

1983

Teaching Health to the Learning Disabled

Sharon Marie Harter
Central Washington University

Follow this and additional works at: https://digitalcommons.cwu.edu/graduate_projects



Part of the [Disability and Equity in Education Commons](#), [Health and Physical Education Commons](#), and the [Junior High, Intermediate, Middle School Education and Teaching Commons](#)

Recommended Citation

Harter, Sharon Marie, "Teaching Health to the Learning Disabled" (1983). *All Graduate Projects*. 48.
https://digitalcommons.cwu.edu/graduate_projects/48

This Graduate Project is brought to you for free and open access by the Graduate Student Projects at ScholarWorks@CWU. It has been accepted for inclusion in All Graduate Projects by an authorized administrator of ScholarWorks@CWU. For more information, please contact scholarworks@cwu.edu.

EDUCATIONAL TECHNOLOGY CENTER
CENTRAL WASHINGTON UNIVERSITY

TEACHING HEALTH TO THE LEARNING DISABLED

A Project Report
Presented to
The Graduate Faculty
Central Washington University

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Sharon Marie Harter
May, 1983

TEACHING HEALTH TO THE LEARNING DISABLED

by

Sharon Marie Harter

May, 1983

A project was designed for secondary health students possessing learning disabilities in the areas of perceptual motor, motor active, and reading. After identifying the characteristics and remedial approaches for these learning disabilities, lesson plans and specific learning activities were developed for a unit on nutrition. A resource and materials section was included to assist regular secondary health classroom teachers with learning disabled students.

ACKNOWLEDGEMENTS

A special thanks to Dr. Tim Young, Dr. Kenneth Briggs, and Dr. Darwin Goodey for all their help and support during this project. Also a special thanks to my husband and friends for all their support throughout the duration of the work for this degree.

TABLE OF CONTENTS

Chapter	Page
1. TEACHING HEALTH TO THE LEARNING DISABLED.	1
Statement of the Problem.	1
Purpose of the Project.	5
Importance of the Project	5
Limitations of the Project.	7
Assumptions	8
Definitions	9
Summary of the Project.	10
2. REVIEW OF THE LITERATURE.	11
3. PROCEDURES OF THE PROJECT	32
Development of Materials.	32
4. NUTRITION UNIT PROJECT.	35
Health Education Framework Student	
Learning Objectives	36
Unit Outline.	37
Lesson Plans.	52
Unit Test	308
5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	315
BIBLIOGRAPHY	318
APPENDIX	322
A. Available Health Teaching Aids.	322

B. Summaries of Activities and Their Application to the Learning Disabled Student.	329
C. Permission to Copy Published Activities.	334
D. Unit Lesson Plans Tape	337

Chapter 1

TEACHING HEALTH TO THE LEARNING DISABLED

Statement of the Problem

An increasing number of secondary students with learning disabilities are being mainstreamed into the regular subject matter classroom. The presence of the learning disabled has created a perplexing problem for the teacher who has little or no training in the special needs of these students, or knowledge of what resource materials are available to assist him or her. In addition, Public Law 94-142, the Education for All Handicapped Children Act, required that by October, 1977, each state identify children with specific learning disabilities and provide them with appropriate programs and services. This legislation has resulted in confusion among educators, legislators, medical professionals, and parents because the term "specific learning disabilities" is vaguely defined. Its definition refers to symptoms and manifestations the nature, cause, severity, and treatment of which have yet to be better understood.

Creative and sensitive teachers who have empathy with their students with learning problems and who understand the conceptual structure of the health disciplines have little problem in assisting these learning disabled students in developing knowledge in health. Unfortunately, few teachers are able to employ this approach because the emphasis is on narrow specialization and factual knowledge, and because the many details unrelated to health teaching with which health teachers are

burdened during the school day leave very little time to develop and implement special activities which will assist students in overcoming their specific barriers to health learning.

. It has been estimated that approximately 3 percent of all school-age students are learning disabled, with an additional 3.9 percent of undiagnosed students present in a classroom (39, 29:214). Unfortunately, few schools have provided teachers with adequate secondary resources and curriculum materials to meet the needs of learning disabled students mainstreamed into the regular subject matter classroom. Placement of mainstreamed students into a classroom creates feelings of frustration and anxiety not only for the teacher, but for the learning disabled students also (29:327).

Learning disabled children have an impaired ability to learn from early in their lives, possibly from birth. As a result they lag behind their peers and siblings in the acquisition of academic skills. Given the typical responses of their parents and teachers, which increase the stress for the children and make them feel inadequate, insecure, dumb, and anxious in any learning or testing situation, these children become more and more disorganized. The older they get, the more their disorganization, anxiety, and feelings of inadequacy increase. As a result of these feelings of inadequacy, they develop social problems and either withdraw or attempt to compensate in antisocial ways (29:117). Therefore, it is easy to see why teaching the learning disabled is more than just teaching them facts; it is dealing with their poor self-concepts in addition to their learning problems.

Another problem which often occurs when a learning disabled student is mainstreamed is that the teacher is told only the clinical diagnosis, without a proper explanation of the actual problem (39). Again, when the teacher does not understand the disability many negative results may occur which affect the teacher and his or her students.

Health education is no different from other classes in the public school system. Secondary level health teachers are having to face the problems and challenges of having students with learning disabilities in their classrooms. Additionally, in 1980 school health teachers were faced with a new problem and a new challenge. The Division of Instructional and Professional Services in the Office of the Superintendent of Public Instruction in Olympia, Washington published the School Health Education Framework.

The purpose of the Health Education Framework was to: 1) identify program goals and student learning objectives for implementation under the Washington State Learning Objectives Law; and 2) begin development of a comprehensive sequential health education curriculum for kindergarten through twelfth grade students. So now we find not one, but two, educational problems facing the school health educators--the implementation of the student health framework into the health curriculum while also trying to accommodate the learning disabled.

In the introduction to the Resource for Program Planning and Student Learning Objectives Guide it states that the student learning objectives are appropriate for all students, kindergarten through

twelfth grades, but it is not realistic to expect students to achieve all these objectives. In addition, for the gifted, the handicapped, the migrant, the bilingual students, and the students with learning problems, learning activities designed to achieve the objectives must reflect these students' needs, interests, talents, and limitations. Having set student learning objectives, the health teacher has a real need for special resource materials for teaching health education. Concomitantly, the health education teacher is faced with the challenge of having resource materials which also benefit the learning disabled.

The writer has personally experienced the frustration of trying to teach the learning disabled with few resource materials available in the district. With little help from the district, the writer had to resort to her own creativity in designing lessons for the learning disabled. This situation resulted in a great deal of extra work and frustration, while trying to keep up with other students and with classroom duties.

The real victims of the situation were the learning disabled students present in the classroom. The writer believes that these students realized she wanted to help, but that she did not understand how to approach their specific learning disabilities in an adequate fashion. Had materials with suggestions for teaching the learning disabled been available, I believe my students would have reached a higher level of academic achievement.

The writer feels that learning disabled students do not have to be a problem. She believes that once the teacher understands and accepts

the individual needs of the learning disabled, secondary level health teaching methods can be developed which do not disrupt learning, but will actually enhance it. Many educators have stated that the overall level of learning and retention improves when teaching methods are geared toward the learning disabled (43:xiv, 39). Educators have stated this fact because most traditional methods of teaching are visually and aurally oriented. With nearly 4 percent of all children having undiagnosed learning disabilities, remedial approaches to all classroom teaching are assets to learning.

Purpose of the Project

The purpose of the project is to accommodate students with previously diagnosed (as well as undiagnosed) learning disabilities in the regular subject matter classroom by developing a handbook of health education units and lesson plans. The units and lesson plans developed cover the topic of physical health through sensible nutrition. The basis for the lesson plans is the list of related student learning objectives for the Program Goal II for people 14 to 18 years of age found in the Health Education Framework.

Importance of the Project

In recent years, people have become more aware of the importance of health education. With the advancements in medical science new and

important health facts are being discovered daily. The writer believes it is essential to relate health concepts to students in order to provide them with the best health education possible. Frequently the learning disabled have less concern for their health in all aspects of life. Therefore, it is even more crucial that learning disabled students be exposed to quality health education suitable to their educational abilities.

By the time learning disabled students are in high school, they are often convinced that they are unable to learn and that there is no need to try (43:5). The frustration experienced by the learning disabled could be due to a combination of factors including lack of concern, lack of understanding of the learning disability, and a lack of materials designed for the special needs of the learning disabled. Until proper educational materials are developed, the learning disabled will receive a poorer quality of health education.

The writer's experience includes a class with 10 mainstreamed learning disabled boys. The first few efforts to educate these exceptional students using regular classroom methods were fruitless. Our district had few resources for teaching the secondary level learning disabled. The writer had to accept the task of creating individual learning methods for each student. The task was a difficult one, and the results lacked the professional ideas of other educators with training in teaching exceptional children.

Development of quality materials for use in teaching the learning disabled should result in better instruction and learning. By having access to resource materials for the learning disabled, teachers could be more effective in their teaching and could adapt accepted methods of teaching for use with the learning disabled. Resource materials would also provide new ideas for the teachers.

When students realize that a teacher is sincerely putting forth an effort to help them learn, they often become more motivated. Since many learning disabled students are average or above average in intelligence, it is often simply a matter of finding learning methods which work for those persons (43:8). Additionally, health resource materials not only help the learning disabled student, but can also provide useful ideas for all students.

The topic of nutrition was selected for the project unit plans. This topic was chosen because it is a suggested topic for teaching in grades 10-12 by the Health Education Framework. In addition to its being a suggested topic, the writer has discovered in 2 years of teaching health that this topic is detailed and difficult to learn. Because the teaching is often not concrete and seems useless for real life, many students have difficulty in understanding its concepts.

Limitations of the Project

The scope of this project has five limitations. The first of the limitations deals with suggested topics by the Health Education Frame-

work for tenth grade health. The second limitation concerns the unit on nutrition which will be developed for the special needs of the learning disabled. Third, because resource materials in health for the learning disabled are very limited, many of the project teaching methods and activities are the result of the writer's own ideas, creativity, and experiences. Many of these ideas will be shared in the project section. The materials for the project include very few published materials. Media listings were compiled by their effectiveness and appropriateness for teaching nutrition. Fourth, the writer followed the recommendation of the Health Education Framework that teachers select student learning objectives which are suitable for their students. Fifth, the writer decided to deal with the broad types of learning disabilities, since it would be impossible to set up an individualized lesson plan for each learning disabled student while teaching regular subject matter classes. Therefore, this project deals with perceptual disorders, motor active disorders, and reading disorders.

Assumptions

Learning disabled students can learn effectively in regular subject matter classrooms.

In order for the learning disabled to realize their academic capabilities, the teacher must understand specific educational needs of the learning disabled and must make adjustments to meet those needs.

Development of appropriate resource materials need not be an in-

surmountable problem when it comes to preparation time and teaching methods.

If teachers teach as if learning disabled students were in the classroom, the learning of the other students will be better because of improved teaching activities.

Definitions

For the purposes of this project, frequently used terms are defined as follows:

Learning Disabled: A general term used to describe individuals who demonstrate a discrepancy between the expected level of achievement and their actual achievement. Usually implied is lower-than-average ability to understand or use spoken and written language.

Exceptional Child: A term to describe an individual with special educational needs including the gifted, mentally retarded, emotionally disturbed, behaviorally disturbed, learning disabled, physically handicapped, visually and aurally disordered, talented, and students with multicultural heritages.

Mainstreaming: The practice of providing handicapped persons an education in association with their nonhandicapped peers, to the greatest extent possible.

Remediation: Includes those activities, practices, and techniques which are directed toward a strengthening of specific areas of functioning which are viewed as weak or deficient.

Accommodation: Refers to a process whereby the learning environment of the student is modified to promote learning. The focus is on changing the learning environment or the academic requirements so that the student may learn in spite of a fundamental weakness or deficiency.

Summary of the Project:

The project will consist of four remaining chapters. Chapter Two is a review of the literature on various learning disabilities and appropriate curriculum and instructional materials for the effective instruction of secondary level learning disabled students. Chapter Three outlines the procedure of the project. Chapter Four is a handbook of unit and lesson plans designed for the tenth grade learning disabled student studying the topic of nutrition. Chapter Five includes the Summary, Conclusions, and Recommendations.

Chapter 2

Review of the Literature

In almost every classroom there are students who have to struggle to learn. Some of these students have an invisible problem; they either have a specific learning disability or a combination of various disabilities.

Learning disabilities (LD) represent the newest and fastest growing issue in education (3:11). Being a growing area of interest and concern in education, there is much confusion as to the question, "Just what is a learning disability?" (14:3). Defining the term, identifying students who possess learning disabilities, planning an approach to educational programs, and determining who is responsible for identifying and teaching learning disabled students have created much concern and confusion.

Frequently, learning disabilities have been equated with mental retardation, emotional disturbance, economic disadvantage, cultural deprivation, environmental disadvantage, hyperactivity, dyslexia, visual and hearing handicaps, and minimal brain dysfunction (35:8, 14:12). The learning disabled have been categorized with other handicapped children simply because no one knows what actually causes the problem. As time passes, medical professionals and educators are learning more about specific learning disabilities in the hope of presenting more information and remediation for these exceptional children (14:3).

There are many theories as to what might lie behind these puzzling problems seen in so many children. Heredity is believed to be respon-

sible at times. Prenatal influences, difficult births, high fevers, and head injuries may all cause slight nerve damage to the brain. Therefore, these occurrences are thought to alter certain learning patterns.

In addition, delayed or uneven motor development is often credited with creating later problems in reading, writing, spelling, and language disorders. Some research indications point to nutrition and chemical factors affecting learning. The latter indications are new and very controversial (35:9).

Often the causative factor is unknown. Psychologists, physicians, and educators battle over the origin of learning disabilities. The result is even more confusion about the mystery of the problem.

The problem arises when the regular subject matter classroom teacher is given the task of educating the mainstreamed learning disabled students, but does not have a clear understanding of learning disabilities. An obvious problem has occurred since the area of learning disabilities is relatively new, and the teacher is legally obligated to instruct all students present in a classroom. The situation causes the teacher to become a pioneer in researching various learning disabilities and in locating and creating educational materials.

Despite all the unanswered questions and changing definitions, learning disabled students are being recognized, and successful classroom procedures can be and are being developed and implemented. It is important to remember that the regular subject matter teacher should be able to recognize what a learning disability is and be able to develop a

teaching style conducive to optimum learning for all students, especially the learning disabled.

I. What is a Learning Disability?

A learning disability refers to one or more significant deficiencies in learning processes involved in using language (spoken or written), which may result in an inability to listen, think, speak, read, write, spell, or to do mathematical calculations which require special education techniques for remediation (14:12, 3:11).

Each student with a learning disability is different, and each exhibits a different combination and severity of problems (35:8). However, most learning disabled children are normal or above normal in intelligence and have in common the lack of adequate achievement in school and demonstrate a discrepancy between expected and actual achievement in one or more areas (3:13). Because all learning disabled children share the problem of poor achievement in school, all states have established some statement about discrepancy or degree of educational lag for a child's age in order to measure academic functioning (14:36).

Included within the definition should be some of the various characteristics displayed by the learning disabled. No child exhibits all these traits, but the presence of several may help the regular subject matter teacher to identify some previously unidentified learning disabled students present in the classroom. Among the most common characteristics are: motor activity, which includes hyperactivity and

hypoactivity; emotional reactions including aggressiveness, withdrawal, frustration, anxiety, and extreme sensitivity; perceptual problems in the areas of auditory, visual, tactile, and kinesthetic processing; symbolization problems; distractibility, disruptiveness; inattention, poor listening skills, and memory problems (3:13, 34:66, 5:352, 14:14-15, 43:9). Frequently mentioned characteristics additionally noted are the inability to follow directions, constant forgetfulness, good skills in some areas and poor in others, poor socialization skills, impulsiveness, inconsistent behavior, and poor reading abilities.

Since no two learning disabled students possess the same deficiencies in learning or exhibit the same characteristics, it is a massive task for educators teaching these exceptional children. Because of the differences among learning disabled children, some broad areas have been identified to be discussed which encompass most specific learning disabilities. The first area to be discussed is perceptual motor disorders.

II. What is a Perceptual Motor Disorder?

The belief behind perceptual motor disorders tends to be that higher level mental processes develop out of, and after, adequate integrated development of the motor system and the perceptual system. For most perceptual authorities this means that poorly developed perceptual motor abilities may be part of the cause for learning disabilities, and that training programs should relate to such poorly developed abilities (14:98).

Perceptual motor disorder literally means that a person has an inability to interpret information through the senses and to make sense out of the environment. Without perception, one is not able to make sense of what is seen, heard, or felt. This inability to interpret creates a problem for the perceptually disordered because the majority of traditional learning is through visual and auditory channels (35:9, 2:83). For example, a student with visual imperception, but with normal vision, does not perceive things as do other students. Often foreground is indistinguishable from background.

Frequently all learning disabled students are grouped under perceptual motor disorders because there is no common agreement as to which skills can be called perceptual and which belong to other processes. It is known that perception is the first step in the learning procedure (35:9). Perhaps the only belief that nearly all perceptual motor authorities would support is that, for the most part, perceptual abilities provide that base for later conceptual abilities (14:75).

Among the more prominent authorities in perceptual motor disorders are Newell Kephart, Gerald Getman, Raymond Barsch, Bryant Cratty, Jean Ayers, Marianne Frostig, and Carl Delacato. The work done by these perceptual motor theorists includes some of the more interesting efforts, and also some of the more controversial (14:73). One criticism of the early pioneers in the development of perceptual motor programs is that most of their work was done on brain injured individuals. The more recent theorists have based their research on the pioneer efforts. The

fact remains that most learning disabled students are not brain injured, and the methods developed are not necessarily appropriate for all learning disabled students (14:76).

The authorities on perceptual motor disorders have developed some interesting approaches to learning. Perhaps the most prominent of the theorists is Kephart. He--along with Getman in his visual motor model, Barsch with his theory on movigenics, and Cratty with his strong beliefs in education games and activities--believed that the development of the child occurs in stages. If a student is interrupted in development, then adequate learning and progressio are halted. The belief arises among authorities that students need to begin remediation by working first on poorly developed early motor skills in order to relax and develop optimum alertness to learn (14:76,82,86-87).

Most perceptual motor educators are interested in tactile and kinesthetic learning modalities and believe that they provide the basis for higher levels of learning (14:118). Among the educators with such beliefs are Gillingham and Stillman with their Phonics Approach, and Grace Fernald's VAKT (Visual-Auditory-Kinesthetic-Tactile) Approach.

The Gillingham-Stillman Phonics Approach stresses auditory discrimination by developing formal skills for learning. The approach is built on eight linkages which stimulate the auditory, visual, tactile, and kinesthetic senses through the use of phonograms. Students hear the sounds of the word or words to be learned, trace the letters with their fingers, and copy the term while using it correctly in a sentence

(19:80-81, 5:337, 14:131). This approach necessitates activities and is often criticized for its weaknesses (14:93).

Grace Fernald developed the VAKT Approach as a word learning technique for severely disabled students who have not succeeded with visual and auditory approaches. Being a multisensory approach, emphasis is placed on all senses. Perception of the word as a whole is basic to the approach. The student writes the word, traces the word with his finger while verbalizing or listening to the definition of the word, and copies the word while speaking the meaning until correct usage and spelling are learned (19:78-79, 14:120). The VAKT Approach has been highly successful when used for visual channel problems, auditory learners, dyslexics, and motor active students (15:93).

Many articles and books have been written on perceptual motor remediation. Commonalities are shared among educators with regard to successful remediation for the auditory learner and the visual learner, since these are the predominant perceptual motor handicaps.

Students who possess perceptual motor disorders exhibit obvious clues to their specific learning disability. Students who are auditory learners usually have short attention spans and appear bored during visual tasks, show interest when listening to tapes, and have poor handwriting. Work copied from the board is poor and may have reversals, inversions, or missing words in sentences. Auditory learners usually do very well in oral discussions, but poorly on written work and tests, dislike "ditto activities", appear poorly organized, and seem brighter than their intelligence tests indicate (21:80).

Remediation techniques for auditory learners emphasize listening and speaking. For older students techniques making use of tapes, records, talking books for the blind, reading aloud, and student tutors have worked best (39).

Visual learners also provide clues to their specific learning disability. Frequently these exceptional students ignore verbal directions, need instructions repeated several times in different ways, and may have "blank" expressions on their faces after directions are explained. Many visual learners use gestures while groping for words; they may have poor speech, limited vocabularies, and poor articulation skills. Often they look to see what everyone else is doing after directions are given, seem to misunderstand frequently, and forget information which is given verbally. Most visual learners enjoy visual games and activities, and may not seem as bright as their intelligence tests indicate (22:76).

Students possessing some of these characteristics need to use their eyes as keys to learning. Some of the approaches used are look-and-say charts, experience charts, flash cards, color-coding terms, films, picture coding materials, outlining material to be covered, and the phonics and VAKT approaches mentioned earlier (43:89, 39, 14:136).

III. What is a Motor Active Disorder?

The term motor active is usually associated with hyperactivity and hyperkinesis. Both hyperactivity and hyperkinesis are general terms

used to describe unusual activity, particularly for an individual in a given setting. The term also denotes disruptive activity (14:101, 29:45, 17:46). Most efforts by educators and physicians to define the problem deal with symptoms. Definitions and descriptions have emphasized the extent and type of motor activity or the behavioral, psychological, and social characteristics that are associated with individuals called hyperactive. For educators, the emphasis is on the reduction of socially unacceptable behavior and the improvement of learning.

Difficulties in the classroom with the hyperactive or hyperkinetic student are the topic of considerable discussion in magazines and professional journals. Accounts in articles and journals are confusing due to misinformation or professional specialization. Diagnosis of hyperactivity or hyperkinesis is a clinical judgment.

There are several causal hypotheses on hyperactivity. Some educators and physicians believe that there are medically oriented explanations and specific organic etiology. Others imply that hyperactive children are neurologically intact, but the nature of the motor activity interferes with accurate acquisition of information. The final hypothesis is that hyperactive students make decisions too rapidly, before information is acquired (25:103).

With at least one million children afflicted by hyperkinesis, a teacher averages at least one hyperactive student per classroom (36:86). Typically these students are restless, impulsive, uncoordinated, irritable, hard to manage, inattentive, distractible, and easily frustrated (34:88, 14:102).

The differences between normal and hyperactive children are not as clearly documented as one might expect. It appears that hyperactive children are less able to modify activity levels to certain environmental influences. It may be concluded that the character, not just the amount, of activity determines which children are called hyperactive. The normal child responds to expectations in a social situation more readily, whereas the hyperactive child tends to continue to exhibit hyperactivity even when it is socially inappropriate to do so (34:102).

One often reads that hyperactivity is a characteristic of children who are diagnosed as having cerebral brain dysfunction, but perceptual problems and other characteristics such as distractibility and disorganization are not necessarily correlated to hyperactivity. Not all brain injured children are hyperactive, and not all hyperactive children are brain damaged. However, hyperactivity is much more likely in a brain damaged individual than in the population as a whole (34:104).

The control of hyperactivity or hyperkinesis is a growing concern among educators, physicians, and psychologists. Among these professionals, three approaches to controlling motor activity have been developed. First, there is medical treatment where children are diagnosed by a physician; stimulants, tranquilizers, megavitamins, or corticosteroids are prescribed to counteract the hyperactivity (14:185). The medical treatment approach is controversial among doctors because of the possible overuse of drugs and drug dependence. Concern for the long-term effects has caused many doctors to support nonprescription

methods such as diet related treatment. Positive control results have been reported for medical treatment, creating a performance decision (14:185).

Second, there is the behavioral management approach. This is a technique which provides planned systematic consequences for a given response, which are designed to alter the response or its frequency (14:106). Behavior modification has been used for years among educators with much success. Specific academic and behavioral goals are set for each student in order to increase or strengthen good behavior and work. The goals restrict freedom because of preestablished punishment for offenses (5:354). Included in the behavior modification approach is contingency management, operant conditioning, contracting, and modeling. Each included approach gives students responsibility for changing their behavior. Students are rewarded with privileges, tokens, and other motivating means for good behavior and for completion of desired tasks (5:358, 19:263).

Environmental control, which is the third approach, has also reduced motor activity in the classroom. Environmental control is based on the hypothesis that lessening surrounding stimuli reduces motor activity in students. Classrooms are bare, containing no pictures, bulletin boards, or decorations; windows are covered, teachers dress plainly, students face blank walls, and use simple textbooks and manipulative materials. Some controversy has been expressed concerning the effect on other students in a classroom who have no apparent motor active problems (25:106-108).

IV. What is a Reading Disorder?

In the circle of learning disabilities a reading disorder usually implies dyslexia. Dyslexia is a developmental condition, found primarily in boys, which reflects great difficulty in some of the associational skills basic to word recognition (6:139). Dyslexia is frequently called "word blindness" and differs from reading retardation resulting from poor instruction and poor comprehension. Dyslexia is similar but not identical to alexia, or the loss of ability to read due to damage to the left hemisphere of the brain. Dyslexia simply causes a functional inefficiency which handicaps learning.

Dyslexia typically occurs in boys of normal intelligence. Some reading ability may be present, but it is significantly below grade level. Material is read haltingly, and simple errors are frequent. A word may be known in one sentence and unrecognized in the next. Frequently the dyslexic will guess at words. He may know the names of letters and sounds of consonants, but is confused about vowel sounds. Dyslexia represents an extreme and continuing lack of reading readiness (6:140).

Usually associated with reading disorders is confusion in identifying right or left. On a test of motor development and coordination, the child is likely to score low for his age. He is much more likely to have speech difficulty, poor auditory discrimination, male relatives with similar reading disorders, non-focal EEG abnormalities, and unusual sleep patterns (19:25, 5:215).

The specific problems associated with dyslexia appear to be inefficiency in associating sound with visual symbols, left-right confusion, and letter reversal. The problems are believed to result from neurological dysfunctioning from poor motor development and perceptual learning experiences as an infant (5:172, 14:225).

The term "dyslexia" is a Greek word meaning reading difficulty. While reading problems are usually associated with dyslexia, dyslexia can also involve problems in math, writing, spelling, and comprehension. The term "dyslexia" can also be misleading because it does not imply what reading problems exist (35:9). There are several types of dyslexic problems. A child may be a dysphonetic dyslexic, which means the child has limited sight vocabulary and is unable to sound out words phonetically. Secondly, a child may be a dyseidetic dyslexic, which means the child has difficulty remembering the appearance of letters or of whole words. Thirdly, a child may be a mixed dysphonetic-dyseidetic dyslexic. These children are, unfortunately, the hard core dyslexics who possess neither the visual nor the auditory means to decipher the written word (5:217).

Several other theorists believe that dyslexic children can be divided into two groups: visual and auditory, or visual and verbal dyslexics (5:217). From this suggestion it is easy to associate overlapping perceptual motor disorder problems. For this very reason, many of the remediations discussed are used for several types of learning disabilities.

There is no single best approach to teaching reading to the learning disabled child. Studies have indicated that increased response time along with positive reinforcement implemented in selected individualized learning approaches have been most successful (14:73,104,220). Among the most commonly used approaches to teaching students with dyslexia and other reading disorders are the basal reader approach, phonic approach, modified alphabet system, language experience approach, color-coded phonetic approach, and the rebus approach.

The basal reader and phonetic approaches are elementary. Students learn whole words meaningful in the lives of the readers and then learn the phonetic sounds which compose the words (14:79-81).

The modified alphabet system is an interesting approach for expanding the alphabet to 46 characters. Twenty new symbols are included to represent inconsistent sounds and spellings in the English language (14:83).

As a highly recognized and praised approach, the language experience approach is very successful. Reading is only considered one part of total communication, and is integrated with listening, speaking, writing, and spelling. The student's reading ability grows out of reading material in personal interest areas and developing those interests in several channels (14:85, 43:57).

Many learning disabled students with reading disorders benefit from using the techniques for visual and auditory dyslexics. Individualized reading approaches are developed where color-coded phonetic consonants

and vowels are used for expanding vocabulary and sight reading. In addition, the rebus approach of providing a picture beside the word to be learned has been very successful (14:98-101).

Reading for the dyslexic is an emotional and awesome task which demands creativity and patience on the part of the student and the teacher. Often the multisensory approaches, mentioned under perceptual motor disorders, are implemented. Frequently, severe dyslexics use talking books for the blind (28:192, 39). Creative efforts with rhymes, stories, games, and token rewards often benefit reading disordered students more than do the theories devised by the professionals (5:144,159, 19:105).

V. Teaching the Learning Disabled

A teacher of the learning disabled cannot function effectively without having some solid theoretical concept of how normal learning takes place as a basis for planning for the learning disabled. The most effective teachers of the learning disabled are those who genuinely care, and who realize that all students do not learn in precisely the same way; these teachers may find that unusual or unorthodox procedures may be most beneficial (29:16,76, 14:87). Different learning styles have necessitated individualized planning. Due to the complexity of remedial techniques, planning must be based on an evaluation of the strengths and weaknesses of the secondary level learning disabled student in order for success to occur (3:13).

Most learning disabled students have long histories of educational

failure due to inappropriate instruction, instruction that is not carefully structured, paced, and sequenced. The potential for continued failure is inherent in the manner in which secondary level content materials are written. Usually, secondary content materials have numerous facts and ideas packed into a relatively small space, and there are few organizational clues in the form of headings, subheadings, and boldface type. The specificity and unfamiliarity of secondary level vocabulary constitute major handicaps for the learning disabled students in regular subject matter classrooms. It is relatively easy to see that comprehension and interpretation suffer as a result (43:71, 14:259).

For the regular subject matter classroom teacher, controlling motor activity is a challenging, as well as a frustrating, task. Perhaps the most important single element is the need for a great deal of order, structure, and control throughout the total environment (10:113, 25:110, 43:149, 5:140). Motor active students function more positively when they are removed from distracting classroom elements such as the pencil sharpener, interest centers, bulletin boards, multicolored materials, and movable objects on desks. These exceptional students also are better behaved when sitting in the front of the room, making eye contact with others more difficult; when the walls are bare; and when students are given headsets to reduce auditory input or are assigned hands-on activities with a specific time frame (5:138, 43:57, 14:110, 19:75).

Hyperactive students can learn at the same rate when given agreed-upon goals and immediate rewards for progress (5:140, 43:52). Giving

tokens for positive behavior and accomplished tasks is a very successful approach. One approach frequently implemented in secondary schools is the written contract. The contract is designed to establish mutually agreed-upon objectives and behavioral goals between teacher and student. Infringements of the contract result in previously discussed consequences (43:52).

Students with reading disorders need individualized instruction. Implementation of the approaches mentioned in the reading disorders section are all successful. However, for regular classroom subject matter the teacher needs to call attention to important details by using picture coding, color-coding, or multisensory techniques (6:141). Students also need to be encouraged to make automatic responses for letter discrimination and sounds by using tachistoscopic techniques. Dyslexic students are easily confused and can become "overloaded". The teacher needs to be conscious of the breaking-down effect of too much information. Finally, constant reviews of basic skills are essential to promote reading (6:144).

Students with reading disorders dislike to read. By giving students materials to read which are of interest, reading can be enhanced. Life experiences written and read, comic strips with new vocabulary, scrap-books, word games, and guided listening procedures are all good for the learning disabled (43:57-58).

Generally, if a regular subject matter classroom teacher realizes that the learning disabled need concrete individualized instruction with

frequent examples, few alternatives, and easily followed routines, learning will occur (43:25). Teachers who express interest in their students appear to be most successful with the learning disabled. Classrooms that are warm in nature but are structured, well-disciplined, consistent, and provide the student with standards and expectations tend to motivate and improve behavior because students know what is expected (28:190,194, 43:27).

A primary consideration for all regular classroom teachers who are given the task of educating any type of learning disabled students is to begin where the student is, by using success related individualized instruction (7:3, 5:13, 14:154, 19:73). Success can be achieved when complex assignments are broken down into small increments of learning which are paced and sequential in manner. The teacher needs to introduce assignments in terms of the students' strengths and to avoid deficient areas. It is necessary that skills needed for the tasks be identified and proper materials prepared as guides for different levels of learning. Learning disabled students with auditory or memory problems need additional time to sort out directions. All instructions should be restated in simple language after each command (29:79, 7:2-3, 3:13, 43:72-73).

Reading assignments are perhaps the most difficult to remediate. Successful classroom teachers have found that the key to success is breaking down the assignment into steps and allowing students to use their fingers as markers when reading (6:142, 43:28). Students are

encouraged to go through a process of writing down the assignment, expressing what they hope to gain as a result of their efforts; they are encouraged to use textbook aids (titles, subheadings, and summaries) as they outline the information, and to summarize the material by answering questions such as "What does it mean?" (43:33)

Objectives for each assignment should be clearly stated. As the task is being mastered, positive reinforcement is provided by pointing out achievement and providing immediate feedback on performance (3:13, 7:3). By using a positive approach to correction and avoiding negative responses, goals seem more attainable. For example, for the student who spells poorly on written assignments give two grades, one for content and one for spelling (28:193, 42:216).

Some of the best teaching approaches for the learning disabled have developed from capitalizing on student interest, creative activities, reward systems, contracts, teacher demonstrations, humor role playing, games, creative writing, student tutors, recorded lessons, and comic strip lessons (43:27, 7:2-3, 28:193, 3:13).

After reviewing the literature, it seems only natural that the concluding section be devoted to presenting practical suggestions for teaching a daily lesson in any subject. When teaching a daily lesson it is crucial that teachers use a variety of teaching methods, attempt to remove all distractions, and create a warm classroom atmosphere. Each lesson should begin with a review of the previous day's learning and end with the objectives for the day. Attention should be drawn to vocabu-

lary and an outline of the discussion provided, with important concepts highlighted. As many visual aids as possible should be incorporated. The overhead projector and recorded tapes have proven most successful (4:3, 3:13, 43:76).

The teacher should talk slowly and use many illustrations or demonstrations. Emphasis should be placed on important points by saying "This is important" and by coding on written notes. Major information should be repeated periodically. When talking, attempt to maintain student interest by relating experiences, stories, or films with which they can identify.

Take time to give excellent directions, and check to make sure students understand assignments. Make allowances for specific learning disabilities which may require visual aids, oral tests, multisensory aids, talking books, or recorded tapes. When explaining directions, allow students to verbalize the tasks whenever possible.

Prepared handouts should be on uncrowded pages. All writing needs to be large, legible, and on colored paper. Consistent format of papers is also crucial (4:3-4).

Any discipline problems arising should be handled promptly and in a consistent manner. Avoid such things as drawing attention to the student, negative comments, and severe punishment. Severe punishment tends to promote more hostility and negative behavior in learning disabled adolescents, due to their poor self concepts (43:26, 4:4).

Learning disabilities are a challenging area of education for every teacher. Each teacher is confronted daily with students with unique

special learning needs, necessitating individualized instruction. By accommodating the special learning disabilities present in a classroom, a teacher will increase the quality of education for all the students.

Chapter 3

Procedures of the Project

Development of Materials

After consulting with an authority in learning disabilities--Myrtle Snyder, director of the HELDS Project (High Education for Learning Disabled Students) at Central Washington University--the writer interviewed learning disabled students at Richland High School. In addition to talking to authorities in learning disabilities, the writer contacted school district personnel in Special Education and Special Services, professors in special education at Central Washington University and Washington State University, and directors of special education through local Educational Service Districts in Yakima and Pasco. After gaining as much information as possible, the writer reviewed many handbooks on teaching the learning disabled. The broad spectrum of learning disabilities was narrowed to three major areas frequently encountered by the regular classroom teacher.

The spectrum of learning disabilities was narrowed to perceptual disorders, motor active disorders, and reading disorders. The perceptual disorders deal with the areas of hearing and seeing. Motor active disorders deal with hyperkinesis and the learning and behavior problems which result. Reading disorders deal primarily with dyslexia.

The Health Education Framework was used as a foundation for the unit and lesson plans developed for the project. The writer obtained a

copy of the Health Education Framework from Olympia, Washington by writing the Department of Education. The topic of nutrition was selected for the unit. Five student learning objectives were selected.

Resource activities reviewed for consideration were: learning disability handbooks obtained through university libraries; special service materials acquired through the local Education Service Districts; materials obtained through interviews with professors in health education, special education, and learning disabilities at Central Washington University and Washington State University; handbooks on health activities and science activities; film catalogues; health education workbooks; health resource planner books; and books discussing various methods of instruction for the learning disabled. Very few paper-pencil activities in health education were obtainable. The writer did look into the auditory forms of learning, but without success.

The writer proceeded to develop unit plans incorporating student learning objectives and student educational goals for the students. After stating the objectives and goals to be met, the writer developed lesson plans for the teaching unit. The unit was divided into subtopics to be covered, with activities weekly which would meet the specific needs of the three areas of learning disabilities previously discussed. The writer created and incorporated activities for the learning disabled in Chapter Four.

Within the lesson plans, a calendar of assignments and subtopics was created for each student. Alternative assignments for the learning

disabled were also listed, in order to enhance the learning of all students present in a health classroom. Lists of additional resource materials were provided in order to have assignments which meet the learning objectives of each student. The list of additional resource materials includes class activities, visual aids, auditory aids, prepared teaching units available, and books.

Chapter 4

Nutrition Unit Project

This project was developed for any secondary level health teacher teaching a unit on nutrition. Daily lesson plans are provided, with prepared lessons, handouts, activities, games, and resources for the learning disabled student present in the regular subject matter classroom.

It is the intention of the writer that the project be a good hands-on resource for teachers desiring additional ideas for the learning disabled. The project is designed so that the regular subject matter teacher can easily use the unit for any secondary level health class. A resource and materials section is also provided.

Health Education Framework Student Learning Objectives

- (1) Investigates current nutritional guidelines recommended by Federal agencies and professional groups. Explains the United States Recommended Daily Allowances (USRDA) and the Recommended Dietary Allowances (RDA) and how to use them.
- (2) Discusses major nutritional problems concerning teenagers, especially obesity, anemia, and periodontal disease.
- (3) Analyzes one's own nutritional patterns and initiates action to correct any problems.
- (4) Applies principles of energy balance to plan a food and activity pattern which results in desirable body weight.
- (5) Identifies the role of food in health at different stages of the life cycle.

CHAPTER OUTLINE

Lesson I

I. FOOD

- A. Food is any substance (besides air and medicines) which provides for the body's growth, maintenance, repair, and reproduction
 - 1. Materials in food which perform these functions are called "nutrients"
 - 2. Food may be either natural or man-made
- B. Nutrients are chemicals which
 - 1. Provide energy
 - 2. Provide materials for growth
 - 3. Act to regulate body processes
- C. Problem - to match food needs of person with nutrients, both in quantity and quality

II. WHAT IS FOOD?

- A. Food
 - 1. Supplies materials for growth and replacement of cells
 - 2. Contains 6 chemical classes of food substances; water, proteins, fats, carbohydrates, minerals, and vitamins.
- B. Body's composition by food substances
 - 1. Water - 59 percent
 - 2. Protein - 18 percent
 - 3. Fat - 18 percent
 - 4. Minerals - 4.3 percent
- C. Food substances not equally distributed in body
 - 1. Water - 90 to 92 percent in blood; 5 percent in tooth enamel
 - 2. Proteins - most abundant in muscle
 - 3. Fats - concentrated in fat cells under skin and around intestines
 - 4. Carbohydrates - mostly in liver, muscles, blood
 - 5. Minerals
 - a. Calcium and phosphorus (bones and teeth)
 - b. Sodium and chloride (body fluids)
 - c. Potassium (muscle)
 - d. Iron (red blood cells)
 - e. Magnesium (throughout body)
 - 6. Vitamins - very small amounts needed to regulate body

D. Carbohydrates

1. Sugars and starches
2. Most important source of energy for most of world
 - a. If low in diet, fats and proteins also used for energy
 - b. If high in diet, surplus above body needs converted into human fat and stored.
 - c. Diet ideal - 50 percent carbohydrates; should not exceed 66 percent
 - d. High carbohydrate foods - rice, corn, grains and their products, potatoes, all sugar products
3. Sugars
 - a. Simple sugars (monosaccharides)
 - (1) Glucose (dextrose) and fructose - in fruits and honey
 - (2) Galactose - in milk
 - b. Double sugars (disaccharides)
 - (1) Sucrose (table sugar) - in cane and sugar beets
 - (2) Maltose - in germinating grains
 - (3) Lactose - in milk
4. Starches
 - a. Consist of long chains of simple sugars
 - b. Cellulose - an indigestible (for humans) starch abundant in food from plants
5. All converted to simple sugars in digestive tract before being absorbed into the blood.

Lesson 2

E. Fats

1. High calorie source; over two times calorie content of pure carbohydrate
2. Carriers for fat-soluble vitamins A, D, E, K
3. Provide body with energy storage, insulation, and protection
4. One pound of fat yields 4,210 calories
5. Consist of one glycerol molecule connected to three fatty-acid molecules
6. Essential fatty acids
 - a. Fatty acids the body needs but is unable to produce in sufficient amounts
 - b. Abundant in meats, whole milk, cheese, nuts, olives, fish
7. Saturated versus unsaturated fats
 - a. Unsaturated fats free to accept hydrogen into the fat molecule
 - b. Saturated fats not free to accept hydrogen into the fat molecule
 - c. Some hold that a diet with too much saturated fat increases the tendency to atherosclerosis (fatty deposits in the bloodstream)
8. Fats should comprise 20 to 40 percent of a person's total calorie intake

F. Proteins

1. Body's source of nitrogen
2. Consist of combinations of amino acids
 - a. 23 different amino acids
 - b. Essential amino acids - amino acids body needs but is unable to produce in sufficient amounts
 - (1) 8 essential amino acids for humans
 - (2) Other amino acids nonessential
 - c. Proteins containing all 8 essential amino acids are complete; those low in one or more are incomplete
 - d. Two incomplete proteins may be used to complement each other
3. Amino acids used by body to build
 - a. Enzymes (chemical catalysts), hormones, secretions, and tissue
 - b. Many different protein combinations
4. For supply of dietary protein, animal protein preferred to vegetable protein
 - a. Vegetable proteins contain fewer and smaller amounts of essential amino acids
 - b. Animal proteins occur with some important vitamins such as B-12

5. Amino acids not stored in cells; body needs daily supply
6. Person should eat at least 68 grams ($2\frac{1}{4}$ ounces) protein per day
7. Ideal diet - at least 10 percent of calories as protein

G. Minerals

1. Important regulating substances
2. Serve as building materials for bones, teeth, skin, hair, nails, muscles, blood, and gland secretions
3. Several essential elements - calcium, phosphorus, sodium, potassium, magnesium, iron, sulfur, iodine, manganese, cobalt, copper, and zinc
4. Four of major importance
 - a. Calcium
 - (1) Needed for bone and tooth construction, blood clotting, muscle contraction (including heart action)
 - (2) Stored in ends of long bones; storage areas depleted when insufficient calcium in diet
 - (3) Deficiency can cause stunted growth, soft bones (rickets), malformed teeth, muscular spasms
 - b. Phosphorus
 - (1) Essential for bone and tooth formation, and for carbohydrate metabolism
 - (2) Deficiency affects growth, causes soft bones and lack of endurance and vigor
 - c. Iron
 - (1) Essential in red blood cells
 - (a) Combines with protein to form hemoglobin (oxygen-carrying mechanism of blood)
 - (b) Liver and spleen extract iron from worn-out red blood cells
 - (2) Deficiency causes anemia
 - d. Iodine
 - (1) Important part of thyroid hormone (thyroxin) which controls rate at which food is used by body
 - (2) Deficiency causes reduced metabolism, lowered vitality, mental sluggishness, weight increase, enlargement of thyroid gland (goiter)

Lesson 3

H. Vitamins

1. Present in minute amounts in foods
2. Trace amounts needed by body for
 - a. Chemical regulation
 - b. Actions with enzymes, thus called coenzymes
3. Cannot be synthesized directly in body; must be obtained from diet
4. Provide no energy
5. Deficiency serious; causes vitamin deficiency diseases
6. Abundant supply for body ensured through balanced diet
7. Kinds
 - a. Fat-soluble (danger of overdoses because unused vitamins are stored in body fats)
 - (1) Vitamin A
 - (a) Normally found in animal and plant oils and fats
 - (b) Deficiency may cause diarrhea; dry, rough skin and hair; reduced night vision (night blindness)
 - (2) Vitamin D
 - (a) Produced by the effect of ultraviolet light on fatlike materials found in human skin
 - (b) Added to milk (called fortified milk)
 - (c) Deficiency may cause rickets (a retardation of the normal calcification of developing bones)
 - (3) Vitamin E
 - (a) Widely distributed in foods
 - (b) Used in the normal functioning of muscles
 - (4) Vitamin K
 - (a) Found in food
 - (b) Produced by bacterial action in the large intestine of humans
 - (c) Needed for blood coagulation
 - b. Water-soluble vitamins
 - (1) B vitamins, including B-1 (thiamine), B-2 (riboflavin), B-3 (nicotinic acid), B-6 (pyridoxine), B-12 (cyanocobalamin), pantothenic acid, and inositol
 - (a) Vegetables should be cooked in as little water as possible to keep from losing these vitamins
 - (b) Thiamine often lost in the milling process of cereal grains; foods made from refined grains need to be enriched with synthetic thiamine

- (2) Functions of B Vitamins
 - (a) Vitamin B essential to normal body growth; moderate deficiency is common in all age groups, and produces general weakness, digestive disturbances, loss of weight, nervousness, rough skin, and - in extreme conditions - severe respiratory problems
 - (b) Niacin essential to the normal development and maintenance of skin, digestive system, nervous system, and mental state; deficiency may produce inflammation of skin, mental disorders, and diarrhea; extreme deficiency called pellagra
 - (c) Thiamine essential to the functioning of the nervous system, carbohydrate metabolism, and appetite regulation; deficiency may cause nervousness, general weakness, loss of energy, neuritis, and eye problems; extreme deficiency called beriberi
- (3) Vitamin C (ascorbic acid)
 - (a) Easily destroyed by long cooking, exposure to air or light, and mashing or chopping foods before eating
 - (b) Found in citrus fruits
 - (c) Important in intercellular substance formation, maintenance of blood vessels, and calcium metabolism (bone formation)
 - (d) Deficiency causes fragile capillaries (capillary bleeding), soft bones, loose teeth, and chronic bleeding
 - (e) Extreme deficiency is termed scurvy
- (4) Other water-soluble vitamins - H (biotin), M (folic acid), and choline
 - (a) Actions and deficiencies not well established
 - (b) Seem to be widespread in food and readily accessible to a person who has a normal diet

I. Water

1. Most vital of all food substances; loss of only 10 percent can cause death
2. Body over 50 percent water (blood over 90 percent water)
3. Highly essential to body
 - a. Required for all metabolic reactions
 - b. Provides moisture for oxygen and carbon dioxide exchange
4. Person's water requirement based on air temperature
5. Water loss - kidneys, lungs, digestive tract, skin
6. Sources - liquids and foods of all kinds
7. Dietary ideal - slight excess beyond thirst

Lesson 5

III. GUIDELINES TO GOOD NUTRITION

- A. Daily food guides
 - 1. U.S. Department of Agriculture "Basic Four" Food Groups
 - a. Occasionally criticized for not specifying all important dietary requirements
 - b. Easier for people to remember
 - c. Milk group provides calcium, riboflavin, protein, phosphorus, and thiamin when requirements are met
 - d. Meat group provides protein, iron, and B vitamins
 - e. Vegetable-fruit group provides needed ascorbic acid, vitamin A, B vitamins, minerals, roughage, and other vitamins
- B. Dietary Standards and Recommendations
 - 1. Minimum Daily Requirements (MDR) established by the Food and Drug Administration; sets a standard of labeling nutrients in foods (now obsolete due to new revisions since 1955)
 - 2. Recommended Dietary Allowances (RDA) established to identify the amounts of nutrients needed by healthy, normal Americans to promote optimum health for all
 - a. Re-evaluated and revised every 5 years
 - b. U.S. RDA has established standards for nutrition labeling
- C. Goals for Good Nutrition

Lesson 9

IV. ENERGY BALANCE AND ACTIVITY PATTERNS

- A. All food not alike
 - 1. Humans unable to synthesize all needed chemicals we fail to get through eating
 - 2. Balanced eating, in kind and amount, needed to supply known physiological requirements
 - 3. Well-fed person not necessarily well-nourished
- B. Metabolism
 - 1. Human body - machine needing energy to function
 - 2. Forms of energy
 - a. Potential
 - (1) Resting or stored energy
 - (2) Found in food
 - b. Kinetic - energy being used or working, such as heat, motion, light, and electricity
 - 3. Body requires kinetic energy for
 - a. Automatic functions - heartbeat, gland secretions, nerve conduction, breathing, and so on
 - b. Voluntary muscular contractions of all kinds
 - 4. Conversion of potential energy into kinetic occurs in the cell
 - 5. Metabolism - total series of chemical reactions that make up process of life; includes
 - a. Catabolism - reactions breaking food down and releasing energy
 - b. Anabolism - reactions building up new substances and storing up energy
 - 6. Basal metabolic rate (BMR)
 - a. Amount of energy required just to stay alive - breathing, heartbeat, glandular secretions, etc.
 - b. Under direct influence of thyroid gland (hormone thyroxin)
 - 7. Resting Metabolism (RM)
 - a. BMR plus the number of calories used while at rest
 - b. Ranges from 0.8 to 1.4 Kcal per hour per kilogram of body weight, depending on the amount of fat present
 - 8. Energy requirements also include the degree of physical activity engaged in during the day
 - a. Needs depend on amount of physical activity and one's RM
 - (1) Inactive individuals add 30 percent to RM
 - (2) Lightly active individuals add 50 percent to RM
 - (3) Moderate activity requires 75 percent of RM
 - (4) Strenuous activity requires 100 percent of RM

- C. Quantity of energy released measured in calories
 - 1. Calorie (kilocalorie)
 - a. Amount of heat required to raise 1 kilogram (2.2 lb.) of water 1 degree centigrade
 - b. Not to be confused with gram calorie (1000 gram calories equal 1 kilocalorie); calories referred to in nutrition almost always mean kilocalories
 - 2. Though measured in calories (heat energy units), food energy converted into other forms of energy
 - a. Electrical (nerve impulses)
 - b. Light (fireflies)
 - c. Mechanical (muscle contractions)

Lesson 10

V. NUTRITION AND HEALTH

- A. Nutrition adequate when person can function in normal, healthy manner
- B. Undernutrition - insufficiency of calories in diet
 1. 10 to 15 percent of world's population undernourished (United Nations Food and Agricultural Organization)
 2. Symptoms - underweight, stunted growth, reduced metabolic rate, slowed pulse, reduced blood pressure, decreased muscle tone, mental dullness, easy fatigue
 3. Extreme starvation - body severely waterlogged, death common from heart failure
 4. Pregnant women - prolonged labor, affected milk production, infant mortality up sharply, children smaller at birth
 5. Temporary famines do not permanently affect eventual size and weight of children
- C. Malnutrition - deficiency of certain essential nutrients
 1. Protein deficiency
 - a. Results from inadequate protein intake
 - b. Causes severe hemorrhaging, extensive burns, severe injury, loss of body fluids
 2. Kwashiorkor (world's most widespread and serious deficiency disease)
 - a. Affects children from weaning to sixth year (due to too little protein intake and excessive carbohydrate intake)
 - b. Symptoms - retarded growth, apathy, appetite loss, loss of pigmentation, diarrhea, anemia
 - c. In United States symptoms often include low resistance to measles, pneumonia, whooping cough, diarrhea, and tuberculosis
 3. Vitamin A
 - a. Needed for normal bone growth, vision, and skin
 - b. Xerophthalmia (vitamin A deficiency disease) - impaired night vision, skin breakdown, and tendency to skin infection
 4. Vitamin D
 - a. Amount in body from natural sources due to amount of ultraviolet radiation absorbed from sunshine (less in cold climates, more in hot)
 - b. Needed for proper body use of calcium and phosphorus
 - c. Rickets (children) and Osteomalacia (adults) - vitamin D deficiency diseases causing softening of bones

5. Thiamin (vitamin B-1 deficiency)
 - a. Causes beriberi (fluid accumulation and tissue swelling may be fatal)
 - b. A leading cause of infant mortality
 6. Niacin deficiency
 - a. Causes pellagra
 - b. Common among people with high corn diet (with insufficient egg and whole grain intake)
 7. Vitamin C deficiency
 - a. Causes scurvy - pain in joints, hemorrhaging, tooth loss
 8. Iodine deficiency
 - a. Causes enlargement of thyroid gland (goiter) in attempt to produce more thyroxin to maintain body metabolism
 - b. Once common among people in United States getting insufficient ocean fish (iodine); iodized salt now widely consumed
 9. Iron deficiency
 - a. Causes reduction of number of red blood cells or amount of hemoglobin in these cells, leading to anemia
 - b. May be treated by eating iron-rich foods (liver, meat, shellfish, egg yolk, legumes, dried fruits) or by taking iron salts
- D. Other nutritional disorders
1. Types of high blood pressure - too much dietary salt
 2. Artery blood clots and blood vessel diseases - due to excessive cholesterol (saturated fats may be cause) in diet
 3. Acne, exzema, and other skin disorders - may be due to lack of Vitamins A and C, and of protein
 4. Memory development may relate to supply of lysine (an amino acid) in diet
 5. Obesity can develop from overfeeding as a child, producing greater numbers of fat cells or larger than normal fat cells
 - a. Bodies are made up primarily of lean, non-fat tissues
 - (1) Men average 15% of body weight as fat
 - (2) Women average 25% of body weight as fat due to an extra layer of fat in skin
 - b. Obese people can lose weight, but never lose the fat cells
 - c. About 80% of overweight children become overweight adults

- d. Causes of overweight
 - (1) Eating more calories than your body can use
 - (2) Possible hereditary linkage in genes
 - (3) Environmental cultures
 - (4) Psychological reasons (social, emotional)
- 6. Anorexia Nervosa thought to be caused by an emotional condition resulting in starvation, malnutrition, underweight
 - a. Affects thousands of young women during adolescence and the twenties
 - b. Disorder usually begins in slightly overweight young women who decide to diet
 - c. The disease is not fully understood, but is felt to stem from a fear of growing up and facing responsibility
 - d. If treated in time, anorexia can be cured by increasing calorie intake and by making use of psychological counseling
 - e. Anorexia can lead to death if left untreated
- 7. Periodontal disease (gum disease) is main cause of tooth loss in adults; caused by buildup of plaque between teeth and under gums
- E. Deficiency diseases consistently show same pattern - a particular food is consumed to exclusion of another food
- F. Good nutrition comes through getting a diet balanced in sufficient amounts both in quality and quantity

Lesson 11

VI. NUTRITION THROUGHOUT LIFE

- A. During pregnancy and lactation women need between 300-500 additional calories high in vitamins, protein, and minerals
 - 1. Most women can meet additional nutritional demands of pregnancy by drinking 3-4 glasses of milk daily and by snacking on fruits and vegetables
 - a. Recommended weight gain during pregnancy is 22-27 pounds
 - b. Additional nutrients essential for proper and healthy development of fetus
 - 2. Pregnant teenage girls need additional calories high in essential nutrients to meet needs of their own developing bodies in addition to the needs of the developing child
 - a. Surveys indicate teenage girls are the most mal-nourished sector of the U.S. population
 - b. More births to teenage girls result in birth defects, illnesses, and death than in any other age group; cause is poor prenatal dietary care
 - 3. Care in food selection necessary during lactation
 - a. Content of the mother's milk is affected by her dietary consumption
 - b. Foods high in protein, B vitamins, vitamin C, iodine, and fluoride should be consumed
 - c. Other nutrients remain consistent in maternal milk regardless of diet.
- B. Nutrition patterns during infancy lay the foundation for dietary habits of later life
 - 1. Malnutrition during the mother's pregnancy and the infancy of the child may lead to formation of fewer brain cells and to serious illness
 - 2. Basic food in the diet of the infant is milk
 - a. Infants need supplements of ascorbic acid and iron not provided by milk
 - b. By 6 months of age daily menu should be planned around Basic Four food groups
 - c. Well balanced menus of pureed foods essential for normal development
 - d. Up to one quart of milk should be consumed daily by the average infant
- C. Appetite demands of preschool age child slow down because of slower growth rate
 - 1. Parental and sibling influences important factors in molding nutrition pattern of toddlers

2. Dietary patterns for 1 and 2 year olds should be based on the Basic Four food group plan with emphasis on chewable meats and vegetables
 - a. Home environment can encourage a wide range of food preferences
 3. Preschoolers have proportionately high nutritional needs in relation to calorie needs
 - a. Select foods high in nutrients and low in sugar
 - b. Nutrition enhanced by using fluoridated water, iodized salt, fortified vitamin D milk, and whole grain breads and cereals
 4. Goals for achieving normal weight and good nutrition are established between ages 1-5 years
- D. There is a gradual increase in energy and dietary requirements throughout the school age years.
1. Children need additional amounts of niacin, riboflavin, thiamin, and iodine along with adequate intake of protein, vitamins, and minerals
 - a. Most children who miss breakfast have inadequate nutrition
 - b. Lunch an important meal of the day; should provide 1/3 the daily recommended dietary allowances
 - c. Snacks should be juice, milk, fresh fruit, raw vegetables, or small sandwiches
 - d. Junk food snacks are high in calories, low in nutrients; may gradually lead to obesity
 2. Girls from 11-18 years, and boys from 15-18 years have highest daily RDA
 - a. Boys tend to burn up more calories because of their physical activity
 - b. Teenage girls are cited as having poorest diet of any group in the United States; cause is concern over weight
 3. Good nutrition for adolescent athletes requires slightly larger quantities of food in well balanced meals
 - a. Avoid arrays of "health foods"
 - b. Avoid high calorie junk foods
- E. Calorie intake generally reduced as person grows older
1. Calorie needs are dependent upon age, activity level, job description, and physical health
 2. Atherosclerosis, obesity, high blood pressure, heart disease, and diabetes can result from poor nutritional habits
 - a. Saturated fats should be reduced; polyunsaturated fats should be increased

- b. Calorie intake should be determined by one's height and one's appropriate weight
- c. Exercise very important as one grows older
- 3. Food consumption should be high in nutrients and low in calories
 - a. Avoid high fat content foods and high carbohydrate foods, such as whole milk and desserts
 - b. Maintain generous amounts of protein, vitamins, and minerals in the diet
- 4. The elderly need to reduce calorie intake by 10 percent, while maintaining a highly nourishing diet
 - a. Need to eat more frequent, smaller meals
 - b. Meals should include more fiber and roughage, as well as the ingestion of more liquids, to avoid constipation

LESSON I: What is food and what is a nutrient?
What is a carbohydrate?

Framework Objective:

1. Analyzes one's own nutritional patterns and initiates action to correct any problems.

Sub objectives:

1. Describe the 3 principal uses of food in the body.
2. Define what a nutrient is.
3. Identify what a carbohydrate is, its function, and examples of high carbohydrate foods.

Activity 1

Discuss objectives and goals for the day.

Activity 2

Discuss the lesson using overhead to outline lecture, using color coding, picture coding, and large print letters.

LD: Provide written outline of the lecture.

LD: Provide a taped lecture if necessary. See tape #1.

Activity 3

Review lesson orally before giving the assignment.

Activity 4:

Read directions in class orally for all assignments.
Assign vocabulary sheets over related terms for all students.

LD: Taped vocabulary sheet using VAKT Approach pp. 53-64
Coded vocabulary sheets pp. 65-66
Content worksheets using outline or taped lecture (tape #1)
pp. 67-68
Daily contract for the hyperkinetic for content worksheets
pp. 69
Formal contract for the hyperactive pp. 70

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

food

DIRECTIONS: Listen to the definition while tracing the letters.

FOOD: is any substance (besides air and medicines) that provides for the body's growth, maintenance, repair, and reproduction.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Nutrient

DIRECTIONS: Listen to the definition while tracing the letters.

NUTRIENTS: chemicals that provide energy, materials for growth, and act to regulate body processes.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Carbohydrate

DIRECTIONS: Listen to the definition while tracing the letters.

CARBOHYDRATE: an important nutrient energy source composed of sugars and starches.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the
tape, trace the letters of the word.

Monosaccharides

DIRECTIONS: Listen to the definition while tracing the
letters.

MONOSACCHARIDES: another name for simple sugars.

DIRECTIONS: Copy the word 3 times, spelling it correctly
while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the
meaning of the word is correct.

Lesson 1
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Glucose

DIRECTIONS: Listen to the definition while tracing the letters.

GLUCOSE: A simple sugar necessary for energy for the body.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Fructose

DIRECTIONS: Listen to the definition while tracing the letters.

FRUCTOSE: A simple sugar found in fruits and honey.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Galactose

DIRECTIONS: Listen to the definition while tracing the letters.

GALACTOSE: A simple sugar found in milk.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Disaccharides

DIRECTIONS: Listen to the definition while tracing the letters.

DISACCHARIDES: another name for double sugars.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Sucrose

DIRECTIONS: Listen to the definition while tracing the letters.

SUCROSE: A double sugar found in cane and in sugar beets.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Maltose

DIRECTIONS: Listen to the definition while tracing the letters.

MALTOSE: A double sugar found in germinating grains.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Lactose

DIRECTIONS: Listen to the definition while tracing the letters.

LACTOSE: A double sugar found in milk.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Cellulose

DIRECTIONS: Listen to the definition while tracing the letters.

CELLULOSE: an indigestible starch abundant in plants.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 1

Name _____

Coded Vocabulary

□	○	▷	⊙	▣	⊖	⊗	◻	⊕	△	⊗	∅	>
A	B	C	D	E	F	G	H	I	J	K	L	M
<	◼	◁	■	▷	⊕	⊖	λ	√	≡	+	=	#
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

DIRECTIONS: Use the code above to decode the words being defined.

⊖ ◼ ◼ ⊙

_____ is any substance (besides air and medicines) that provides for the body's growth, maintenance, repair, and reproduction.

< λ ⊖ > ⊖ ▣ < ⊖

_____ are chemicals that provide energy, materials for growth, and regulate body processes.

▷ □ > ○ ◼ ◻ = ⊙ > □ ⊖ ▣

_____ a chemical class of food composed of sugars and starches.

> ◼ < ◼ ⊕ □ ▷ ▷ ◻ ◻ > ⊖ ⊙ ▣ ⊕

_____ are simple sugars.

⊗ ∅ λ ▷ ◼ ⊕ ▣

_____ a simple sugar found in fruits and honey.

⊖ > λ ▷ ⊖ ◼ ⊕ ▣

_____ a simple sugar that is used by the body for energy.

⊗ □ ∅ ◻ ▷ ⊖ ◼ ⊕ ▣

_____ a simple sugar found in milk.

⊙ ⊖ ⊕ ◻ ▷ ▷ ◻ ◻ > ⊖ ⊙ ▣ ⊕

_____ is another name for double sugars.

⊕ λ ▷ > ◼ ⊕ ▣

_____ a double sugar found in cane and sugar beets.

Coded Vocabulary-page 2

> □ ∅ ⊖ ▣ ⊕ □

___ a double sugar in germinating plants.

∅ □ ▷ ⊖ ▣ ⊕ □

___ a double sugar in milk.

▷ □ ∅ ∅ ≡ ∅ ▣ ⊕ □

___ an indigestible starch found in
plants.

LESSON 1

CONTENT WORKSHEET (Tape 1)

NAME _____

DIRECTIONS: Read over today's lesson in your notes, in your book, or on the provided outline given in class. (Sections 1-II.D.5) answer the following questions from your reading.

LD: Listen to today's lesson on Tape 1. Answer the following questions as you listen.

1. What are the 3 functions of food in the body?
 - a. _____
 - b. _____
 - c. _____

2. What do we call the materials in food which perform the functions of food?

3. What are the 6 chemical classes of food?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____

4. What is the function of carbohydrates? _____

5. What 2 substances compose all carbohydrates? _____

6. If a person's diet is low in carbohydrates, what will the body use for energy?

Content Worksheet (continued)

7. If excess carbohydrates are consumed, they are converted into _____.
8. What are simple sugars called? _____
9. The three simple sugars are (1) _____, (2) _____, and (3) _____, and are found in _____ and _____.
10. Disaccharides are actually _____.
11. _____, a double sugar, is found in cane and sugar beets.
12. _____, another double sugar, is found in germinating grains.
13. _____, a double sugar, is found in milk.
14. _____ consist of long chains of simple sugars.
15. _____ is an indigestible starch for humans, which is abundant in plants.
16. All _____ are converted to simple sugars in the digestive tract before being absorbed into the bloodstream.

DAILY CONTRACT

DATE 5-2-83

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: VAKT Approach to vocabulary

and I understand that if I invalidate my contract, the following punishment will occur: I will have to stay after school to complete my assignment.

SIGNED: John Smith

TEACHER: John and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if John does not keep to this agreement. I will try to help John in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of John's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-2-83

STUDENT: I agree to follow these rules of student behavior: I
will sit in my seat and not disturb others

Signed: John Smith

TEACHER: I agree to help John by giving him
interesting activities to work on.
I will also reward him for
success.

Signed: Mrs. Harter

PRINCIPAL: I agree to help John by warning
him when he is out of control
before disciplining.

Signed: Mr. Principal

PARENTS: I/We agree to help John by being
consistent in discipline.

Signed: John Smith Sr.
Mary Smith

LESSON 2: What are fats, proteins, and minerals?

Framework Objective:

1. Analyzes one's own nutritional patterns and initiates action to correct any problems.
2. Discusses major nutritional problems concerning teenagers, especially obesity, anemia, and periodontal disease.

Sub objectives: Students should be able to:

1. Discuss the difference in caloric values among nutrients.
2. Discuss what composes a fat molecule.
3. Distinguish between saturated and unsaturated fats.
4. Name foods high in fat, protein, and mineral content.
5. Discuss recommended amounts of fats, proteins, and minerals in the body.
6. Explain the importance of amino acids in the body.
7. Explain the difference between a complete and an incomplete protein.
8. Discuss the functions of fats, proteins, and minerals in the body.
9. Name 4 important minerals and their functions in the body.

Activity 1

Review Lesson 1 over food, nutrients, and carbohydrates.

LD: Necessary for dyslexics for memory retention of terms.

Activity 2

Go over goals and objectives for today's lesson. Write on the board.

LD: Have an understanding with the LD present that they must copy down the objectives and goals for the day, the assignment, and what they have learned. This gives structure and direction to the LD and helps break the task down into steps.

Activity 3:

Use the overhead projector to outline discussion using color coding, symbols, or pictures to emphasize important points.

LD: Provide LD with a typed copy of the discussion with highlighted points of importance.

LD: Provide taped lessons for the LD. (tape 1, lesson 2)

Activity 4:

Review today's lesson, emphasizing important points by repeating terms and definitions frequently.

Activity 5

Assign vocabulary terms. Read written instructions orally and explain the directions in your own words or by demonstration. Ask if there are any questions.

LD: Daily contract if necessary pp. 74
Formal contract if necessary pp. 75
Taped vocabulary for the VAKT Approach pp. 76-85
Coded vocabulary sheet pp. 86
Content worksheet pp. 87-88
Vocabulary identification worksheet pp. 89-97

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 2 CHAPTER _____ NAME John

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Content worksheet

and it is due: Tuesday

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

DAILY CONTRACT

DATE 5-3-83

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: VAKT Approach to Vocabulary

and I understand that if I invalidate my contract, the following punishment will occur: I will have to stay after school and miss the game

SIGNED: John Smith

TEACHER: John and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if John does not keep to this agreement. I will try to help John in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of John's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-3-83

STUDENT: I agree to follow these rules of student behavior: _____

I will stop hitting my neighboring
students during school hours

Signed: Michael WoodTEACHER: I agree to help Michael by isolating
him whenever possible.Signed: Mrs. HartenPRINCIPAL: I agree to help Michael by rewarding
him for every hour he does
not hit someone.Signed: Mr. PrincipalPARENTS: I/We agree to help Michael by punishing
him whenever he invalidates
his contractSigned: Steve Wood
Sally Wood

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Fat

DIRECTIONS: Listen to the definition while tracing the letters.

FAT: the highest nutrient energy source.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Glycerol

DIRECTIONS: Listen to the definition while tracing the letters.

GLYCEROL: one of the molecular components of fat.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Fatty acid

DIRECTIONS: Listen to the definition while tracing the letters.

FATTY ACIDS: one of the molecular components of fat needed by the body.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Saturated

DIRECTIONS: Listen to the definition while tracing the letters.

SATURATED FATS: are not free to accept hydrogen into the fat molecule and are thought to cause atherosclerosis.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Unsaturated

DIRECTIONS: Listen to the definition while tracing the letters.

UNSATURATED FATS: are free to accept hydrogen into the fat molecule.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Complete protein

DIRECTIONS: Listen to the definition while tracing the letters.

COMPLETE PROTEIN: is a protein containing all eight essential amino acids.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Incomplete protein

DIRECTIONS: Listen to the definition while tracing the letters.

INCOMPLETE PROTEIN: is a protein missing one or more essential amino acids.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Amino acids

DIRECTIONS: Listen to the definition while tracing the letters.

AMINO ACIDS: are protein building blocks of the body.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Enzymes

DIRECTIONS: Listen to the definition while tracing the letters.

ENZYMES: are chemical catalysts which act within the body.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Mineral

DIRECTIONS: Listen to the definition while tracing the letters.

MINERALS: are important regulating and building materials for the body.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 2
Coded Vocabulary

Name _____

□	○	▷	⊙	▣	⊖	⊗	◻	⊖	△	⊗	⊘	>
A	B	C	D	E	F	G	H	I	J	K	L	M
<	▣	<	■	>	⊕	⊖	λ	≡	≡	+	=	#
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

DIRECTIONS: Use the code above to decode the words being defined.

⊖ □ ⊕
 ___ the highest nutrient energy source.

⊗ ⊘ = ▷ ▣ > ■ ⊘
 ___ one of the molecular components of fat.

⊖ □ ⊕ ⊕ = □ ▷ ⊖ ⊙ ⊕
 ___ one of the molecular components of fat needed by the body.

⊕ □ ⊕ λ > □ ⊕ ▣ ⊙ ⊖ □ ⊕ ⊕
 ___ are not free to accept hydrogen into the fat molecule and thought to cause atherosclerosis.

λ < ⊕ □ ⊕ λ > □ ⊕ ▣ ⊙ ⊖ □ ⊕ ⊕
 ___ are free to accept hydrogen into the the fat molecule.

□ > ⊕ < ■ ▣ ▷ ⊖ ⊙ ⊕
 ___, a protein called the building blocks of the body.

▷ ■ > < ⊘ ▣ ⊕ ▣ < > ■ ⊕ ▣ ⊕ <
 ___ a protein containing all 8 essential amino acids.

⊖ < ▷ ■ > < ⊘ ▣ ⊕ ▣ < > ■ ▣ ⊕ ⊕ <
 ___ a protein missing one or more essential amino acids.

▣ < # = > ▣ ⊕
 ___ are chemical catalysts which act within the body.

LESSON 2

CONTENT WORKSHEET

NAME _____

DIRECTIONS: Read over today's lesson in your notes, in your book, or on the provided outline given in class. (Sections 11.E.-G.4.d) Answer the following questions from your reading.

LD: Listen to today's lesson on Tape 1, Lesson 2. Answer the following questions as you listen.

1. _____ have 2 times the caloric content of carbohydrates.
2. Fats provide the body with energy, _____, _____, and _____.
3. One pound of fat equals _____ calories.
4. A fat molecule is made up of _____, _____, and _____.
5. It is better for a person to consume _____ fats than _____ fats.
6. Fats should comprise _____ percent of a person's total caloric intake.
7. Proteins are the body's source of _____.
8. _____ are called the building blocks of the body.
9. Name 3 things amino acids are necessary for in the body.
 - a. _____
 - b. _____
 - c. _____

Content Worksheet (continued)

10. Explain the difference between a complete protein and an incomplete protein.

11. Approximately _____ percent of total caloric intake should be protein.

12. Name 2 functions of minerals.

a. _____

b. _____

13. Name 4 important minerals and their primary functions.

a. _____

b. _____

c. _____

d. _____

Lesson 2
Vocabulary Identification

Name _____

FAT

the highest caloric nutrient.

- 1) Circle the letters that spell the word.

w a t r m e l o s p g f j l b

- 2) Circle the right word. One in each line is correct.

fat	fit	fly
fly	fit	fat
fat	fog	fly

- 3) Circle the parts that spell the word.

fa gh ie ts kl

- 4) Fill in the letters.

f _ _ t _ _ _ t fa _ _

- 5) Fill in the word. One sentence uses the new word.

The bird can _ _ _ high in the sk

To much _ _ _ in the diet is dangerous.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Fatty Acid

one of the molecular components of fat needed by the body.

1) Circle the letters that spell the word.

t a c h i t y f a k d p j k

2) Circle the right word. One in each line is correct.

fatty acid	fly away
fatty acid	foreigner
fly away	fatty acid

3) Circle the parts that spell the word.

fat ac ty ner for id

4) Fill in the letters.

___ ___ ___ ty ___ ___ id

5) Fill in the word. One sentence uses the new word.

The kite will _____ in the wind.

_____ are needed by the body.

6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Saturated fats

are not free to accept hydrogen into the fat molecule and are thought to cause atherosclerosis.

- 1) Circle the letters that spell the word.

t r t d a t s g b s a u e d

- 2) Circle the right word. One in each line is correct.

saturated fats unsaturated fats
unsaturated fats saturated fats
unsaturated fats saturated fats

- 3) Circle the parts that spell the word.

fats un sat u rated sack

- 4) Fill in the letters.

sat _____ ed _____

- 5) Fill in the word. One sentence uses the new word.

A person should not eat alot of _____ fats.

_____ fats are believed to be better for you.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Unsaturated Fats

are free to accept hydrogen into the fat molecule.

- 1) Circle the letters that spell the word.

s a d t a r t s u p n a u a e f t s

- 2) Circle the right word. One in each line is correct.

saturated fats unsaturated fats
saturated fats unsaturated fats
unsaturated fats saturated fats

- 3) Circle the parts that spell the word.

rated un fats sat u unsat

- 4) Fill in the letters.

___ sat ___ rat ___ ___ ts

- 5) Fill in the word. One sentence uses the new word.

Butter is a _____ fat.

Crisco is a _____ fat.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Complete protein

a protein containing all eight essential amino acids.

- 1) Circle the letters that spell the word.

n c p l e t q o m e r o i s t v

- 2) Circle the right word. One in each line is correct.

complete	concrete	crisco
protein	pellagra	popcorn
crisco	complete	concrete

- 3) Circle the parts that spell the word.

tein pro in com plete mud

- 4) Fill in the letters.

c _ _ _ _ ete _ _ _ _ tein

- 5) Fill in the word. One sentence uses the new word.

Milk is a _ _ _ _ _ protein.

Nuts are a(n) _ _ _ _ _ protein.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Incomplete protein

a protein missing one or more essential amino acids.

- 1) Circle the letters that spell the word.

w r n e o p t l m c n i c e l t p

- 2) Circle the right word. One in each line is correct.

interupt incomplete income
incomplete income interupt
protein proton pluto

- 3) Circle the parts that spell the word.

tein in plete pro dog com day

- 4) Fill in the letters.

in _ _ _ plete pro _ _ _ _

- 5) Fill in the word. One sentence uses the new word.

Incom _ _ _ _ proteins have less than 8 essential amino acids.

Complete _ _ _ teins have all 8 essential amino acids.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Minerals

are important regulating and building materials for the body.

1) Circle the letters that spell the word.

n p m l i n e l s r s h u b h s

2) Circle the right word. One in each line is correct.

minerals miner mushroom
miner minerals mushroom
mushroom miner minerals

3) Circle the parts that spell the word.

mush in min er room als

4) Fill in the letters.

_____ s

5) Fill in the word. One sentence uses the new word.

Vegetables contain _____

The _____ struck gold in the mine.

6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

Enzymes

are chemical catalysts which act within the body.

1) Circle the letters that spell the word.

g h e m z x y m e s h j r s y f q

2) Circle the right word. One in each line is correct.

enclose enzymes envelope
envelope enzymes enclose
enzyme enclose envelope

3) Circle the parts that spell the word.

en cy zy mes vel close

4) Fill in the letters.

E _ _ _ _ _ s

5) Fill in the word. One sentence uses the new word.

_____ help regulate the body.

Please enclose the letter in the _____

6) Use the word in 3 or more sentences to show its meaning.

Lesson 2
Vocabulary Identification

Name _____

amino acids

are the protein building blocks of the body.

1) Circle the letters that spell the word.

x a o c i m n o d i b a c o s

2) Circle the right word. One in each line is correct.

albino amino alpine apple
 acids albino amino albino
 amino apple acids apple

3) Circle the parts that spell the word.

a i c acids a l b a p p a m i n o

4) Fill in the letters.

_ _ _ _ _ n o _ _ _ _ _ s

5) Fill in the word. One sentence uses the new word.

_ _ _ _ _ are strong solutions.
 _ _ _ _ _ acids are necessary for
 building new cells.

6) Use the word in 3 or more sentences to show its meaning.

LESSON 3: Why are vitamins and water important in maintaining health?Framework Objective:

1. Analyzes one's own nutritional patterns and initiates action to correct any problems.
2. Discusses major nutritional problems concerning teenagers, especially obesity, anemia, and periodontal disease.

Sub objectives: Students should be able to:

1. Explain the differences between fat-soluble and water-soluble vitamins.
2. Name and discuss the functions of the major vitamins.
3. Identify sources of fat-soluble and water-soluble vitamins.
4. Discuss disorders resulting from deficiencies in vitamins.
5. Discuss the function(s) of water in the diet.
6. Identify the 6 classes of nutrients.

Activity 1

Review main points from Lessons 1 and 2.

Activity 2

State and write out on the board goals and objectives for Lesson 3.

Activity 3:

Use the overhead, audiovisual aids, and large print. Provide color and visual stimulation in presentation.

LD: Provide a typed outline with important points highlighted, and a taped discussion of the lesson. (tape 1, lesson 3)
pp. 41-42

Activity 4

Film: Nutrition and the Teenager.

Activity 5

Review lesson orally before giving assignment.

Activity 6

Read directions orally for all vocabulary assignments.
Restate directions several ways in your own words.

- LD: Taped vocabulary using the VAKT Approach pp. 101-109
Coded vocabulary pp. 110
Content worksheets pp. 111-112
Flash cards over vitamins pp. 113-119
Daily contract if necessary pp. 120
Formal contract if necessary pp. 121

Activity 7

National Dairy Council's CURE FOR THE COMMON COLD.

- LD: Make adaptations to simplify instructions. Content is excellent.
Overhead projector activity in class before the activity assignment pp. 122-129

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 3 CHAPTER _____ NAME Mary

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Flash cards for
vitamins.

and it is due: Thursday

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Vitamin

DIRECTIONS: Listen to the definition while tracing the letters.

VITAMIN: are elements in foods not made by the body necessary for chemical regulation.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Fat soluble

DIRECTIONS: Listen to the definition while tracing the letters.

FAT SOLUBLE VITAMINS: are vitamins stored in the body. Excess amounts can be dangerous.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Water soluble

DIRECTIONS: Listen to the definition while tracing the letters.

WATER SOLUBLE VITAMINS: are required daily because they are not stored in the body and are excreted in waste products.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Pellagra

DIRECTIONS: Listen to the definition while tracing the letters.

PELLAGRA: is a vitamin disorder resulting from a deficiency in niacin.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Beriberi

DIRECTIONS: Listen to the definition while tracing the letters.

BERIBERI: Is a vitamin disorder resulting from a deficiency in thiamine.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Ascorbic acid

DIRECTIONS: Listen to the definition while tracing the letters.

ASCORBIC ACID: Is another name for Vitamin C.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Scurvy

DIRECTIONS: Listen to the definition while tracing the letters.

SCURVY: Results from extreme deficiencies in Vitamin C.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Water

DIRECTIONS: Listen to the definition while tracing the letters.

WATER: Is the sixth nutrient needed for metabolic reactions, gas exchange, body temperature and body composition.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Rickets

DIRECTIONS: Listen to the definition while tracing the letters.

RICKETS: A disorder resulting from a serious vitamin D deficiency.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 3
Coded Vocabulary

Name _____

□	○	▷	⊙	▣	⊖	⊗	◻	⊖	△	⊗	∅	>	<
A	B	C	D	E	F	G	H	I	J	K	L	M	N
◻	<	■	>	⊕	⊖	λ	∇	≡	+	=	#		
O	P	Q	R	S	T	U	V	W	X	Y	X		

DIRECTIONS: Use the code above to decode the words being defined.

∇ ⊖ ⊕ □ > ⊖ < ⊕
 _____ are elements in foods not made in the body for chemical regulation.

⊖ □ ⊕ ⊕ ◻ ∅ λ ○ ∅ ▣
 _____ vitamins are vitamins stored in the body.

≡ □ ⊖ ▣ > ⊕ ◻ ∅ λ ○ ∅ ▣
 _____ vitamins are required daily because they are not stored in the body and are excreted in waste.

< ▣ ∅ ∅ □ ⊗ > □
 _____ is a vitamin disorder resulting from a deficiency in thiamine.

○ ▣ > ⊖ ○ ◻ ⊖ ▷ □ ▷ ⊖ ○
 _____ is another name for Vitamin C.

⊕ λ > ∇ ▣ =
 _____ results from extreme deficiencies in Vitamin C.

> ⊖ ▷ ⊗ ▣ ⊖ ⊕
 _____ results from a deficiency in Vitamin D.

≡ □ ⊖ ▣ >
 _____ is the sixth nutrient needed for metabolic reactions, gas exchange, body temperature, and body composition.

LESSON 3

CONTENT WORKSHEET

NAME _____

DIRECTIONS: Read over today's lesson in your notes, in your book, or on the provided outline given in class. (Sections II.H--II.1.)

Answer the following questions from your reading.

LD: Listen to today's assignment on Tape 1, Lesson 3. Answer the following questions as you listen.

1. _____ are present in minute amounts in foods needed by the body for chemical regulation.
2. Vitamins act with enzymes as _____.
3. What is the difference between a fat-soluble vitamin and a water-soluble vitamin?

4. Name 4 fat-soluble vitamins and their primary function(s).
 - a. _____
 - b. _____
 - c. _____
 - d. _____
5. Name 4 water-soluble vitamins and their primary function(s).
 - a. _____
 - b. _____
 - c. _____
 - d. _____
6. When vitamin D is added to milk, it is said to _____

Content Worksheet (continued)

7. _____ is a disorder resulting from a deficiency of vitamin D.
8. The B vitamins include _____, _____, _____, and _____.
9. Why do water-soluble vitamins require special care when being cooked?

10. A deficiency in niacin results in _____, and a deficiency in _____ results in beriberi.
11. Another name for vitamin C is _____.
12. A deficiency in vitamin C results in _____.
13. Water makes up _____ percent of the body and _____ percent of blood.
14. Name 3 functions of water in the body.
- a. _____
- b. _____
- c. _____
15. Name 4 ways a person loses water from his system.
- a. _____
- b. _____
- c. _____
- d. _____

Lesson 3
Flash Card

Name _____

DIRECTIONS: Cut out the following card. Fold the paper in half on the dashed line and fill in the requested information on the back side. You and a partner are to quiz each other. The one to get the most vocabulary terms correct will receive a reward.

_____ : FUNCTION

_____ : DEFINITION

Vitamins

LIST 4 SOLUBLE VITAMINS AND THEIR FUNCTION:

Fat soluble

Water soluble

What can be done to prevent Pellagra?

Pellagra

What causes Beriberi?

Beriberi

What causes Rickets?

Rickets

4)

3)

2)

1)

Name 4 functions of water:

Water

Which nutrient studied acts as a coenzyme?

Coenzyme

When Vitamin D is added to milk it is called

Vitamin D

Thiamine

Name 2 facts about Thiamine.

1) _____

2) _____

Niacin

What is another name for niacin? _____

Why is niacin important in the body? _____

Scurvy

What causes Scurvy? _____

Ascorbic acid

Another name for Ascorbic acid is: _____

Is ascorbic acid a fat soluble vitamin or a water soluble
vitamin? _____

DAILY CONTRACT

DATE 5-3

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: Flash cards over vitamins

and I understand that if I invalidate my contract, the following punishment will occur: I will have to help clean up the room.

SIGNED: Mary Jones

TEACHER: Mary and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if Mary does not keep to this agreement. I will try to help Mary in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of Mary's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-3

STUDENT: I agree to follow these rules of student behavior: _____

I will come to class prepared
with materials, book, and assignment.

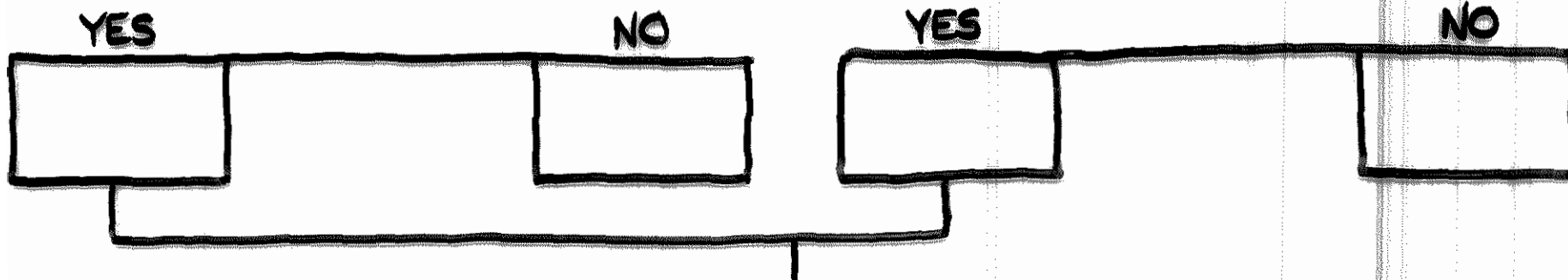
Signed: Mary JonesTEACHER: I agree to help Mary by reminding
her daily of her obligation to
come to class prepared.Signed: Mrs. HarterPRINCIPAL: I agree to help Mary by giving
her detention for not being
prepared for Mrs. Harter's classSigned: Mr. PrincipalPARENTS: I/We agree to help Mary by helping
get ready for school each night
before going to bed.Signed: Sam Jones
Dorothy Jones

HAVE YOU EVER HAD A COLD?

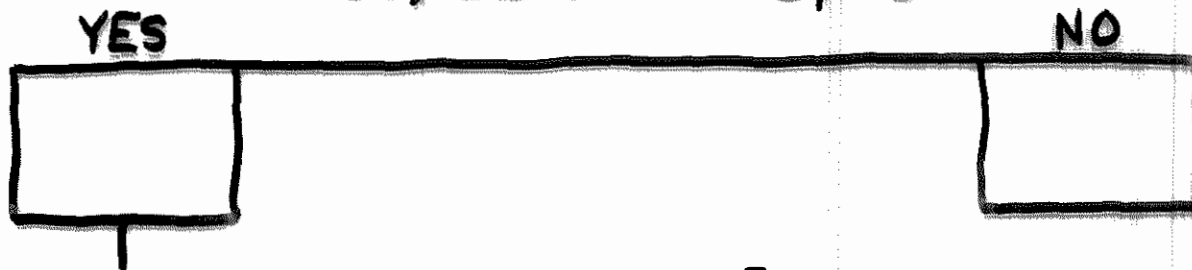


Have you ever taken vitamin C?

Have you ever taken vitamin C?



Do you take vitamin C pills?

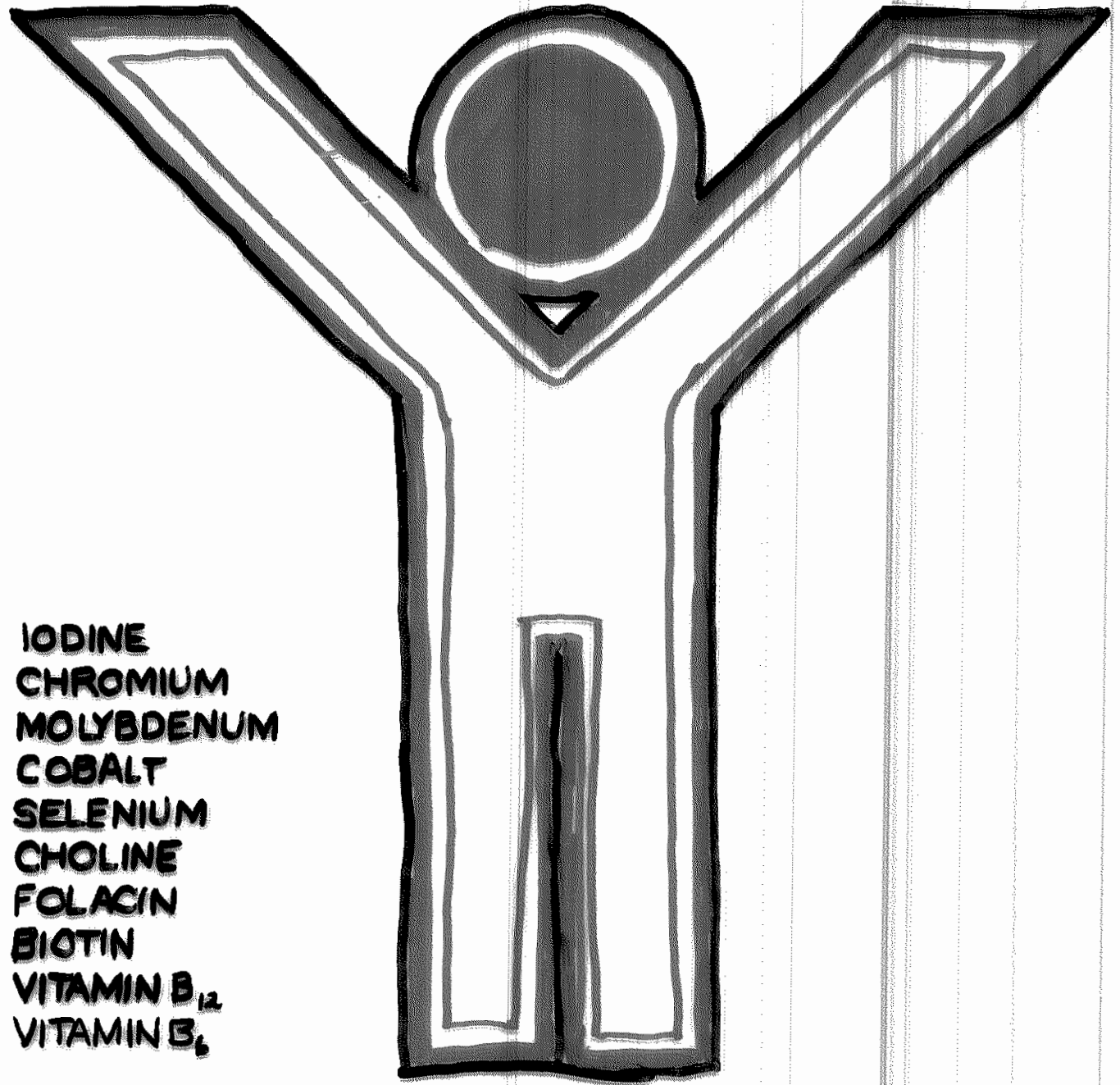


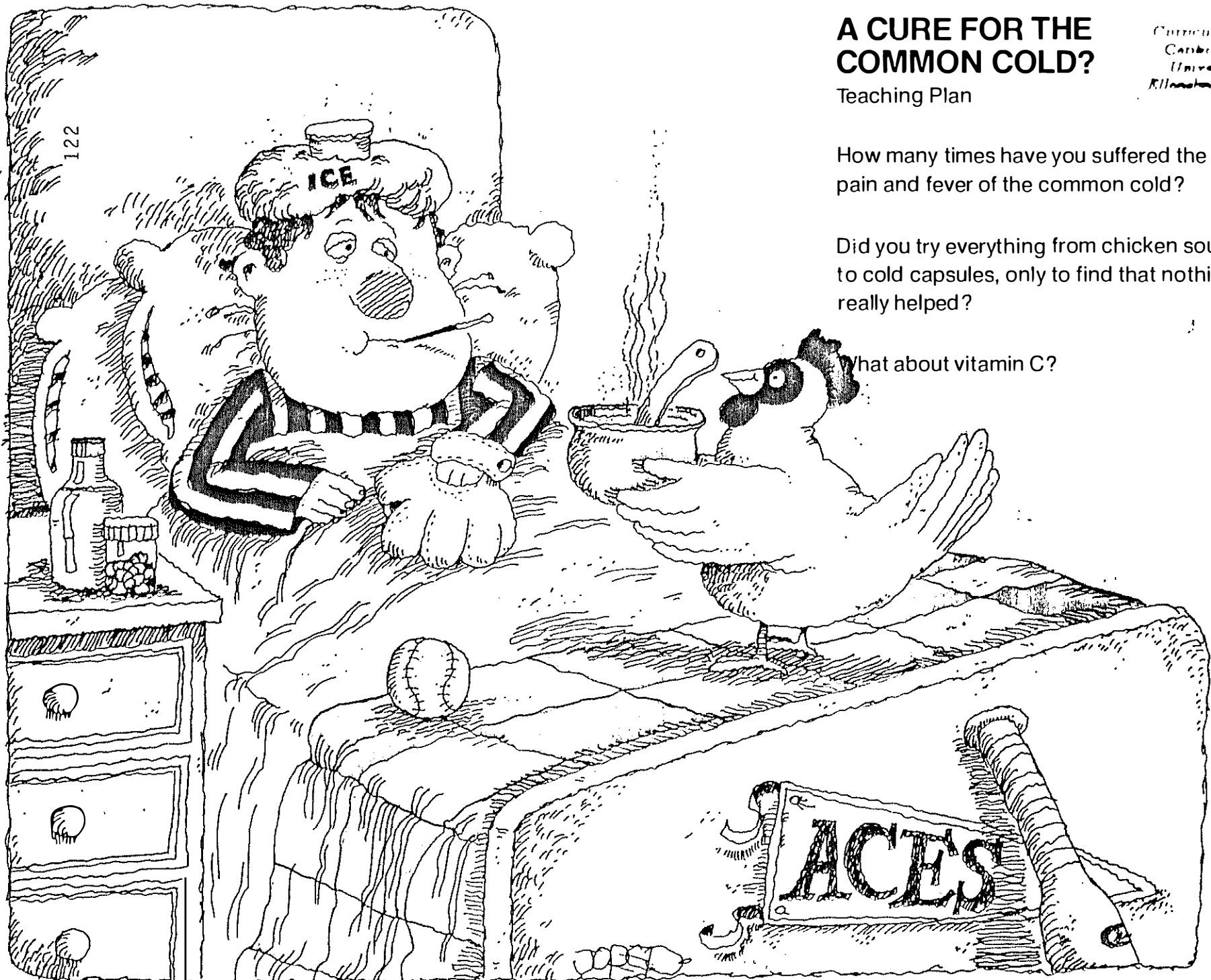
How much vitamin C is in your pills? _____ Milligrams
How much vitamin C does your body need? _____ Milligrams
Difference _____

IN MY BODY!

VITAMIN A
RIBOFLAVIN
NIACIN
WATER
CARBOHYDRATES
PROTEIN
VITAMIN C
IRON
CALCIUM
THIAMIN
FAT
ZINC
COPPER
VITAMIN D
CHLORIDE
FLUORINE
SODIUM
MAGNESIUM
VITAMIN K
PANTOTHENIC ACID
MANGANESE
POTASSIUM
PHOSPHORUS
VITAMIN E

IODINE
CHROMIUM
MOLYBDENUM
COBALT
SELENIUM
CHOLINE
FOLACIN
BIOTIN
VITAMIN B₁₂
VITAMIN B₆





A CURE FOR THE COMMON COLD?

Teaching Plan

*Curriculum Unit
Carol Washburn
University of
Rhode Island
Rhode Island, Massachusetts*

How many times have you suffered the pain and fever of the common cold?

Did you try everything from chicken soup to cold capsules, only to find that nothing really helped?

What about vitamin C?

Activity Synopsis

Students examine their personal experiences to cite remedies for curing the common cold. They then investigate the widely publicized claim that increased consumption of vitamin C can cure, and even prevent, the common cold. They also explore how vitamin C is used in the body.

Finally, students evaluate their own diets to determine if their vitamin C intake meets the recommendations of the National Academy of Sciences. Students discover that their nutrient needs can be met by eating a variety of foods.

Activity Outcomes

After completing this activity, the student will be able to:

- Describe health consequences of nutrient (vitamin C) excesses
- Determine the relationship between diet and disease (colds)

Activity Terminology

- Nutrient
- Pantothenic acid
- Vitamin C

Estimated Teaching Time

One class period (approximately 40-55 minutes)

Teaching Materials

Teacher:

- Have You Ever Had a Cold?** transparency
- Nonpermanent pen or marker to write on transparencies
- Millions Turn on to Pantothenic Acid** newspaper article
- In My Body!** transparency

Each Student:

- Vitamin C Isn't Just for Breakfast Anymore!** worksheets

Advance Preparation

- Duplicate the **Vitamin C Isn't Just for Breakfast Anymore!** worksheets.
- If necessary, arrange for an overhead projector and screen.
- Refer to page 8 of the *Nutrition Source Book* for additional information about vitamin C.

Teaching Plan

1. Set the stage by explaining that, since the cold season (either summer or winter) is quickly approaching (or already upon us), you'd like to take some precautionary measures.

In fact, you would like to find out if any students have a cure for the common cold.
2. Project the **Have You Ever Had a Cold?** transparency. Keep all but the top question and its pair of boxes covered with a piece of paper. Ask for a show of hands:
 - How many of you have ever had a cold? (Count and record that number on the transparency.)
 - Is there anyone who has never had a cold? (Count and record on the transparency.)
3. If, by any chance, a student has never had a cold, ask him/her:
 - What do you attribute your good health to?
 - Is it something that runs in your family (a hereditary trait)?
 - The amount of sleep you get?
 - The food you eat?
 - The preventive medicine you take, such as vitamins or mouthwashes?
4. Ask those who have had a cold:
 - Who had the most recent cold?
 - How did you feel?
 - Did you have a sore throat?
 - A runny nose?
 - Were you tired and run down?
 - Did you have a fever?
 - Chills?
 - A headache?
 - A cough?
 - What did you do for your cold?

5. Survey other students to find out how they treat their colds.

Confirm, if mentioned, that the following are probably the most recommended courses of action:

- Plenty of rest
- 124 —Plenty of fluids (6-8 glasses of water or juice a day to prevent dehydration and help loosen mucous secretions)
- Aspirin (if needed, 1-2 tablets about every 4 hours to help reduce fever and pain from headaches, body aches, sore throats)

Discussing Vitamin C and Colds

6. Uncover the next question on the transparency. Ask those who have had colds:

- How many of you have ever taken vitamin C for your colds (or for your health in general)? (Count and record that number on the transparency.)
- Who hasn't ever taken vitamin C? (Again, count and record on the transparency.)

Ask the students who have never had a cold the same 2 questions.

7. If no one has taken vitamin C, ask:

- Who takes multivitamins? (Count and record on the transparency, changing "vitamin C" to "multivitamins.")

Some of the questions below may have to be reworded.

8. Ask those who take vitamin C:

- What does vitamin C do for your body?
- Did it help your cold?
- Would you take it again if you were sick?

9. Ask those who have never been sick:

- Do you take vitamin C?
- Do you think vitamin C has helped you prevent colds?

10. Ask those who don't take vitamin C:

- Why don't you take vitamin C?

11. Let them know that:

- Dr. Linus Pauling, who received 2 Nobel prizes (the first in chemistry for his research on the nature of the chemical bond and the second in peace for his opposition to all warfare as a means of solving international conflicts), feels that vitamin C can cure a cold.
- And he feels that large amounts of the vitamin can even prevent the common cold.

12. Again, ask those who don't take vitamin C:

- Would you consider taking vitamin C for future colds?
- Why or why not?

13. Uncover the third question on the transparency. Ask those who answered "yes" to the previous question on the transparency:

- Who takes vitamin C in pill form? (Count and record that number on the transparency.)

14. Uncover the remainder of the transparency. Ask those who take vitamin C pills:

- How much vitamin C is in each of the pills you take? (Record their responses on the transparency.)

If no one knows, use the information below:

	milligrams
One-a-Day Multivitamins	60
Squibb Vitamin C	250
Walgreens Vitamin C	250
Fisons Vitamin C	125/250
Pfipharmecs Viterra C	250/500
Meyer Vicon C	300
Pharmacare Solucap C	1000
Nature's Bounty Vitamin C	300/1000/1500

15. Go on to ask the class:

- What is vitamin C? *Vitamin C is a nutrient which the body needs for good health.*
- How much vitamin C do you think your body needs a day?

Explain that:

- The National Academy of Sciences recommends that 11-14-year-olds need about 50 milligrams of vitamin C each day. (Write "50 milligrams" on the transparency if students are between 11 and 14.)
- Those over 14 need approximately 60 milligrams. (If the majority of the class is over 14, write "60 milligrams" on the transparency.)

16. Subtract 50 (or 60) milligrams from the specific amount of vitamin C in a vitamin C pill. Ask the class:

- What happens to this extra vitamin C?

17. Explain that:

- The body is unable to store vitamin C in any great quantity.
- So, the body's supply of vitamin C needs to be replenished daily.
- Extra vitamin C that the body doesn't use up in a day is usually excreted.
- High doses of vitamin C may, therefore, be an unnecessary expense.

18. Go on to ask the class:

- Is it possible to get too much vitamin C?

Correct any misconceptions by explaining that extreme doses of vitamin C have:

- Caused diarrhea, flatulence (gas), and abdominal distention, especially when taken without food.
- Been converted in the body to oxalic acid, an ingredient in kidney stones.
- When taken by pregnant women, resulted in their infants showing symptoms of scurvy (a vitamin C deficiency) when fed a normal diet after birth, until their bodies have adapted.
- Resulted in scurvy symptoms when those taking large doses of vitamin C for a long period of time try to discontinue vitamin C. This occurs until their bodies adapt to smaller amounts.

19. Ask those who answered "no" to the third row question on the transparency:

- If you don't take vitamin C pills, where do you get your vitamin C?

—What foods provide vitamin C? (Write their responses on the chalkboard, developing a list of vitamin C sources.)

20. Point out to the class that just ½ cup of orange juice contains 56 milligrams of vitamin C—enough (or almost enough for those over 14) for the whole day.

Analyzing Diets for Vitamin C Sources

21. Pass out a copy of the **Vitamin C Isn't Just for Breakfast Anymore!** worksheets to each student.

Explain that this is a list of common foods and the amount of vitamin C in them.

22. Go over the worksheet directions with the class:

- Students should try to recall all the foods they ate yesterday (or any typical day they can remember).
- Have them circle the foods eaten (and the milligrams of vitamin C in them) on the worksheet.
- If a food isn't listed, tell them to substitute a similar food. For example, if fish sticks were eaten for dinner, use the vitamin C value for fried perch instead.
- When finished, have students add up the circled milligrams of vitamin C.

23. When students have finished their worksheets, ask them:

—Did anyone have trouble getting at least 50 (or 60) milligrams of vitamin C?

If yes, ask:

- What was your total?
- What types of food did you eat?
- Are there any foods you like that could bring your total up to 50 (or 60)?

24. Go on to ask other students:

- Did anyone have over 50 (or 60) milligrams of vitamin C yesterday?
- How many milligrams did you have?
- What foods did you eat that were good sources of vitamin C?
- Do you take vitamin C pills?
- Do you need that extra vitamin C?

—What does your body do with that extra vitamin C? *It excretes most of the excess.*

—Is there any harm in taking extra vitamin C? *Yes, if extreme doses are taken, diarrhea and kidney stones may result. Symptoms of scurvy may occur when returning to smaller doses of vitamin C.*

25. Continue asking the class:

- Do we even need vitamin C? *Yes.*
- What does it do? *Answers may include: vitamin C helps form collagen, which holds body cells together; it helps strengthen blood vessels; it helps wounds and broken bones heal; it helps resist infection; it helps the body use iron.*
- Does vitamin C have anything to do with the common cold? *In a way, because it does increase resistance to infection.*
- However, Linus Pauling claims that large doses of vitamin C (1000 to 10,000 milligrams a day) not only cure colds, but keep you from catching a cold. Do you think large doses of vitamin C can prevent a cold?

26. Let the class know that:

- The American Medical Association disagrees with Linus Pauling.
- It questions the safety of large doses of vitamin C recommended by Dr. Pauling.
- And it cautions that the scientific community has not proven that large doses of vitamin C can prevent or cure the common cold.
- When vitamin C is taken in these large doses, it is no longer functioning as a vitamin but as a drug.

Staging the Pantothenic Acid Spoof

27. Appear to shift the topic of discussion.

Quickly show the class the article **Millions Turn on to Pantothenic Acid**. Do not give students a chance to read any more than the headline.

28. Express concern over the situation. Ask the class:

- Have any of you ever tried pantothenic acid?
- Do your parents know about this?
- Where did you get it?

29. Tell students that, even though only a few (or none) of them admitted it, you know for a fact that all of them are pantothenic acid users.

30. Explain that:

- Pantothenic acid is just 1 of about 14 vitamins the body needs to function.
- Pantothenic acid is in yeast, liver, kidneys, eggs, milk, beef, cheese, broccoli, sweet potatoes, corn, legumes, and kale.
- Pantothenic acid helps the body metabolize carbohydrate, fat, and protein.
- Pantothenic acid can be found in almost every body tissue.

31. Ask students:

- Have you ever taken a pantothenic acid pill?
- Aren't you concerned that you might not be getting enough of it for your body to function?

32. Make the point that, while vitamin pills do supply some of the major vitamins like vitamin C, they may not provide some of the lesser known vitamins and minerals, like pantothenic acid, which the body actually needs.

33. End the session by projecting the **In My Body!** transparency. Let the class know that the body needs all these nutrients to stay healthy—not just the nutrients in vitamin pills.

And 1 of the best ways to get these nutrients is by eating a wide variety of foods.

Evaluation

Circle the correct answer.

- 126
- Some of the best sources of vitamin C are
 - Milk and other dairy products
 - Fruits and vegetables
 - Lean meats
 - Bread and cereals
 - One function of vitamin C in our bodies is to
 - Build red blood cells
 - Improve eyesight
 - Provide energy
 - Help resist infection
 - The recommendation for vitamin C for people between 11 and 14 years old is
 - 25 milligrams
 - 50 milligrams
 - 60 milligrams
 - 1000 milligrams
 - Which of the following statements about vitamin C is NOT true?
 - You should try to replenish the body's supply of vitamin C daily
 - Large doses of vitamin C can cure the common cold
 - Extra vitamin C not used by the body is usually excreted
 - Vitamin C helps wounds and broken bones heal
 - A possible side-effect of extremely large doses of vitamin C is
 - Diarrhea
 - Blindness
 - Goiter
 - Beriberi

Going Further

—Have students compare the amounts of nutrients in several brands of multivitamins with their bodies' needs for these nutrients (the National Research Council's Recommended Dietary Allowances). Have them then determine if overdoses of these nutrients are dangerous, and if vitamin supplements are really necessary.

Resources

—*Vitamins: What Do They Do?* Los Angeles: Alfred Higgins Productions, Inc.

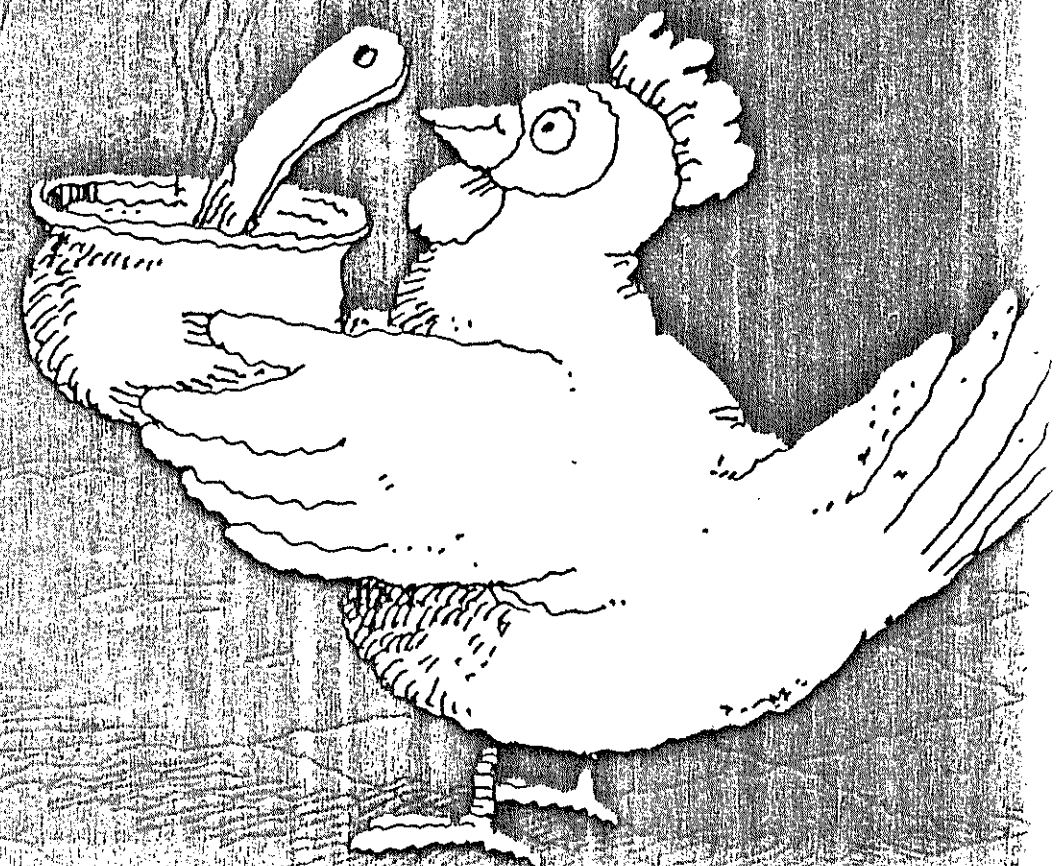
This 21-minute, 16mm, sound, color film discusses the dangers of taking too many vitamin pills. It also reviews the best sources of each vitamin and symptoms of vitamin deficiencies.

—Pauling, L. *Vitamin C, the Common Cold, and the Flu*. San Francisco: W.H. Freeman, 1976.

Dr. Linus Pauling's controversial theories about vitamin C and disease prevention are discussed in this book.

A CURE FOR THE COMMON COLD?

Materials:



VITAMIN C ISN'T JUST FOR BREAKFAST ANYMORE!

	Vitamin C mg	Meat and other protein-rich foods	Vitamin C mg	Grain	Vitamin C mg
127 Milk					
Buttermilk, 1 cup (245 gm)	2	Bacon, ½ oz (15 gm)	—	Bagel (55 gm)	—
Cheese, American, 1 oz (28 gm)	—	Beans, Refried, ½ cup (150 gm)	—	Biscuit, Baking Powder, enriched (28 gm)	—
Cheese, Cheddar, 1 oz (28 gm)	—	Beef, Roast, 3 oz (85 gm)	—	Bread, White, slice, enriched (23 gm)	—
Cheese, Cottage, ½ cup (113 gm)	—	Beef Liver, 3 oz (85 gm)	23	Bread, Whole Wheat, slice (23 gm)	—
Cheese, Swiss, 1 oz (28 gm)	—	Bologna, 1 oz (28 gm)	—	Cornbread, 2½" x 3", enriched (85 gm)	1
Cocoa, ¾ cup (188 gm)	2	Chicken, Fried, 3 oz (85 gm)	—	Cornflakes, ¾ cup (19 gm)	—
Cream, Sour, 1 tbsp (12 gm)	—	Egg, Fried, large (50 gm)	—	Crackers, Graham, 2 (14 gm)	—
Cream, Whipped, 1 tbsp (8 gm)	—	Egg, Hard-cooked, large (50 gm)	—	Crackers, Saltines, 5 (14 gm)	—
Half-and-Half, 1 tbsp (15 gm)	—	Egg, Scrambled, large (64 gm)	—	Hominy Grits, ½ cup, enriched (123 gm)	—
Ice Cream, Vanilla, ½ cup, ¼ pint (66 gm)	—	Frankfurter, 2 oz (57 gm)	—	Noodles, Egg, ½ cup, enriched (80 gm)	—
Milk, 1 cup (244 gm)	2	Ham, Baked, 3 oz (85 gm)	—	Oatmeal, ½ cup (120 gm)	—
Milk, Chocolate, 1 cup (250 gm)	2	Meat Loaf, 3 oz (85 gm)	—	Pancake, 4" diameter, enriched (27 gm)	—
Milk, Lowfat (2%), 1 cup (244 gm) fortified with vitamin A	2	Meat Patty, 3 oz (85 gm)	—	Rice, ½ cup (103 gm)	—
Milk, Skim, 1 cup (244 gm) fortified with vitamin A	2	Peanut Butter, 2 tbsp (32 gm)	—	Roll, Frankfurter, enriched (40 gm)	—
Milkshake, Chocolate, 1½ cups (349 gm)	—	Peanuts, Salted, ¼ cup (36 gm)	—	Roll, Hamburger, enriched (40 gm)	—
Yogurt, Strawberry, 1 cup (227 gm)	1	Peas, Blackeye (immature), ½ cup (124 gm)	21	Roll, Hard, enriched (50 gm)	—
		Peas, Blackeye (mature), ½ cup (124 gm)	—	Toast, White, slice (20 gm)	—
		Perch, Fried, Breaded, 3 oz (85 gm)	—	Tortilla, Corn, 6" diameter, enriched (30 gm)	—
		Pork Chop, 3 oz (85 gm)	—	Waffles, 2, 3½" x 5½", enriched (47 gm)	—
		Sausage, 1 oz (28 gm)	—		
		T-Bone Steak, 3½ oz (95 gm)	—		
		Tuna, 3 oz (85 gm)	—		

Circle any foods (and the milligrams of vitamin C in them) that you ate yesterday. Add up the circled milligrams. Do they total 50, if you're between 11 and 14 years old? Or 60 if you're over 14?

VITAMIN C ISN'T JUST FOR BREAKFAST ANYMORE!

Fruit-Vegetable		Vitamin C mg	Fruit-Vegetable		Vitamin C mg	Combinations		Vitamin C mg
Apple, medium (138 gm)	6	Lettuce, 1/6 head, 1/2 cup (76 gm)	5	Beans, Baked, Pork and Tomato Sauce, 1/2 cup (128 gm)	3			
Applesauce, 1/2 cup (128 gm)	1	Lettuce Leaves, 2 large (50 gm)	9	Beef and Vegetable Stew, 1 cup (235 gm)	16			
Apricots, Dried, 4 halves (15 gm)	2	Okra, 4 pods, 1/2 cup (43 gm)	9	Chili Con Carne with Beans, 1 cup (250 gm)	—			
Asparagus, 4 spears, 1/2 cup (60 gm)	16	Onions, 1/2 cup (105 gm)	7	Custard, Baked, 1/2 cup (133 gm)	—			
Banana, medium (119 gm)	12	Orange, medium (131 gm)	66	Macaroni and Cheese, 1/2 cup (100 gm)	—			
Beans, Green, 1/2 cup (63 gm)	8	Orange Juice, 1/2 cup (125 gm)	56	Pizza, Cheese, 1/4 of 14" pie, enriched (150 gm)	12			
Beans, Lima, 1/2 cup (85 gm)	14	Peaches, 1/2 cup (128 gm)	4	Soup, Chicken Noodle, 1 cup (226 gm)	—			
Beets, 1/2 cup (83 gm)	2	Pear, medium (166 gm)	7	Soup, Cream of Tomato, 1 cup (250 gm)	15			
Broccoli, stalk, 1/2 cup (78 gm)	70	Peas, Blackeye (see meat)	—	Spaghetti, Meat Balls and Tomato Sauce, 1 cup (248 gm)	22			
Cabbage, 1/6 head, 1/2 cup (73 gm)	17	Peas, Green, 1/2 cup (80 gm)	10	Taco, Beef (108 gm)	4			
Cantaloupe, 1/4 medium (96 gm)	32	Pineapple, large slice (122 gm)	9					
Carrots, 1/2 cup (73 gm)	4	Potato, Baked, large (142 gm)	28	Others				
Carrot Sticks, 5" carrot (50 gm)	4	Potatoes, Boiled, 2 small (122 gm)	20	Jelly, Currant, 1 tbsp (18 gm)	1			
Cauliflower, 1/2 cup (60 gm)	33	Potatoes, French-Fried, 20 pieces (85 gm)	18	Pie, Apple, 1/6 of 9" pie, enriched (158 gm)	2			
Celery Sticks, 8" stalk (57 gm)	5	Potatoes, Mashed, 1/2 cup (98 gm)	10	Potato Chips, 10 chips (20 gm)	3			
Coleslaw, 1/2 cup (57 gm)	16	Potato, Sweet, 1/2 medium (55 gm)	12	Sherbet, Orange, 1/2 cup (97 gm)	2			
Corn, 1/2 cup (83 gm)	3	Prunes, Stewed, 4 medium, 2 tbsp juice (60 gm)	1	Other foods in this group (such as candy, cake, cookies, soft drinks, alcoholic beverages, sugar, and fats) provide no vitamin C.				
Corn, 5" ear (125 gm)	11	Raisins, 4 1/2 tbsp (43 gm)	—					
Fruit Salad, 1/2 cup (170 gm) apple, orange, banana, lettuce	44	Squash, Summer, 1/2 cup (105 gm)	12	TOTAL				
Grapefruit, pink, 1/2 medium (118 gm)	45	Squash, Winter, 1/2 medium, 1/2 cup (103 gm)	13					
Grapes, 1/2 cup (71 gm)	3	Strawberries, 1/2 cup (75 gm)	44					
Greens, 1/2 cup (78 gm) mustard greens, spinach greens, turnip greens	36	Tomato, 1/2 medium (100 gm)	23					
		Tomato Juice, 1/2 cup (122 gm)	19					
		Tossed Salad, 3/4 cup (59 gm) lettuce, green pepper, radish, carrot	26					
		Watermelon, 1 cup (200 gm)	14					



Please note: A newspaper clipping on this page was redacted due to copyright concerns.

LESSON 4: Learning wheels about nutrients, vitamins, and minerals.

Framework Objective:

1. Investigates current nutritional guidelines recommended by Federal agencies and professional groups.

Sub objectives: Students should be able to:

1. Identify each nutrient, state a function, and a food source.
2. State functions and food sources of vitamins and minerals.

Activity 1

Hand out all materials needed for the activity.

Activity 2

Go over directions orally by reading the written directions. Explain in your own words as you demonstrate the procedure.

LD: The teacher may have to work with the LD who possess a disability in auditory memory.

Activity 3

Allow students class time to do the activity. Provide easily obtainable sources for required information.

LD: Allow LD to review tapes if necessary to remember the learned information.
Review terms and meanings with the dyslexic before beginning the activity.

Activity 4

Provide assignments later in the unit requiring usage of the learning wheels.

LESSON 4: Construction of Learning Wheels

DIRECTIONS:

1. Cut out all jackets and circles.
2. Label all requested information by using your book, previous worksheets, notes, or outlines.
3. Alternative: Cut out pictures of foods representing the particular vitamin or mineral. Place pictures on the spot labeled "Sources."
4. Cut out 2 circles cardboard.
5. Paste 1 cardboard circle on the back of the nutrient circle. Paste the other circle on the back of the vitamin circle, and put the mineral circle on the other side.
6. Cut 4 cardboard jackets.
7. Glue a jacket to each piece of cardboard.
8. Place the nutrient circle inside the 2 nutrient jackets, and connect with a paper tack.
9. Tape edges so wheel turns easily.
10. Repeat process by putting the mineral circle face up with the mineral jacket, and the vitamin circle face up with the vitamin jacket.

MATERIALS NEEDED:

2 copies of nutrient jacket
1 copy each of: nutrient circle
 vitamin jacket
 vitamin circle
 mineral jacket
 mineral circle
6 pieces of cardboard
glue
magazines with pictures of food
2 paper tacks
colored pencils
tape

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 4 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: making learning
wheels

and it is due: Friday

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

Sources

Examples

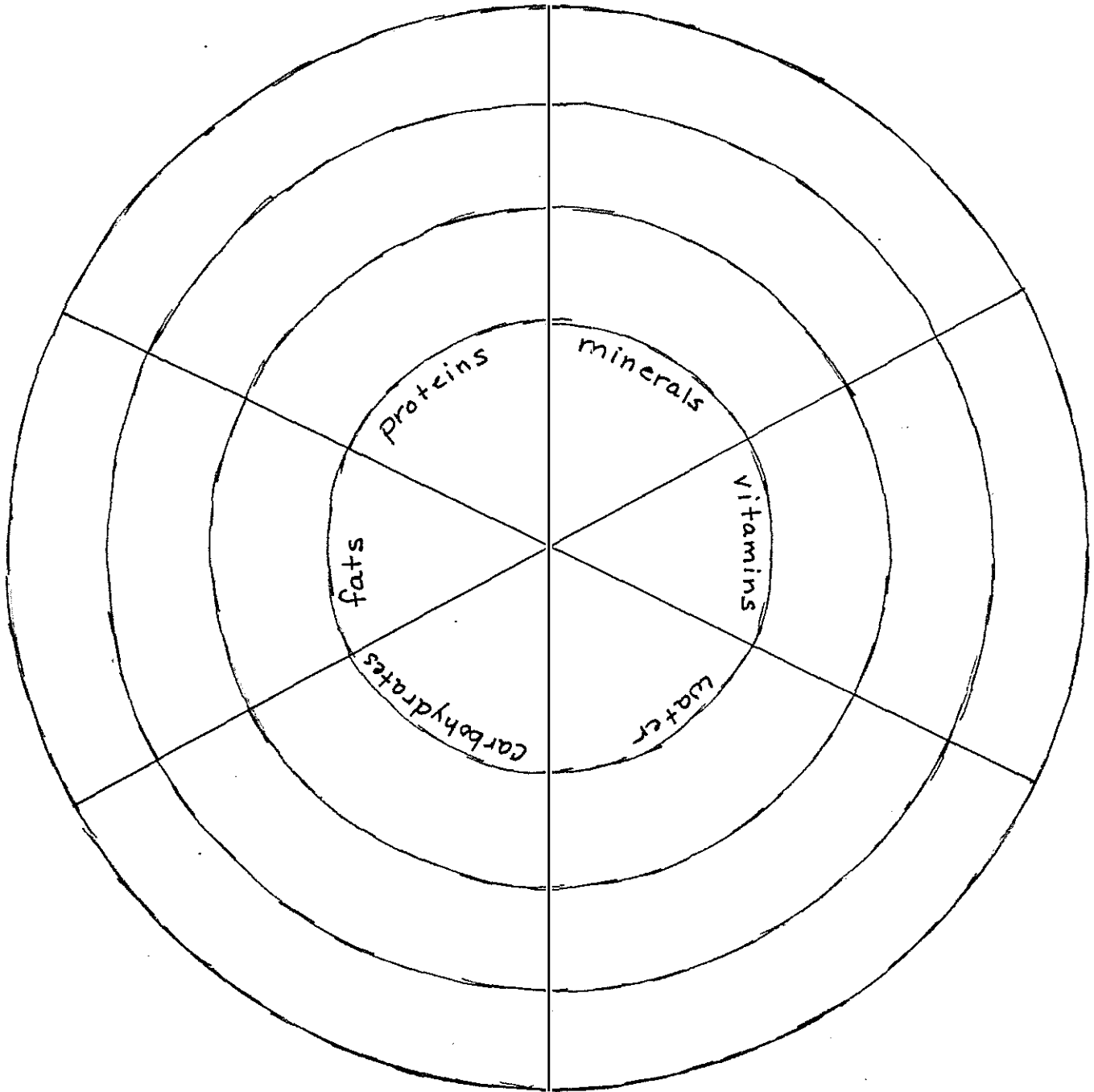
Function(s)

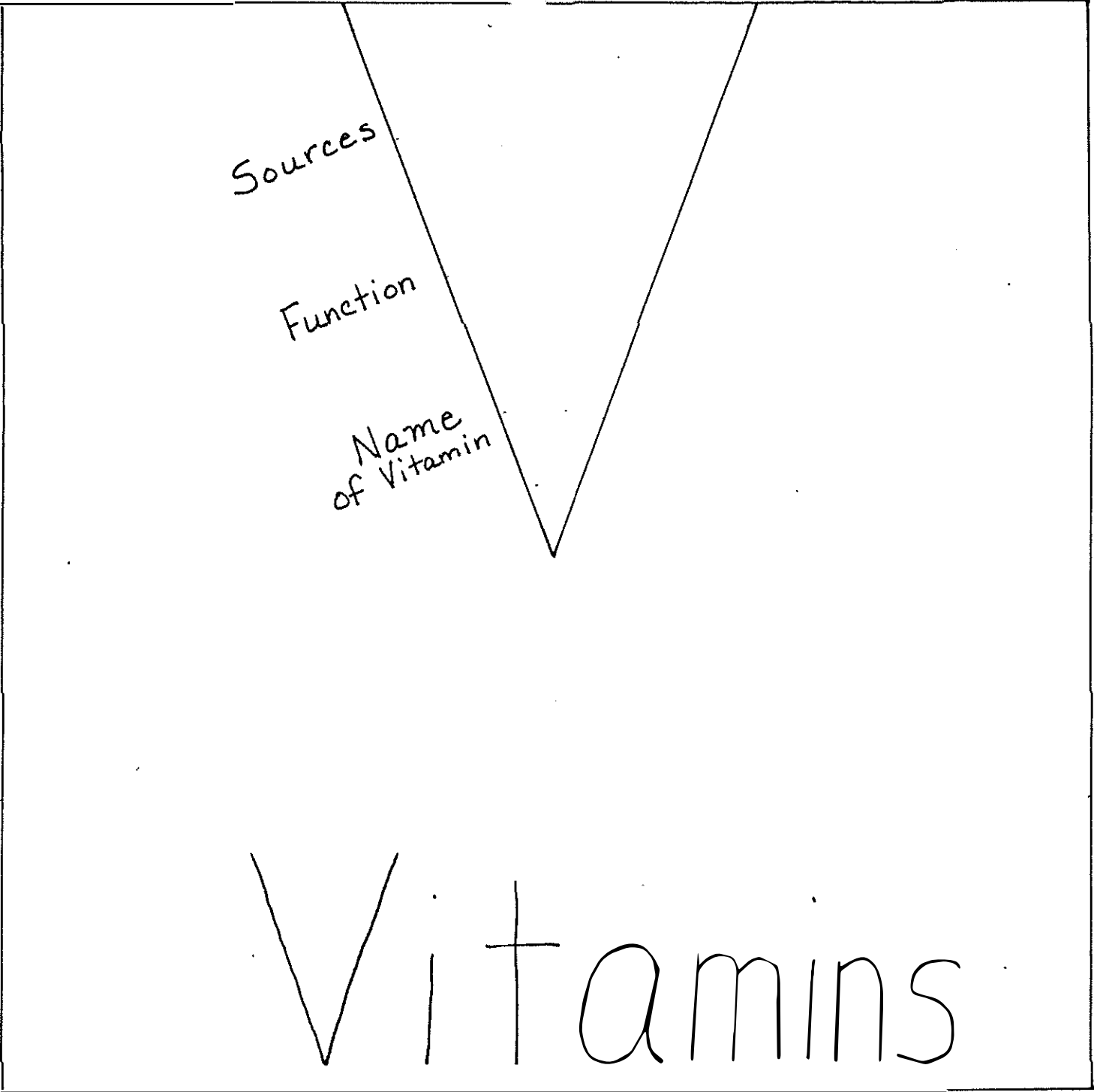
Nutrient

Nutrients

Nutrients.

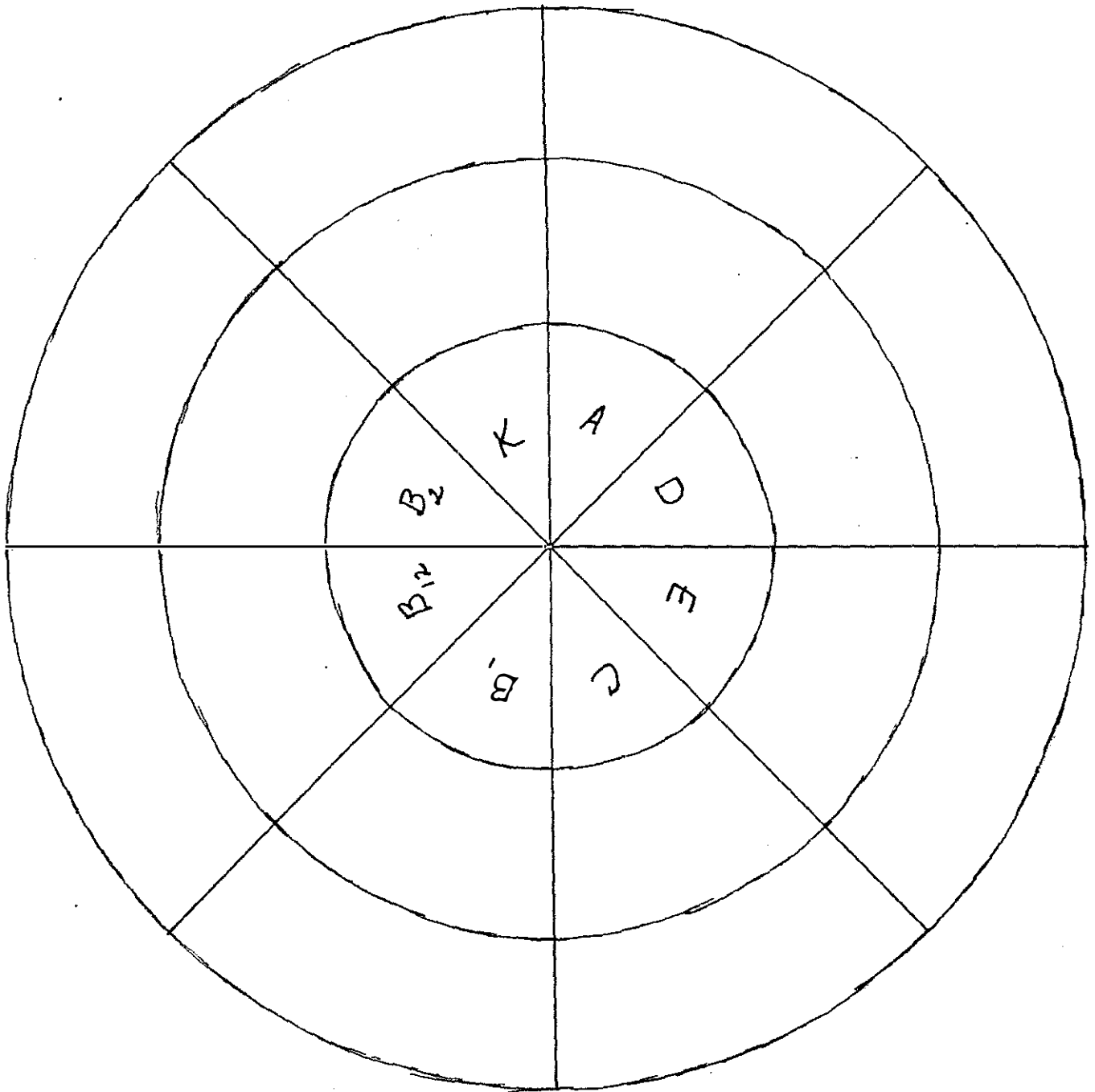
Nutrient circle I copy

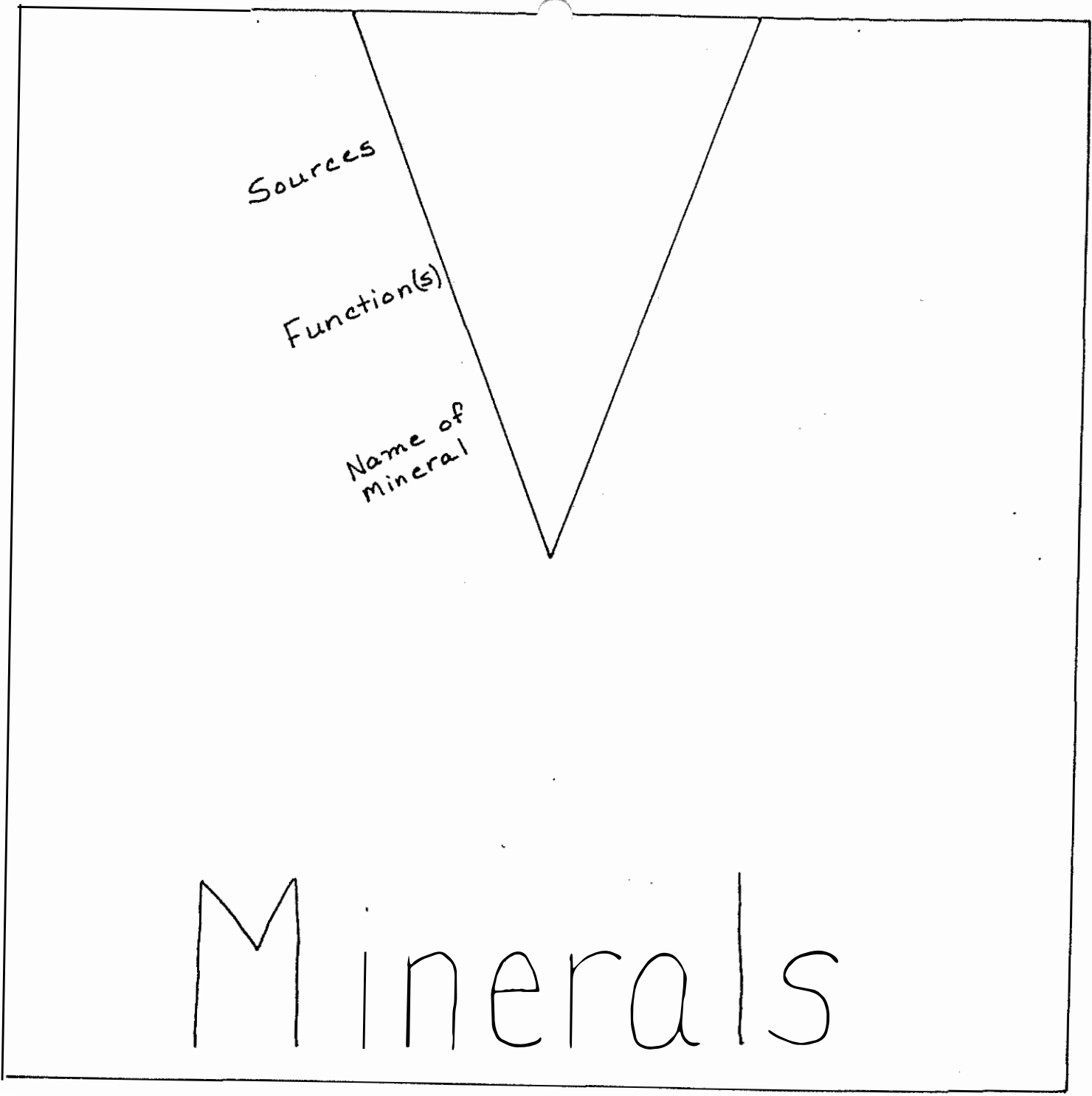




Vitamins

DIRECTIONS: Cut out the wheel and fill in the function and source areas.





Sources

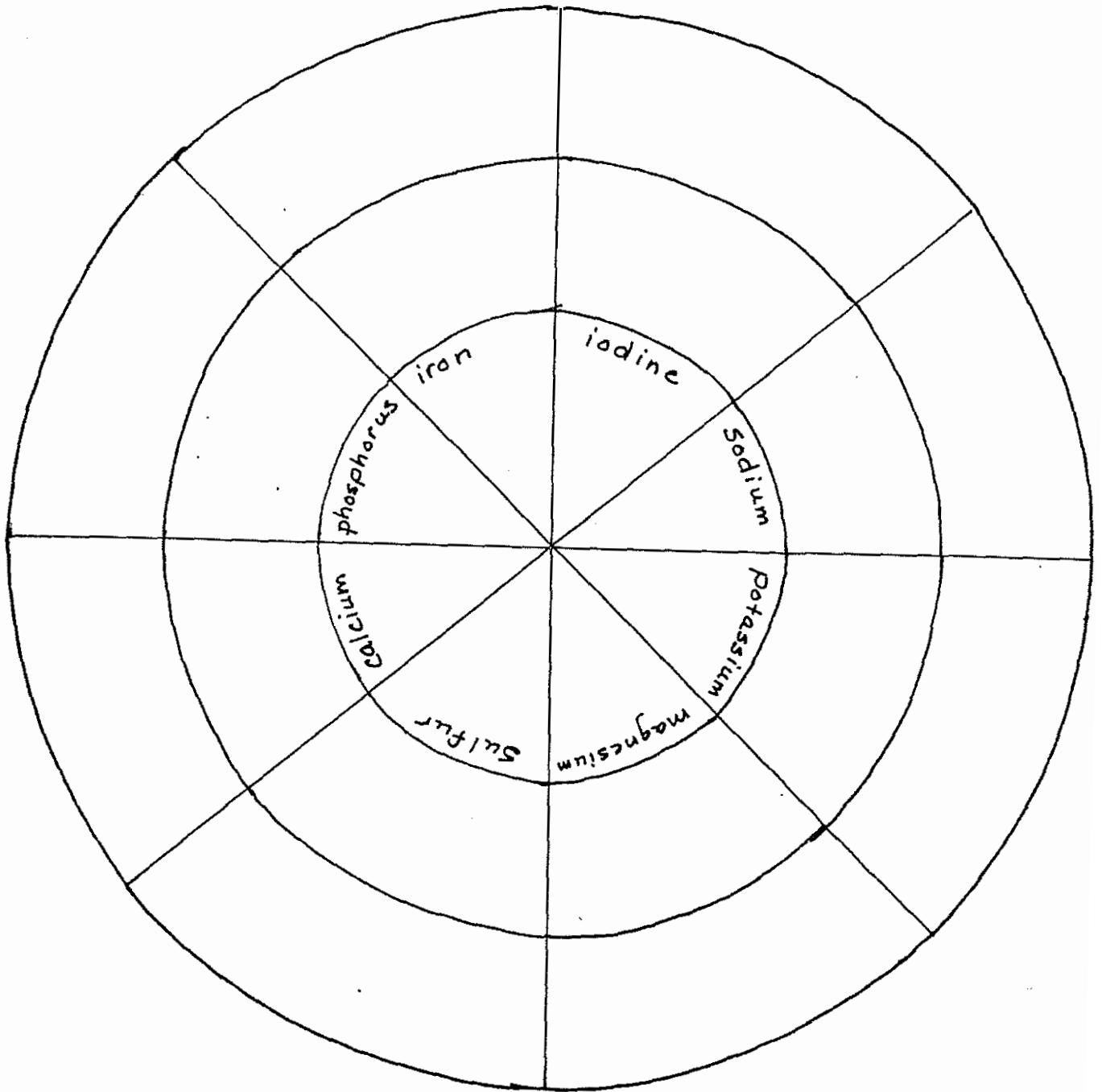
Function(s)

Name of mineral

Minerals

Minerals:

Mineral circle I copy



Lesson 5: Guidelines to good nutrition.Framework Objective:

1. Investigates current nutritional guidelines recommended by Federal agencies and professional groups. Explains the United States Recommended Daily Allowances (USRDA) and Recommended Dietary Allowances (RDA) and how to use them.
2. Analyzes one's own nutritional patterns and initiates action to correct problems.
3. Identifies the role of food in health at different stages of the life cycle.

Sub-objectives: Students should be able to:

1. Identify the four basic or fundamental food groups.
2. Explain what Recommended Dietary Allowances mean and stand for.
3. State 7 U.S. dietary goals for good nutrition.

Activity 1

Class discussion over the basic food groups, RDA, MDA, and U.S. Dietary Goals by using the overhead projector. Provide students with an exact blank copy of the Four Food Groups transparency to be filled in as you discuss in class pp. 146

LD: Provide typed copy of discussion outline highlighting important concepts.

LD: Provide a taped lesson (tape 1, lesson 5) for the auditory learner.

LD: Handouts: U.S. Dietary Goals and RDA requirements pp. 141-142

ALTERNATIVE: McDonald's Food Group Lesson pp 147-149

Activity 2

Briefly review lesson material.

Activity 3

Assign vocabulary.

LD: VAKT Approach for all LD pp. 150-152

Activity 4

Construct the Four Food Groups Learning Wheel

LD: Use directions from learning wheel construction in Lesson 4.
p. 131

Activity 5

Assign Seven Diet Goals Worksheet. Use handout from discussion pp. 155

LD: Use outline or handout for assistance.
Let 2 students work together and fill in the billboards.
Tape the goals for the auditory learner (tape 1, lesson 5)

Activity 6

Leader Nutrient Worksheet pp. 156

LD: Have students use learning wheels to fill in sources and functions.

Activity 7

Role playing: malnutrition activity. pp. 157-159

LD: Use learning wheels for preparation.

Activity 8

Self contract as a review of the lesson pp. 160-161

LD: Use learning wheels, handouts, and outline or tapes.

U.S. Dietary Goals

- (1) To avoid overweight, consume only as much energy (calories) as is expended; if overweight, decrease energy intake and increase energy expenditure.
- (2) Increase the consumption of complex carbohydrates and "naturally" occurring sugars from about 28 percent of energy intake to about 48 percent of energy intake.
- (3) Reduce overall fat consumption from approximately 40 percent to about 30 percent of energy intake.
- (4) Reduce the consumption of refined and processed sugars by about 45 percent to account for about 10 percent of total energy intake.
- (5) Reduce saturated fat consumption to account for about 10 percent of total energy intake; and balance that with polyunsaturated and monounsaturated fats, which should account for about 10 percent of energy intake each.
- (6) Reduce cholesterol consumption to about 300 mg. a day.
- (7) Limit the intake of sodium by reducing the intake of salt to about 5 grams a day.

Table 1.5 Recommended Daily Dietary Allowances, Revised 1974^a
 (Designed for the maintenance of good nutrition of practically all healthy people in the U.S.A.)

	Age (years)	Weight (kg) (lbs)	Height (cm) (in)	Energy (kcal) ^b	Protein (g)	Fat-Soluble Vitamins		Water-Soluble Vitamins										Minerals						
						Vitamin A Activity (RE) ^c	Vitamin A Activity (IU)	Vitamin D (IU)	Vitamin E Activity (IU)	Ascorbic Acid (mg)	Folicin ^d (μg)	Niacin ^e (mg)	Riboflavin (B ₂) (mg)	Thiamin (B ₁) (mg)	Vitamin B ₆ (mg)	Vitamin B ₁₂ (μg)	Calcium (mg)	Phosphorus (mg)	Iodine (μg)	Iron (mg)	Magnesium (mg)	Zinc (mg)		
Infants	0.0-0.5	6	14	60	24	kg × 117	kg × 2.2	420 ^d	1,400	400	4	35	50	5	0.4	0.3	0.3	0.3	360	240	35	10	60	3
	0.5-1.0	9	20	71	28	kg × 108	kg × 2.0	400	2,000	400	5	35	50	8	0.6	0.5	0.4	0.3	540	400	45	15	70	5
Children	1-3	13	28	86	34	1300	23	400	2,000	400	7	40	100	9	0.8	0.7	0.6	1.0	800	800	60	15	150	10
	4-6	20	44	110	44	1800	30	500	2,500	400	9	40	200	12	1.1	0.9	0.9	1.5	800	800	80	10	200	10
	7-10	30	66	135	54	2400	36	700	3,300	400	10	40	300	16	1.2	1.2	1.2	2.0	800	800	110	10	250	10
Males	11-14	44	97	158	63	2800	44	1,000	5,000	400	12	45	400	18	1.5	1.4	1.6	3.0	1200	1200	130	18	350	15
	15-18	51	134	172	69	3000	54	1,000	5,000	400	15	45	400	20	1.8	1.5	2.0	3.0	1200	1200	150	18	400	15
	19-22	67	147	172	69	3000	54	1,000	5,000	400	15	45	400	20	1.8	1.5	2.0	3.0	800	800	140	10	350	15
	23-50	70	154	172	69	2700	56	1,000	5,000	400	15	45	400	18	1.6	1.4	2.0	3.0	800	800	130	10	350	15
	51+	70	154	172	69	2400	56	1,000	5,000	400	15	45	400	16	1.5	1.2	2.0	3.0	800	800	110	10	350	15
Females	11-14	44	97	155	62	2400	44	800	4,000	400	12	45	400	16	1.3	1.2	1.6	3.0	1200	1200	115	18	300	15
	15-18	54	119	162	65	2100	48	800	4,000	400	12	45	400	14	1.4	1.1	2.0	3.0	1200	1200	115	18	300	15
	19-22	58	128	162	65	2100	46	800	4,000	400	12	45	400	14	1.4	1.1	2.0	3.0	800	800	100	18	300	15
	23-50	58	128	162	65	2000	46	800	4,000	400	12	45	400	13	1.2	1.0	2.0	3.0	800	800	100	18	300	15
	51+	58	128	162	65	1800	46	800	4,000	400	12	45	400	12	1.1	1.0	2.0	3.0	800	800	80	10	300	15
Pregnant						+300	+30	1,000	5,000	400	15	60	800	+2	+0.3	+0.3	2.5	4.0	1200	1200	125	18 ^h	450	20
Lactating						+500	+20	1,200	6,000	400	15	80	600	+4	+0.5	+0.3	2.5	4.0	1200	1200	150	18	450	25

^a Reproduced by permission of the Food and Nutrition Board, National Academy of Sciences—National Research Council. The allowances are intended to provide for individual variations among most normal persons as they live in the United States under usual environmental stresses. Diets should be based on a variety of common foods in order to provide other nutrients for which human requirements have been less well defined. See text for more detailed discussion of allowances and of nutrients not tabulated.

^b Kilojoules (kJ) = 4.2 × kcal

^c Retinol equivalents

^d Assumed to be all as retinol in milk during the first six months of life. All subsequent intakes are assumed to be half as retinol and half as β-carotene when calculated from international units. As retinol equivalents, three fourths are as retinol and one fourth as β-carotene.

^e Total vitamin E activity, estimated to be 80 percent as α-tocopherol and 20 percent other tocopherols

^f The folicin allowances refer to dietary sources as determined by *Lactobacillus casei* assay. Pure forms of folicin may be effective in doses less than one fourth of the recommended dietary allowance.

^g Although allowances are expressed as niacin, it is recognized that on the average 1 mg of niacin is derived from each 60 mg of dietary tryptophan.

^h This increased requirement cannot be met by ordinary diets; therefore, the use of supplemental iron is recommended.

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 5 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Seven Diet Goal
Worksheet and Malnutrition
Activity

and it is due: Mon.

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

DAILY CONTRACT

DATE 5-6

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: Self-Contract

and I understand that if I invalidate my contract, the following punishment will occur: I will stay after school and complete my work

SIGNED: Billy Read

TEACHER: Billy and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if Billy does not keep to this agreement. I will try to help Billy in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of Billy's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-6

STUDENT: I agree to follow these rules of student behavior: _____

I will try to work for 10 min.
with a 2 minute break between.

Signed: Billy Read

TEACHER: I agree to help Billy by allowing
him to get up out of his seat
for 2 minutes for every 10
minutes of good work.

Signed: Mrs. Harten

PRINCIPAL: I agree to help Billy by giving
him extra privileges for good
work.

Signed: Mr. Principal

PARENTS: I/We agree to help Billy by rewarding
him for good work and giving
him short tasks.

Signed: Mr. Read

Basic Four Food Groups

Food Group	Number of Servings			Food Source
	Child	Teenager	Adult	

FOUR BASIC FOOD GROUPS

Food Group	Number of Servings			Food Sources
	Child	Teenager	Adult	
146				

Please note: Text and images on pages 147-149 were redacted due to copyright concerns.

Lesson 5
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Basic Four Food Groups

DIRECTIONS: Listen to the definition while tracing the letters.

BASIC FOUR FOOD GROUPS: A guideline established by the U.S. Department of Agriculture to help people obtain all the important dietary requirements.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 5
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

R D A

DIRECTIONS: Listen to the definition while tracing the letters.

RDA: Recommended Dietary Allowances. It was established to identify the amounts of nutrients needed by healthy, normal Americans.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 5

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

M D A

DIRECTIONS: Listen to the definition while tracing the letters.

MDA: Minimum Dialy Requirements; no longer used because it has never been updated.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

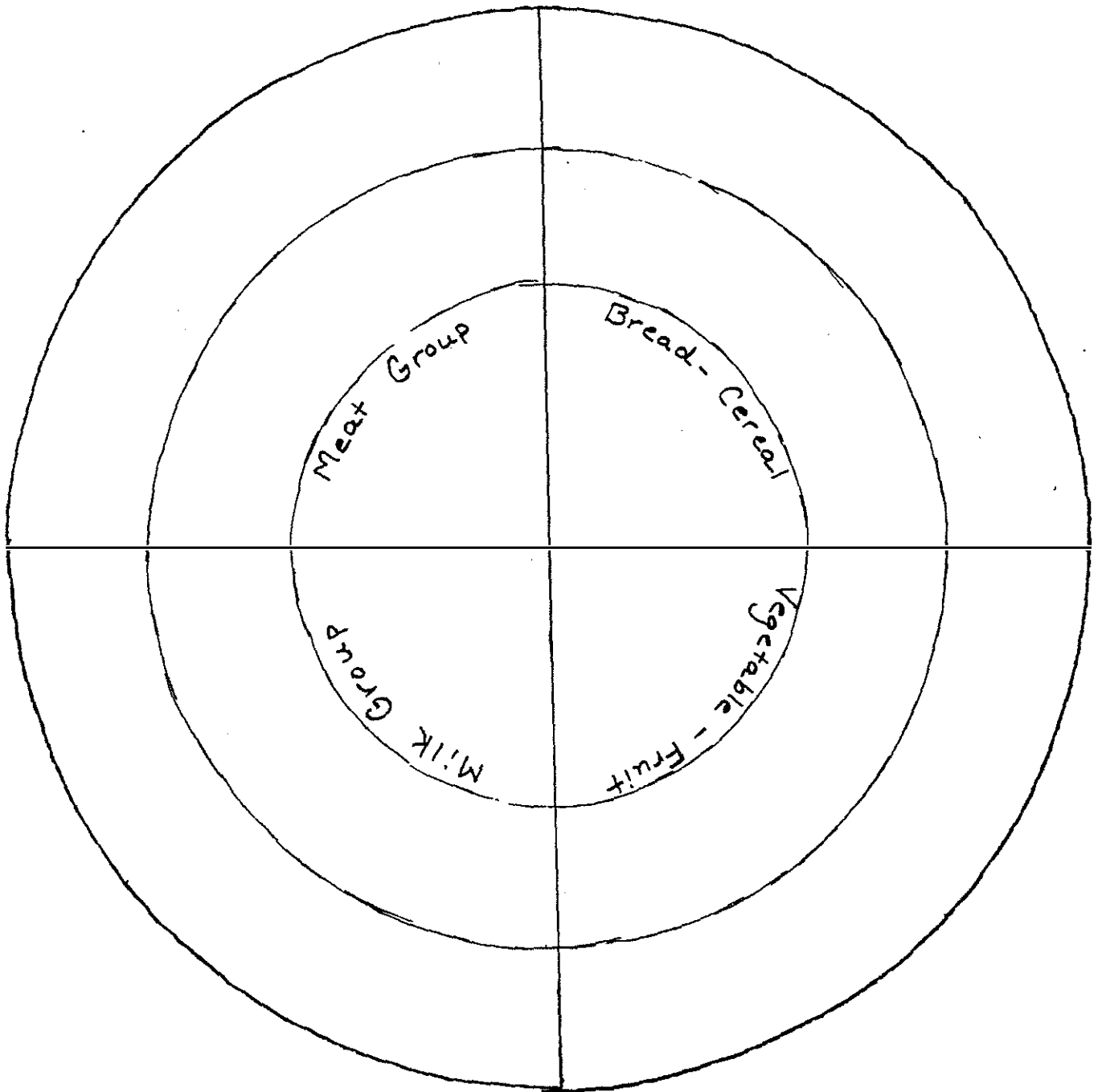
DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Sources

Servings
Daily

Food
Group

Food Groups



Lesson 5
Seven Diet Goals

Name _____

Be sure that you are in top condition by eating wisely. The United States Department of Agriculture and the Department of Health and Human Services have made a list of seven diet goals for Americans. List the seven diet goals in the goal chart. Climb to the top of the mountain by writing on the billboards two ways you plan to reach each goal.

Seven Diet Goals

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Lesson 5
Leader nutrients

Name _____

Part A

A leader nutrient is a substance in food that provides several of the nutrients that your body needs for good health. Be a winner and score for good eating by placing on each line, the name of one leader nutrient, two sources of this nutrient, one function of the nutrient, and one source of the nutrient that you ate yesterday. Part of one line is done for you. Score 10 points for each completed yard line.

	Leader Nutrient	Sources	One Function	Yesterday's Diet Source
100				
90				
80				
70				
60				
50				
40				
30				
20				
10	iron	prune juice tuna		liver

My score _____

Part B

1. What nutrient was not included in your diet yesterday?
2. Construct a food plan, for one day, which includes all the leader nutrients. Plan 3 meals and a snack.

LESSON 5: Malnutrition

Name _____

Background Information: In its extreme form, malnutrition is starving from a lack of food. But malnutrition is also poor nutrition from not eating properly, which is the case for most malnourished people in the United States. For many of these people, however, malnutrition might occur because they skip meals, eat unbalanced meals too often, do not know how to read nutrition labels, or do not know how to plan balanced meals. Each of these things can cause people to miss many of the nutrients they need each day.

This activity provides an opportunity for you to determine how to plan a nutritionally balanced menu within a certain budget.

Materials: Five pencils, ten pieces of paper, five people

How to do the Activity:

1. Form a group with four other people.
2. Each person in the group should pretend to have a food-purchasing budget of one of the following sums of money (no two people should choose the same amount):
 - a. \$200
 - b. \$80
 - c. \$60
 - d. \$40
 - e. \$30
3. Each person should plan to use that money to "purchase" foods and to prepare a menu of three meals a day for one week. It is important that each meal be nutritionally balanced. The meals should be suitable for a family that includes a father, a mother, a fifteen-year-old boy, and a five-year-old girl.

4. Before preparing a menu, each person should collect and write down information about good nutrition by doing each of the following:
 - a. Study about nutrients and their food sources by reading the nutrition labels on containers of food. Find these containers at home or in food stores.
 - b. Investigate food prices at places such as supermarkets, fish stores, butchers, delis, cheese shops, and health-food stores.
 - c. Study about the four food groups and become familiar with the kinds of foods included in each group. Also study the recommended daily servings of each food group for people of different ages. This information can be found in the health text. This information is also available in the library.
 - d. Learn about food preparation by reviewing cookbooks, by reviewing books about dieting, by talking to family members who cook, and so forth.
 - e. Find information about recommended daily dietary allowances according to people's ages, heights, and so forth. This information can be found in the health text and in the library.

5. Using the information gathered, each person should prepare his or her weekly menu. Beside each food listed on the menu, write approximately how much of that food is to be eaten. The following is an example:

LUNCH

American cheese - 1 slice, 28 g (1 oz)
Tomato - 2 slices, 50 g (1.7 oz)
Whole wheat bread - 2 slices, 46 g (1.6 oz)
Mayonnaise - 14 g (1 tbsp)
Milk - 244 g (1 cup)
Apple - 1 medium

6. After each person in the group completes his or her menu, that person should compare the menu with the menus of the others in the group.

Questions to Answer and Discuss

1. What can you determine about the cost of foods in relation to their nutritional value?

Sample: Many high-priced foods contain the same, or less, nutritional value than some low-priced foods.

2. In what ways was the money allotment for each menu reflected in the foods that were chosen for that menu?

Answers may vary.

3. How might you inform your family about eating nutritionally balanced meals?

Sample: By sharing my menu with them, by preparing the meals on my menu if they are within my family's budget, and by sharing the information collected for this activity.

Name _____ Date _____ Class _____

Self Contract

TOPIC: Meal Planning

GOAL: I will plan meals for one day, following these guidelines:

- A. I will eat the recommended number of servings from the four food groups.
- B. I will eat the number of calories that I need.
- C. I will follow the seven diet goals.

PLAN: The number of servings that I need each day from each of the four food groups is ____ fruit-vegetable, ____ meat, ____ milk, ____ grain.

The number of calories that I need is ____.

The seven diet goals are:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

EVALUATION: The foods that I ate which were not on my plan:

The foods that I planned to eat but did not eat:

Did I eat the correct number of servings from each food group? If not, why?

Did I follow the 7 diet goals?

RESULTS:

If I continue this contract, what can I do to make it a part of my lifestyle?

LESSON 6: Eating Awareness Activity

Framework Objective:

1. Analyzes one's own nutritional patterns and initiates action to correct any problems.
2. Discusses nutritional problems concerning teenagers, especially obesity, anemia, and periodontal disease.

Sub-objective:

1. Students will be aware of harmful dietary habits and make attempts to improve their diets.

Activity 1

Discuss how people are generally unaware of their eating patterns. Get student opinion.

Activity 2

Go through directions showing cards and demonstrating how the activity is done. pp. 166-171

LD: Allow LDs to work together so the teacher can give more constructive instruction if necessary.
Have students fill out an Objectives, Goals, and Assignment sheet pp. 163

Activity 3

Go over results of activity. Class discussion of obvious eating patterns and possible solutions.

Activity 4:

Have students keep a food log on themselves and their families for a week to compare eating habits at different times of the day or week.
Have a class discussion after the week is over.

LD: Have LDs fill in daily, on their Goals, Objectives, and Assignment sheet, what they have learned pp. 163

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 6 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Eating Awareness
Activity

and it is due: Wednesday

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

DAILY CONTRACT

DATE 5-9

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: Eating Awareness Activity

and I understand that if I invalidate my contract, the following punishment will occur: I will have 30 minutes of detention.

SIGNED: Bobby White

TEACHER: Bobby and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if Bobby does not keep to this agreement. I will try to help Bobby in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of Bobby's daily contract with Mrs. Harter.

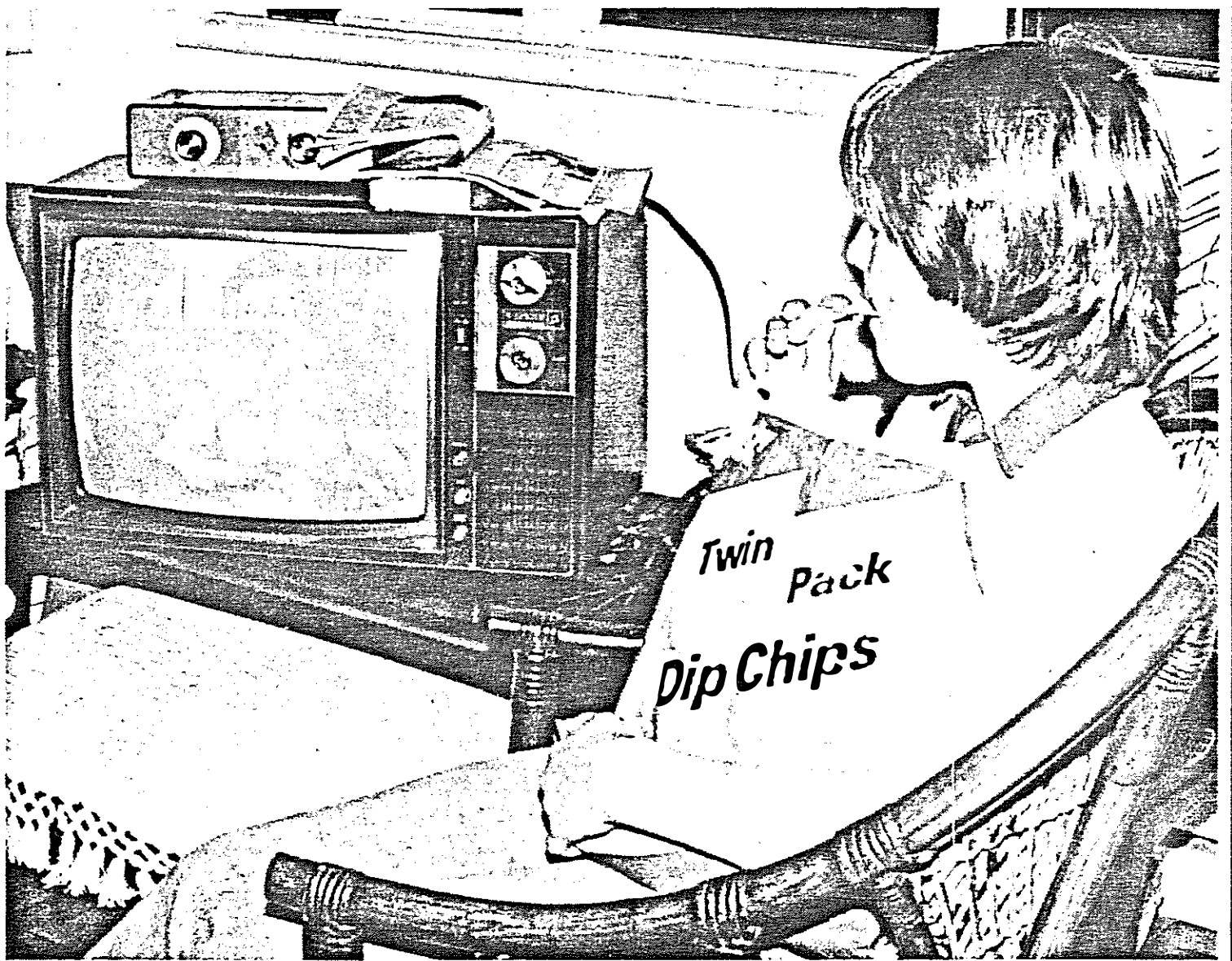
SIGNED: Mr. Principal

Formal Contract

Date: 5-9

STUDENT: I agree to follow these rules of student behavior: _____

I will not swear in class.Signed: Bobby WhiteTEACHER: I agree to help Bobby by isolating
him from those who bother
him and by trying to control
his environment.Signed: Mrs. HartenPRINCIPAL: I agree to help Bobby by giving
him 3 tokens for each hour
he does not swear.Signed: Mr. PrincipalPARENTS: I/We agree to help Bobby by not
permitting swearing at home.Signed: Mrs. White



OVERVIEW

The students record everything they eat for one day and analyze their eating patterns.

HEALTH BACKGROUND

Most people are basically unaware of just how much food they eat or how many times a day they eat. In addition, many people eat for many

reasons other than hunger. Eating is often merely a way of dealing with other emotions, such as boredom, fatigue, anger, restlessness, sadness, or even happiness. Also, passive recreation such as television and movies often prompt people to snack without even being aware of what they are eating.

A food log is one way to help people better understand when, where, what, or why they eat. By keeping track of this data, the students have the opportunity to take control of their eating behavior.

MATERIALS

For each student:

1 copy of Student Sheet EA*

For the class:

duplicator master of Student Sheet EA
additional copies of the Student Sheet*
(optional, for HAP Sidetrips)

* Provided by the teacher.

SETTING UP

Suggested Time: Do not plan to do this activity over a holiday or party period.

- Plan for 20 minutes for Part One.
- Plan for 20 minutes on the following day for Part Two.

Preparing for the Activity

1. Duplicate the Student Sheet.
2. **For Part One:** Make a copy of the Student Sheet on the chalkboard. (Draw only a few rows.)

FOOD LOG

DATE / DAY	TIME OF DAY	FOOD AND AMOUNT	SITUATION OR LOCATION	MOOD	HUNGRY?

3. **For Part Two:** Copy the chart illustrated here on the chalkboard.

HOW MANY STUDENTS ATE	AWAKE TO BEFORE SCHOOL	IN SCHOOL	AFTER SCHOOL UNTIL DINNER	DINNER	AFTER DINNER UNTIL BEDTIME

THE ACTIVITY: PART ONE

167

Introducing the Activity

1. Ask the students:
 - During what situations or at what times of the day do you eat meals or snacks?
 - Do you usually want to eat at these times? Are you always hungry at these times?
 - Can you think of anything other than hunger that makes you want to eat?
 - What are some rules you have in your home concerning eating, for example: times that meals are served, kinds of snacks, forbidden foods, and places where you may and may not eat?
2. Tell the students that they are going to keep a 24-hour log in which they record everything they eat and the times at which they eat.



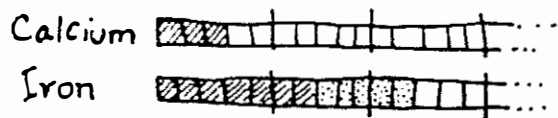
Logging Eating Patterns

1. Distribute the Student Sheets.
2. Show the students how to keep their logs by filling in the Student Sheet you have drawn on the board.
 - Make two or three hypothetical entries.
 - Make sure the students understand what is meant by *mood*. Have them give some examples of moods, and clarify as needed.



Introducing the "Food Values" Card. Show the students how to find the amount of certain nutrients in their chosen lunches.

1. Distribute copies of Student Sheet 2 and the "Food Values" card appropriate for the students' ages.
2. Read aloud from Student Sheet 2 the six nutrients to be plotted. Explain that each square represents 1% of the Recommended Daily Allowance of each nutrient.
3. Using the bar graph on the chalkboard, show the students how to plot the amounts of calcium and iron in two of the foods (e.g. bread and tuna) from your sample lunch. Use a different



COLOR CODE:

- = Bread, white
- = Tuna

color of chalk for each food. As you work, give the students the following instructions:

- Select a different colored pencil to represent each food.
 - Record your color code in the Color Key on Student Sheet 2.
 - Find each of the foods on the "Food Values" card.
 - The number at the left of each bar is the percent of the RDA for your age group of that nutrient in the food item.
 - Color the appropriate number of squares for the amounts of all six nutrients in each food item in your lunch.
4. Ask the students to look up "carrots" on the "Food Values" card. Tell them:
 - Notice that carrots are listed at 33+ units of vitamin A. Because any number of units over 33 would not fit on the page, food items containing more than 33 units are labeled 33+. On your Student Sheets, color 33 squares for such items and write a + above the last square.

Combining Food Values

1. Divide the class into groups of four, and give each group a set of colored pencils.
2. Give the students time to complete their bar graphs.

3. Provide additional copies of Student Sheet 2 for students who run out of empty squares for any nutrients.

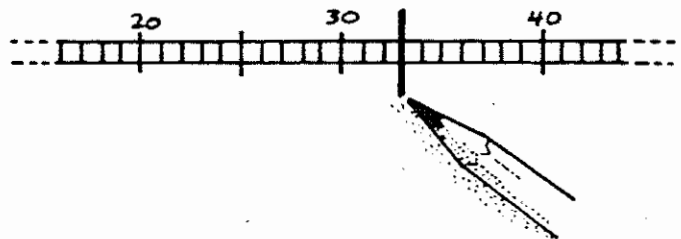
168

4. After the students finish, collect the Student Sheets and save them for after Part Two.

THE ACTIVITY: PART TWO

Scoring the Lunches

1. Return the Student Sheets to the students.
2. Show the students how to draw a vertical line through the "33" line of each bar on Student Sheet 2. Tell them this represents



one-third of the recommended daily requirements.

- Ask the students if they think it reasonable to assume that one-third of their RDA should be provided by their lunch.
 - If they disagree, ask them what percentage of the day's nutrition they think their lunch should provide.
3. Before they go on, ask the students what it means to have a nutrient that was not colored up to the "33" line. What does a bar that has a + above it indicate?
 4. Instruct the students to answer questions 1 and 2 on Student Sheet 2. Tell them to consider a bar within five squares on either side of the "33" line to be about right.

Analyzing the Data

1. Tally the students' lunch scores, and complete a chart similar to the one illustrated here.
2. Ask the students:
 - What do the results show about the lunch foods the class likes?

3. Explain to the students that almost everything they eat or chew is to be considered food (even water and gum).

4. The 24-hour period begins when you hand out the Student Sheets and ends when you discuss (or collect) them tomorrow at this time.

- Emphasize that this is not a contest. This log is a way to help the students accurately describe their eating patterns.
- If you do not discuss the logs at the end of the 24-hour period, save them for future discussion.

THE ACTIVITY: PART TWO

Looking at Eating Patterns

1. Give the students a few minutes to complete their Student Sheets, if necessary.

2. Remind the students that this logging is not a contest but a way to allow them to look at what, when, and why they eat.

3. Ask the students:

- What did you discover by keeping this log?
- Were you surprised by anything on your log?

4. Use the chart you have drawn on the board to find out the class's general eating patterns.

Poll the students and fill in the chart.

- Find out how many students eat a major meal during each time block.
- Then find out how many students snack during each time block and what the frequency of snacking is.

HOW MANY STUDENTS ATE	AWAKE TO BEFORE SCHOOL	IN SCHOOL	AFTER SCHOOL UNTIL DINNER	DINNER	AFTER DINNER UNTIL BEDTIME
MAIN MEAL	24	29	0	26	0
1 SNACK	1	2	14		12
2 SNACKS			5		4
3 SNACKS			4		4
4 SNACKS			1		2
5 SNACKS					
...					

5. Ask the students: 169

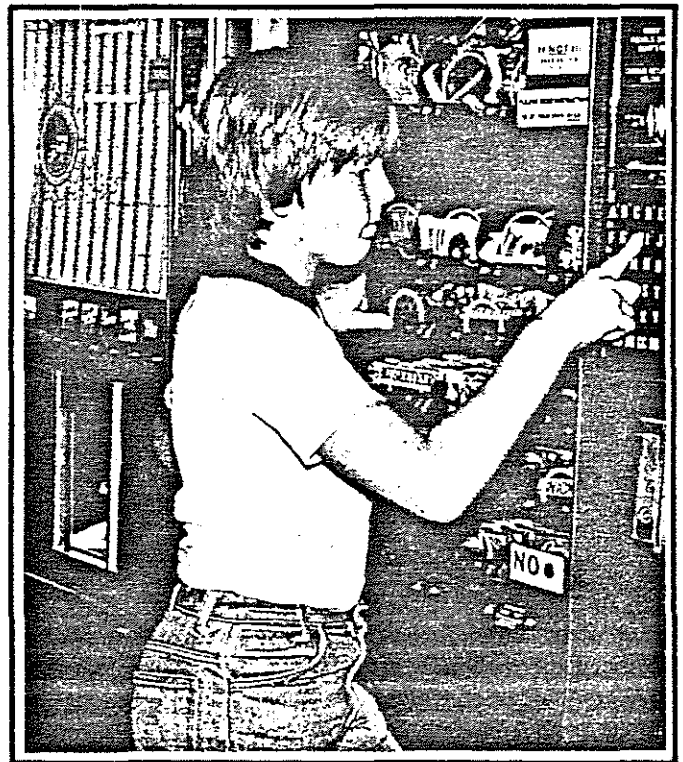
- What does this data show us about our pattern of eating main meals?
- When during the day do we snack the most? Why do you think snacking is heavier at that time?

6. Poll the students to find out how many ate when they weren't hungry.

- What were some of the moods you were in when you ate and were not hungry? (List these on the board.)
- Why do you think you ate when you were feeling this way?

7. Ask the students:

- What value do you see in keeping a log of what you eat?
- Do you think your eating patterns might change? Why?



HEALTH APPLICATIONS

1. Your mother never lets you snack just before dinner, but you are always hungry then. What could you do to try to avoid this continuous conflict?
2. You are trying hard to cut down on certain foods in order to help improve your complexion, but you can't seem to stop snacking. What could you do to better understand when and why you snack?

HAP SIDETRIPS

171

1. Keep a food log during a holiday period to find out how your eating pattern changes.
2. Have students three years younger and three years older keep food logs. Compare these students' eating patterns with yours to find out how these patterns change with age.
3. Take your food log with you the next time you visit the doctor, and discuss with her your eating habits.
4. Keep a food log for a week. Compare your eating habits on different days, and compare your weekend and weekday eating habits.



Take-Home Idea. Take home copies of the food log, and ask your whole family to keep a log for the same 24-hour period. Compare the eating habits of different members of your own family.

LESSON 7: Lunch time activity (2 days)

Framework Objective:

1. Investigates current nutritional guidelines recommended by Federal agencies and professional groups. Explains the United States Recommended Daily Allowances and the Recommended Dietary allowances and how to use them.
2. Analyzes one's own nutritional patterns and initiates action to correct any problems.

Sub objectives: Student should be able to:

1. Plan a balanced diet.
2. Assess nutrient content of foods and RDA requirements met daily.

Activity 1

Go over goals and objectives of the activity. Write them on the board or overhead projector as you discuss the activity.

LD: Fill out Goals, Objectives, and Assignment sheet pp. 174

Activity 2

Hand out all needed materials for Part I pp. 175-185
Go over the directions verbally, demonstrating the activity.
Discuss introduction questions in the activity.

LD: Tape step-by-step directions.
Allow all LD students to work together for additional instruction if necessary.

Activity 3

After completing Part I, discuss student findings.
Write findings on the board.

LD: Have the LDs write down, on their forms, what they learned from the discussion.

Activity 4

Continue the same procedure for Part II.

LD: Allow LD to use learning wheels.

Activity 5

Assign application questions after the activity.

LD: Allow LD to express their knowledge through their best means (orally, diagrams, pictures, etc.) pp. 180

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 7 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Lunch Time
Activity

and it is due: Thursday

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.



OVERVIEW

The students select their lunches from a menu and then assess the nutrients in the foods they have chosen.

HEALTH BACKGROUND

Nutrition is a subject of active research, and scientists continually revise dietary recommendations in light of new studies. Most nutrition experts agree, however, that eating a variety of foods from the basic food groups

(meat, dairy products, grain, and fruits and vegetables) is a sound practice.

In this activity, the students select their lunches on the basis of foods they like, and then find out how close the lunch comes to supplying one-third of the Recommended Daily Allowance (RDA) of energy (calories), protein, and four nutrients (calcium, iron, vitamin A, and vitamin C) that are often deficient in teenagers' diets. Although any one meal need not supply one-third of each day's nutrient requirements, we have selected that value to represent a typical meal so that the students might learn how to plan a balanced diet.

THE ACTIVITY: PART ONE

MATERIALS

For each group of four students:

- 4 "Food Values" cards (See "Preparing for the Activity.")
- 4 copies of each Student Sheet: LT 1 and LT 2*
- 8 pencils, each a different color .

For the class:

- 2 pieces of chalk*, each a different color
- 15 to 20 extra copies of Student Sheet LT 2*
- duplicator masters of Student Sheets LT 1 and LT 2

For "HAP Sidetrips":

- 1 "Finding Food Values for New Foods" Technique Card
- 1 Composition of Foods table* (See the Technique Card.)
- duplicator master of Student Sheet LT 3
- * Provided by the teacher.

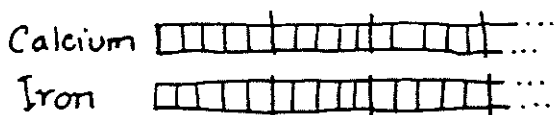
SETTING UP

Suggested Time:

- Plan for 45 minutes for Part One.
- Plan for 30 to 45 minutes for Part Two.

Preparing for the Activity

1. Duplicate Student Sheets 1 and 2.
2. Select either the *purple* (for ages 7–10) or the *green* (for ages 11–14) Food Values cards.
3. Draw the bar graph illustrated here on the chalkboard for use in Part One.



4. For the Take-Home activity, duplicate Student Sheet 3. The students can take home their filled-in copies of Student Sheets 1 and 2 for use at home.
5. For the "HAP Sidetrip," obtain a Composition of Foods table. (The Technique Card tells you where to order a food composition table.)

Introducing the Activity

1. Ask questions to start the students thinking about their roles in choosing the foods they eat.
 - How often do you plan your own lunch?
 - What are some of your favorite lunch foods?
 - On what basis do you select your lunch foods?
2. Tell the students that they will investigate the nutritional value of some of their favorite foods.

Planning Lunches

1. Distribute copies of Student Sheet 1.
2. Ask the students to circle every food item they like on the menu regardless of whether parents or others might approve. Give them several minutes.
3. Now ask the students to make up two lunches that they would like to eat and to write their menus in the lunch boxes on Student Sheet 1. Tell the students:
 - Choose each lunch on the basis of what you *like* to eat.
 - Each lunch should include the amount of food you usually eat for lunch.
 - You don't have to include all your circled foods.
 - Select foods from the kitchen, vending machines, refreshment stand, or any combination of these three.
 - For sandwiches and other items that are combinations of foods, list the individual ingredients.
4. Illustrate the selection process by writing a sample lunch selection on the chalkboard, e.g. a tuna sandwich (two slices of white bread, tuna, and mayonnaise), two carrots, oatmeal raisin cookies, and a soft drink.
5. Allow the students ten minutes to:
 - Write each lunch menu in one of the boxes.
 - Select and circle one lunch for closer examination.

FINDING FOOD VALUES FOR NEW FOODS

If you want to extend this activity to let children select lunches composed of different foods than those listed in the folio, follow these steps.

1. Obtain a Composition of Foods table that lists the amounts of calcium, iron, vitamin A, vitamin C, protein and calories *per serving* of various foods. One such resource is *Nutritive Value of American Foods in Common Units* by Catherine F. Adams, U.S. Department of Agriculture, 1975. It is available for \$5.15 from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Another source is *Food Values of Portions Commonly Used* by J.A.T. Pennington and H.N. Church, Harper 1980, which you may purchase from your book dealer.

2. The work sheet below assists you in calculating the percentage of the RDA of the nutrients in foods not listed in the Food Values cards.

- Copy the amounts of the six nutrients found in the food as listed in the Foods Table in the "Nutrient Amount" column on the worksheet.
- Divide each amount by the appropriate RDA for your age group. (Select only one of the two age groups.)
- Multiply the results by 100 to obtain the percent of the RDA of each nutrient in the food item.

LUNCH TIME WORKSHEET

Food _____ Serving Size _____

NUTRIENT	AMOUNT	÷	Recommended Daily Allowance (RDA)		×	100 =	Percent RDA
			Ages 7-10	Ages 11-14			
Calcium	milligrams (mg)	÷	800 mg	1200 mg	×	100 =	_____ %
Iron	milligrams (mg)	÷	10 mg	18 mg	×	100 =	_____ %
Vitamin A	international units (iu)	÷	3300 iu	4500 iu	×	100 =	_____ %
Vitamin C	milligrams (mg)	÷	45 mg	50 mg	×	100 =	_____ %
Protein	grams (g)	÷	34 g	45 g	×	100 =	_____ %
Energy	calories (C)	÷	2400 C	2500 C	×	100 =	_____ %

Remember, each square = 1%.

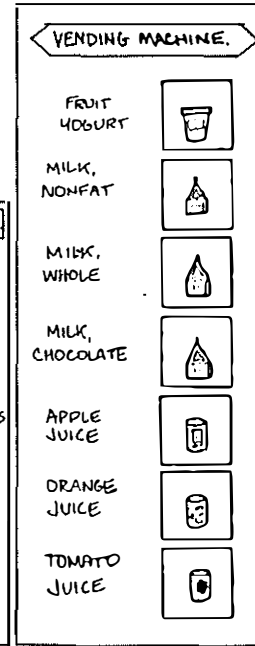
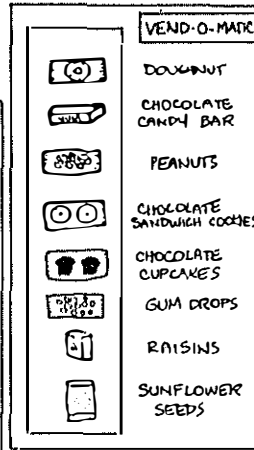
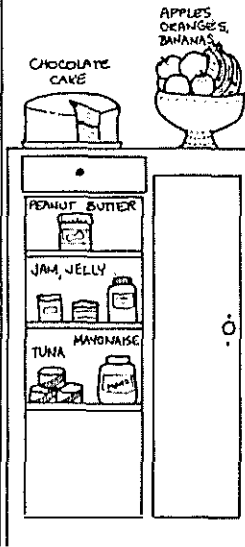
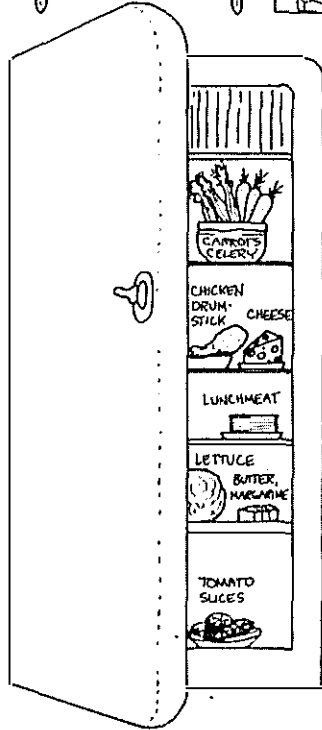
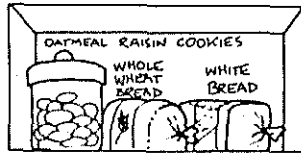
Permission is hereby granted to reproduce this form for use in conjunction with HAP



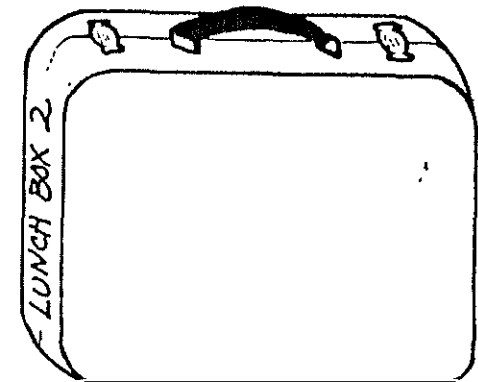
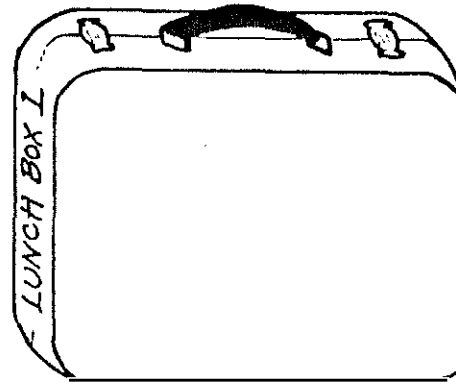
Name _____

LUNCH TIME MENU

178



1. Circle all the foods that you like to eat at lunch time.
2. For each lunch, select your foods from this menu.
 - Select items that you like.
 - Select only as much food as you usually eat at lunch.
 - Write your lunch items in the lunch boxes on the right.



Permission is hereby granted to reproduce this form for use in conjunction with HAP.

PUBLISHED BY



HUBBARD

P. O. BOX NORTHBROOK, ILLINOIS 60062 • 312/272-7810

HEALTH ACTIVITIES PROJECT



Name _____

PLAYING LUNCH TIME WITH YOUR FAMILY

MATERIALS

For each person:
Student Sheet 1
Student Sheet 2

For the family:
1 Food Values card (ages 7–10)
colored pencils

PLAYING

1. From Student Sheet 1, select up to seven items that you would like to eat, and write them in one of the lunch boxes provided.
2. Locate each of the lunch foods on the “Food Values” card. Read the number by each nutrient bar and color that number of squares in the appropriate bar on Student Sheet 2. Use a different color for each food.

Note: The nutrient requirements for different age groups differ somewhat from the values listed for ages 7–10. However the point of this activity is to compare the nutrient contents of different foods, not age requirements, and the values for ages 7–10 provide a workable approximation for most adults.

3. Draw a vertical line through the 33 mark for each nutrient. This line represents one-third of the RDA for each nutrient.
4. Analyze your lunch to determine which nutrients you didn’t have enough of and which ones you needed more of.
5. Use the “Food Values” card to help you plan another lunch that would balance the deficiencies and excesses.



FOOD VALUES

FOR AGES ¹⁸¹11-14



Please note: Text and images on pages 181-185 were redacted due to copyright concerns.

FOOD VALUES

FOR AGES 11-14

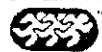
182

FOOD VALUES

FOR AGES 7-10
183

FOOD VALUES

FOR AGES 7-10




Side One

NUTRITION/DENTAL HEALTH Modul

Health Activities Project
Developed by the Lawrence Hall of Science
University of California, Berkeley
Copyright © 1982 by the Regents
of the University of California



Published by
 **HUBBARD**
P.O. BOX 104
NORTHBROOK, ILLINOIS 60062
312/272-7810
000-9035

LESSON 8: Pizza before the game

Framework Objectives:

1. Investigates current nutritional guidelines recommended by Federal agencies and professional groups. Explains the United States Recommended Daily Allowances and the Recommended Dietary Allowances and how to use them.
2. Analyzes one's own nutritional patterns and initiates action to correct any problems.

Sub objectives: Students should be able to:

1. Plan nutritionally adequate meals for the activity levels.
2. Identify foods which supply the nutrients needed by athletes and all healthy individuals.

Activity 1

Discuss goals and objectives of the lesson. List them on the board.

LD: Fill in Goals, Objectives, and Assignment sheet pp. 188

Activity 2

Provide students with all the handouts necessary for the activity.
Go over directions slowly, demonstrating along the way, and writing them out step by step on the board.

LD: Have a step-by-step copy for each student to have at his/her desk pp. 189-199
Group LD together for additional instruction if necessary.

Activity 3

Follow Teaching Plan: First Session through Second Session.

Activity 4

Gather group results and allow students to fill in a large chart on the board. Have students reproduce the chart and information. Have a class discussion and have students write up what conclusions they came to and what they learned for their own nutritional needs.

LD: Have LD do this section in whatever learning mode is best for each of them pp. 200-203

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 8 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Pizza Before the Game

and it is due: Mon.

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

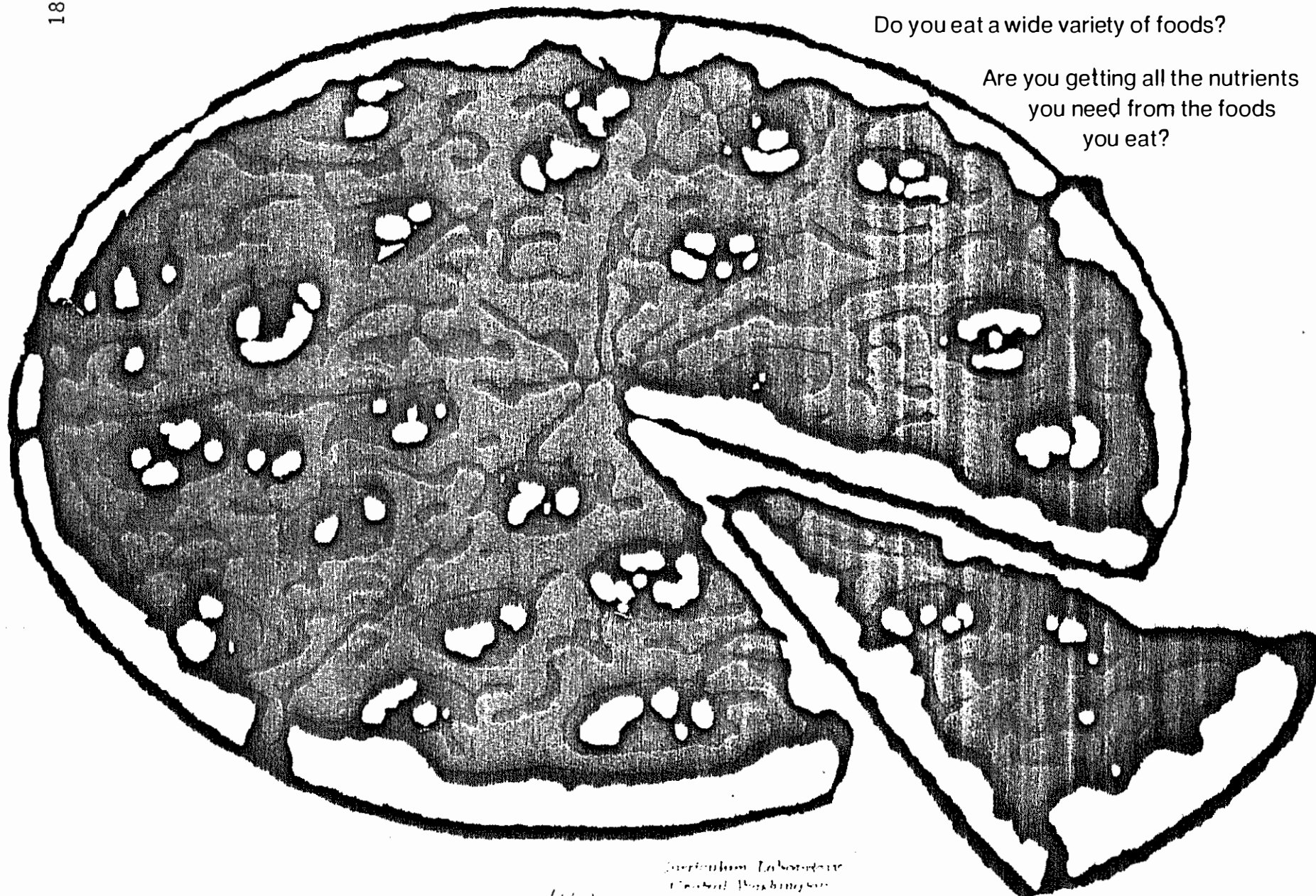
PIZZA BEFORE THE GAME?

First Session: Teaching Plan

Are you in good nutrition condition?

Do you eat a wide variety of foods?

Are you getting all the nutrients
you need from the foods
you eat?



Activity Synopsis

Acting as Olympic trainers, student teams try to meet the Recommended Dietary Allowances (RDA) for their assigned athletes by planning nutritionally adequate meals.

190 Students then identify foods which supply the nutrients needed by their athletes and all healthy individuals.

Activity Outcomes

After completing this activity, the student will be able to:

- Analyze foods for nutrient contributions
- Select foods for a nutritionally adequate diet

Note

Students add and subtract decimals and 3-digit numbers in this activity.

Activity Terminology

- Calcium
- Calories
- Energy
- Iron
- Niacin
- Protein
- Recommended Dietary Allowances (RDA)
- Riboflavin
- Thiamin
- Vitamin A
- Vitamin C

Estimated Teaching Time

Two class periods (approximately 40-55 minutes each)

Teaching Materials: First Session

Teacher:

- 8 sets of **Food Tents**
- Selected set of *Food Models* for cafeteria foods (optional)

Each of the 8 Groups:

- Cafeteria of Food** worksheet
- One-Third RDA Chart**
- 1 of the 8 **Olympic Task Cards**
- Calculator (optional)

Advance Preparation: First Session

- Duplicate the **Cafeteria of Food** worksheet and the **One-Third RDA Chart**.
- Duplicate and cut apart the **Olympic Task Cards**.
- Duplicate, cut apart along solid lines, and fold in half along dotted line the 8 sets of **Food Tents**. (The **Olympic Task Cards** and **Food Tents** can be collected and reused with other classes.)
- Arrange the **Food Tents** in a cafeteria-style set-up on tables, along chalkboards, window ledges, etc. Keep similar foods together (e.g., hot items, desserts, beverages).
- Optional: Secure a set of *Food Models* from your local Dairy Council. Punch out those foods represented with **Food Tents**. Display the *Food Models* in front of the **Food Tents** to give students an idea about serving size.
- Refer to pages 5-14 and 16-19 of the *Nutrition Source Book* for additional information about nutrients and RDA.

Teaching Plan: First Session

1. Explain to the students that they are going to be the athletic trainers for the U.S. athletes at the upcoming Olympic games.
2. Divide the class into 8 groups.
3. Assign a different athlete to each of the groups. Give each group a different **Olympic Task Card**.

Explain to the students that their groups will be planning meals for the Olympic athletes on their task cards.

Explaining the RDA

4. Distribute a copy of the **One-Third RDA Chart** to each group.
5. Explain the RDA by telling the class:
 - The RDA are Recommended Dietary Allowances.
 - They are established by the Food and Nutrition Board of the National Academy of Sciences.
 - RDA are recommendations for the amounts of nutrients considered to be adequate to meet the needs of practically all healthy people in the United States.
6. Have the groups find their athletes' RDA (by age and sex) on the **One-Third RDA Chart** and have them circle it.

Optional: Use 1 athlete as an example. Have that athlete's group circle the correct line.

Point out that the figures listed on the **One-Third RDA Chart** are actually $\frac{1}{3}$ of the total daily RDA since the students will be planning only 1 meal for a day.

7. Distribute a copy of the **Cafeteria of Food** worksheet to each group.

Have the students transfer the circled RDA for their athletes to the line marked RDA on the **Cafeteria of Food** worksheet.

Choosing a Meal

8. Tell the students that they will be going through a cafeteria line to select meals for their athletes.

9. Have 1 group at a time go through the cafeteria line. Inform the groups that they should try to select appetizing, nutritionally adequate meals (without looking at the back of the **Food Tents**).
10. Have each group select a recorder. Tell the recorders to write the names of each of their food selections in the column headed "FOOD" on the **Cafeteria of Food** worksheet.
11. Have the students read off the nutrient values of each food as the recorders fill in the correct columns on the worksheet.
12. Then have the groups total each column. (This can be assigned for homework.)
13. Collect the **Cafeteria of Food** worksheets and **One-Third RDA Chart** or have the students bring them back for the next class.
14. Collect the **Food Tents** and **Olympic Task Cards**.

ONE-THIRD RDA CHART*

	Age (Years)	Energy (Kcal)	Protein (g)	Vitamin A (IU)	Vitamin C (mg)	Thiamin (B ₁) (mg)	Riboflavin (B ₂) (mg)	Niacin (mg)	Calcium (mg)	Iron (mg)
192										
MALES	11-14	900	15	1,667	17	.5	.5	6	400	6
	15-18	933	19	1,667	20	.5	.6	6	400	6
	19-22	966	19	1,667	20	.5	.6	6	267	3
	23-50	900	19	1,667	20	.5	.5	6	267	3
	51+	800	19	1,667	20	.4	.5	5	267	3
FEMALES	11-14	733	15	1,333	17	.4	.4	5	400	6
	15-18	700	15	1,333	20	.4	.4	5	400	6
	19-22	700	15	1,333	20	.4	.4	5	267	6
	23-50	667	15	1,333	20	.3	.4	4	267	6
	51+	600	15	1,333	20	.3	.4	4	267	3

*The figures shown on this chart are one-third of the day's total allowances.

You are the Olympic trainer for the 4'11", 92 lb gymnast, Susie Lin. She is 14 years old and trains 4 hours per day.

Plan a nutritious lunch (1/3 of her RDA) from the cafeteria line for Susie.

OLYMPIC TASK CARD

You are the Olympic trainer for Wendy Boglioli, a 24-year-old swimmer. Wendy is 5'11" and weighs 130 lbs. She recently had a baby, but she is not breast feeding.

Plan a nutritious lunch (1/3 of her RDA) for Wendy from the cafeteria line.

OLYMPIC TASK CARD

You are the Olympic trainer for Juan Garcia, a 32-year-old long distance runner. Juan is 5'10" and weighs 130 lbs. He runs 12-20 miles per day in training and seems to be constantly eating.

Plan a nutritious lunch (1/3 of his RDA) for Juan from the cafeteria line.

OLYMPIC TASK CARD

You are the Olympic trainer for Dan Wincovich, a 17-year-old high jumper. Dan is 5'11" and weighs 154 lbs. Dan holds a world record in the high jump and is really ready for the competition this year.

Plan a nutritious lunch (1/3 of his RDA) for Dan from the cafeteria line.

OLYMPIC TASK CARD

You are the Olympic trainer for the 6'11", 200 lb basketball player, Otis Washington. He is 19 years old and trains with the team for 3 hours per day and does weight training 1 hour every 3 days.

Plan a nutritious lunch (1/3 of his RDA) for Otis from the cafeteria line.

OLYMPIC TASK CARD

You are the Olympic trainer for Beth Heinz, a 21-year-old speed skater. Beth is 5'4" and weighs 105 lbs. She competes on a regular basis and practices several hours a day.

Plan a nutritious lunch (1/3 of her RDA) for Beth from the cafeteria line.

OLYMPIC TASK CARD

You are the Olympic trainer for Hans Grimm, a 13-year-old diver for the swim team. Hans is 5'3" and weighs 97 lbs. He is always in the water and seems to be losing weight.

Plan a nutritious lunch (1/3 of his RDA) for Hans from the cafeteria line.

OLYMPIC TASK CARD

You are the Olympic trainer for Madeline Murphy, the 5'9", 130 lb track and field star. Madeline is 17 years old and is the team's best hurdler.

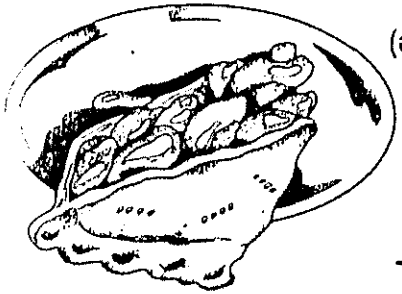
Plan a nutritious lunch (1/3 of her RDA) for Madeline using the cafeteria foods.

OLYMPIC TASK CARD

PIZZA BEFORE THE GAME?

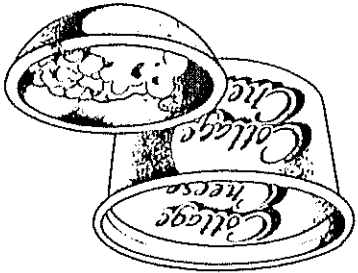
First Session: Materials

Copyright © 2000 by The McGraw-Hill Companies, Inc. All rights reserved. Printed in the USA.



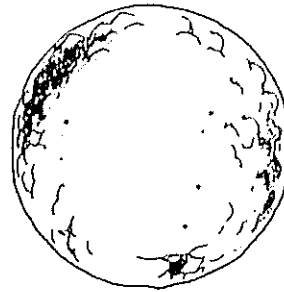
FOOD TENT
APPLE
PIE
(1/6 of 9" pie)

	Amount
Calories	403
Protein	3.5 g
Vitamin A	47 IU
Vitamin C	2 mg
Thiamin (B ₁)	.2 mg
Riboflavin (B ₂)	.1 mg
Niacin	2 mg
Calcium	13 mg
Iron	1 mg



FOOD TENT
COTTAGE
CHEESE
(1/2 cup)

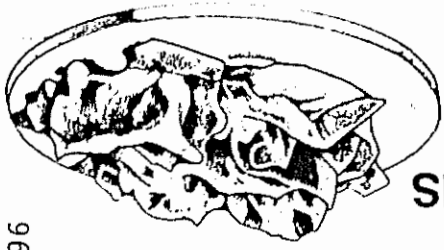
	Amount
Calories	109
Protein	13 g
Vitamin A	171 IU
Vitamin C	—
Thiamin (B ₁)	.02 mg
Riboflavin (B ₂)	.2 mg
Niacin	.1 mg
Calcium	63 mg
Iron	.1 mg



FOOD TENT
ORANGE
(medium)

	Amount
Calories	65
Protein	1.3 g
Vitamin A	263 IU
Vitamin C	66 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.05 mg
Niacin	.5 mg
Calcium	54 mg
Iron	.5 mg

The following pages may be duplicated for classroom use.

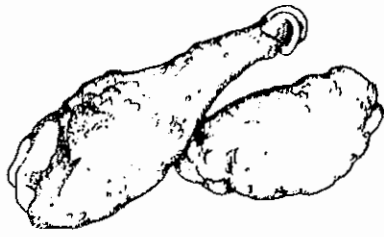


GREENS

(1/2 cup)

FOOD TENT

	Amount
Calories	17
Protein	2 g
Vitamin A	5306 IU
Vitamin C	36 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.1 mg
Niacin	.4 mg
Calcium	104 mg
Iron	1 mg

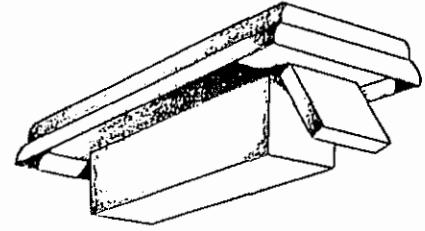


FRIED CHICKEN

(3 ounces edible portion)

FOOD TENT

	Amount
Calories	201
Protein	26 g
Vitamin A	148 IU
Vitamin C	—
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.4 mg
Niacin	6 mg
Calcium	12 mg
Iron	2 mg

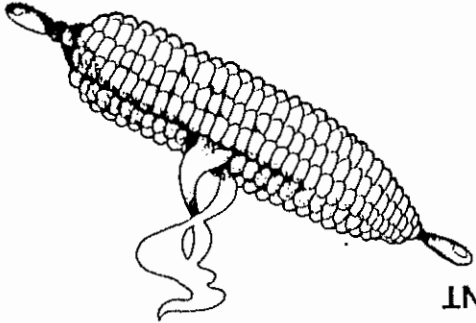


BUTTER

(1 teaspoon)

FOOD TENT

	Amount
Calories	36
Protein	—
Vitamin A	153 IU
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	—
Calcium	1 mg
Iron	—



CORN

(1 ear)

FOOD TENT

	Amount
Calories	114
Protein	4 g
Vitamin A	500 IU
Vitamin C	11 mg
Thiamin (B ₁)	.2 mg
Riboflavin (B ₂)	.1 mg
Niacin	2 mg
Calcium	4 mg
Iron	1 mg

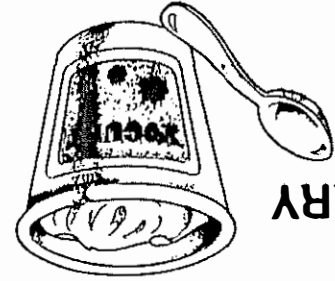


BLACKEYE PEAS

(1/2 cup)

FOOD TENT

	Amount
Calories	134
Protein	10 g
Vitamin A	434 IU
Vitamin C	21 mg
Thiamin (B ₁)	.4 mg
Riboflavin (B ₂)	.1 mg
Niacin	2 mg
Calcium	30 mg
Iron	3 mg



STRAWBERRY YOGURT

(1 cup)

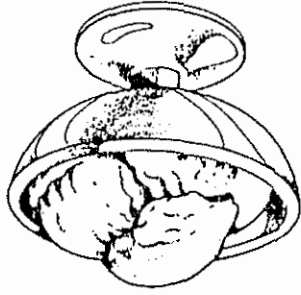
FOOD TENT

	Amount
Calories	225
Protein	9 g
Vitamin A	111 IU
Vitamin C	1.4 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.4 mg
Niacin	.2 mg
Calcium	314 mg
Iron	.1 mg



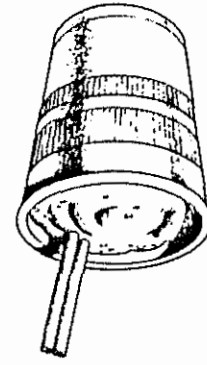
**CHOCOLATE
CAKE**
FOOD TENT
(1/16 of 9" cake)

	Amount
Calories	234
Protein	3 g
Vitamin A	104 IU
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	.1 mg
Niacin	.2 mg
Calcium	41 mg
Iron	.6 mg



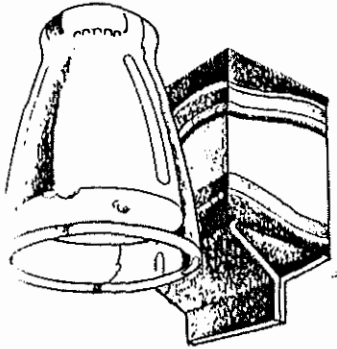
**VANILLA ICE
CREAM**
FOOD TENT
(1/2 cup 1/4 pint)

	Amount
Calories	135
Protein	2 g
Vitamin A	272 IU
Vitamin C	.3 mg
Thiamin (B ₁)	.03 mg
Riboflavin (B ₂)	.2 mg
Niacin	.3 mg
Calcium	88 mg
Iron	.1 mg



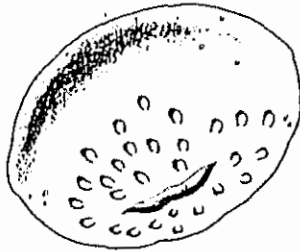
**CHOCOLATE
MILKSHAKE**
FOOD TENT
(1 1/2 cups)

	Amount
Calories	356
Protein	9 g
Vitamin A	258 IU
Vitamin C	—
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.7 mg
Niacin	.4 mg
Calcium	396 mg
Iron	1 mg



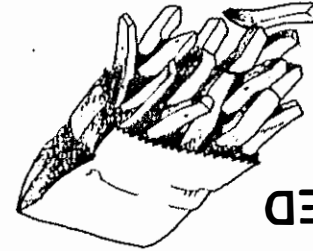
**SKIM
MILK**
FOOD TENT
(1 cup)

	Amount
Calories	86
Protein	8 g
Vitamin A	500 IU
Vitamin C	2 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.3 mg
Niacin	.2 mg
Calcium	302 mg
Iron	.1 mg



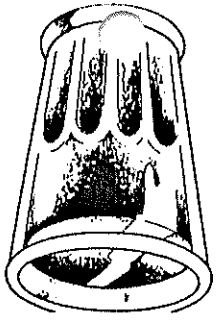
**HARD
ROLL**
FOOD TENT

	Amount
Calories	156
Protein	5 g
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	.2 mg
Riboflavin (B ₂)	.1 mg
Niacin	2 mg
Calcium	24 mg
Iron	1 mg



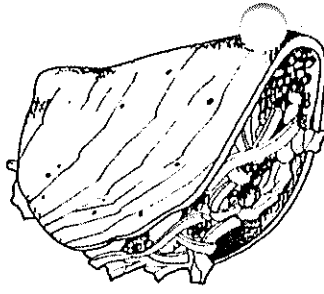
**FRENCH-FRIED
POTATOES**
FOOD TENT
(20 pieces)

	Amount
Calories	233
Protein	4 g
Vitamin A	—
Vitamin C	18 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.1 mg
Niacin	3 mg
Calcium	13 mg
Iron	1 mg



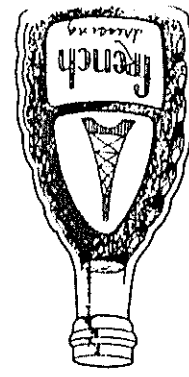
(1/2 cup)
TOMATO JUICE
 FOOD TENT

	Amount
Calories	26
Protein	1 g
Vitamin A	972 IU
Vitamin C	19 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	—
Niacin	1 mg
Calcium	9 mg
Iron	1 mg



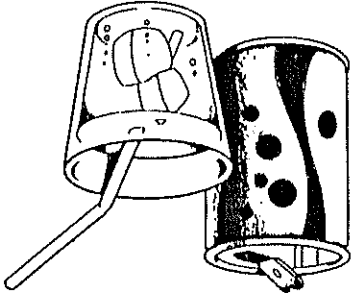
BEEF TACO
 FOOD TENT

	Amount
Calories	216
Protein	17 g
Vitamin A	352 IU
Vitamin C	4 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.2 mg
Niacin	3 mg
Calcium	174 mg
Iron	3 mg



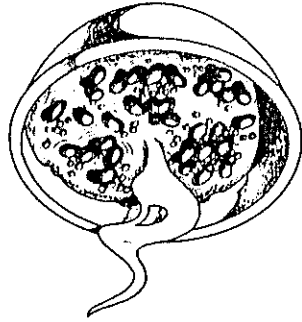
(1 tablespoon)
FRENCH DRESSING
 FOOD TENT

	Amount
Calories	66
Protein	—
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	—
Calcium	2 mg
Iron	.1 mg



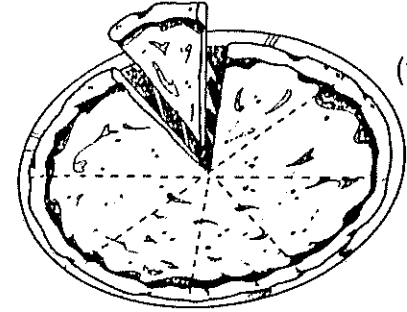
(1 cup)
SOFT DRINK
 FOOD TENT

	Amount
Calories	96
Protein	—
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	—
Calcium	—
Iron	—



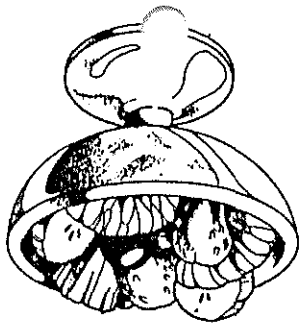
(1 cup with beans)
CHILI CON CARNE
 FOOD TENT

	Amount
Calories	333
Protein	19 g
Vitamin A	150 IU
Vitamin C	—
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.2 mg
Niacin	3 mg
Calcium	80 mg
Iron	4 mg



(1/8 of 14" pizza)
CHEESE PIZZA
 FOOD TENT

	Amount
Calories	354
Protein	18 g
Vitamin A	945 IU
Vitamin C	12 mg
Thiamin (B ₁)	.4 mg
Riboflavin (B ₂)	.5 mg
Niacin	4 mg
Calcium	332 mg
Iron	3 mg

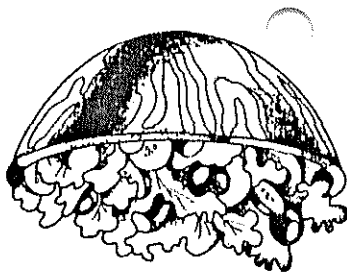


(1/2 cup fruit)

FRUIT SALAD

FOOD TENT

	Amount
Calories	99
Protein	2 g
Vitamin A	530 IU
Vitamin C	44 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.1 mg
Niacin	1 mg
Calcium	45 mg
Iron	1 mg

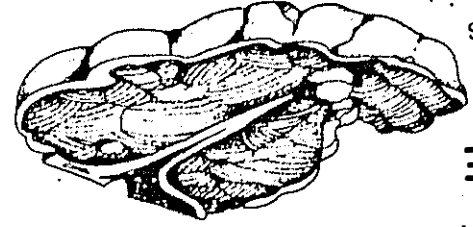


(3/4 cup)

TOSSED SALAD

FOOD TENT

	Amount
Calories	13
Protein	1 g
Vitamin A	1380 IU
Vitamin C	26 mg
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	.3 mg
Calcium	26 mg
Iron	1 mg



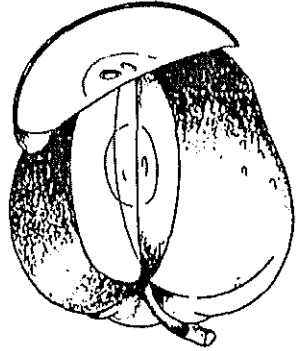
(1 edible portion)

3 1/3 ounces

RIB-BONE STEAK

FOOD TENT

	Amount
Calories	212
Protein	29 g
Vitamin A	19 IU
Vitamin C	—
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.2 mg
Niacin	6 mg
Calcium	11 mg
Iron	4 mg

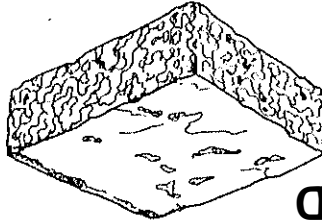


(1 medium)

APPLE

FOOD TENT

	Amount
Calories	80
Protein	—
Vitamin A	124 IU
Vitamin C	6 mg
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	.1 mg
Calcium	10 mg
Iron	.4 mg

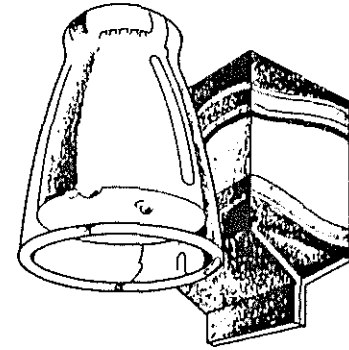


(2 1/2" x 3")

CORNBREAD

FOOD TENT

	Amount
Calories	191
Protein	6 g
Vitamin A	264 IU
Vitamin C	1 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.2 mg
Niacin	1 mg
Calcium	93 mg
Iron	1 mg



(1 cup)

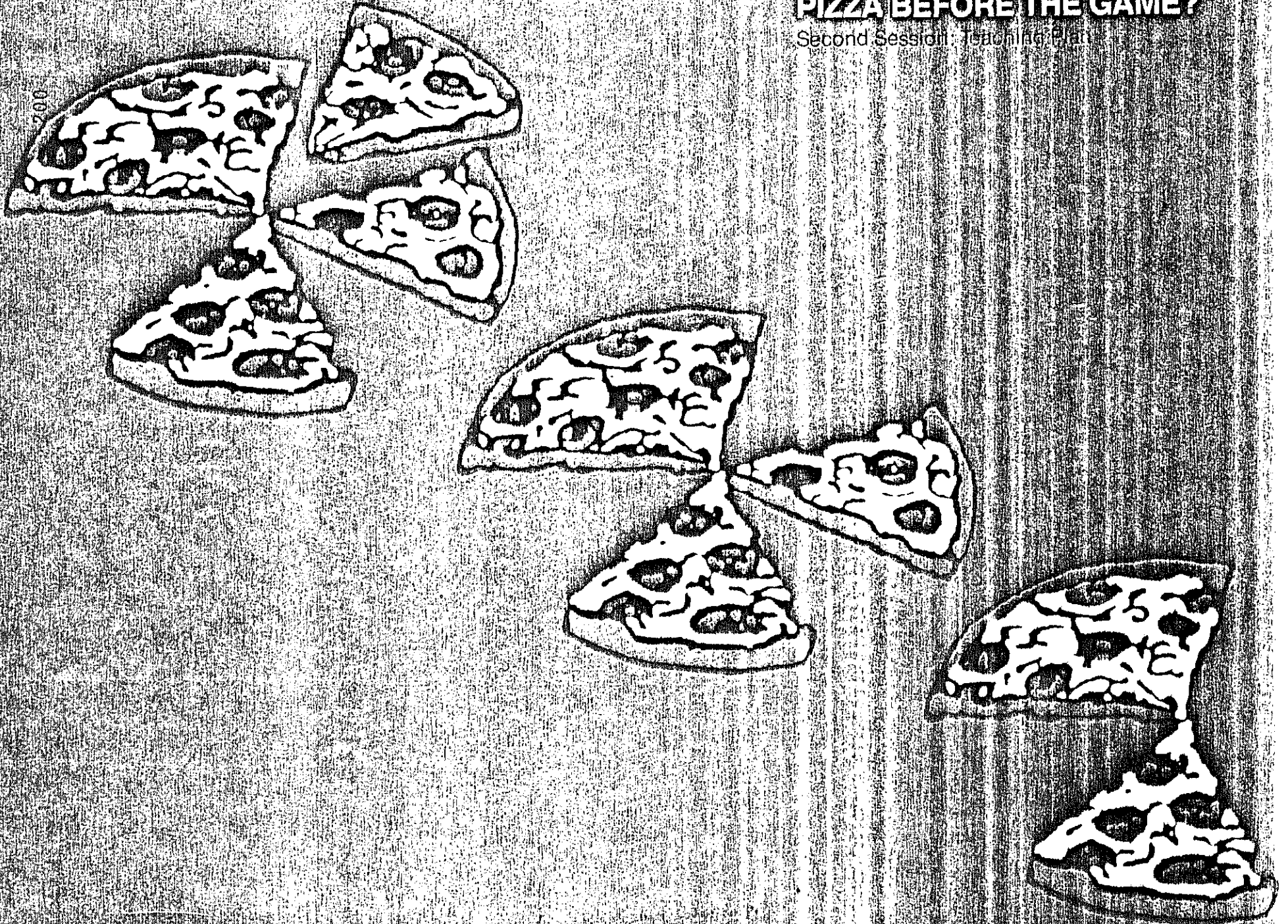
MILK

FOOD TENT

	Amount
Calories	150
Protein	8.1 g
Vitamin A	307 IU
Vitamin C	2 mg
Thiamin (B ₁)	.1 mg
Riboflavin (B ₂)	.4 mg
Niacin	.2 mg
Calcium	304 mg
Iron	.1 mg

PIZZA BEFORE THE GAME?

Second Session: Nutrition Facts



200

Teaching Materials: Second Session

Teacher:

- 8 sets of **Food Tents**
- Selected set of *Food Models* for cafeteria foods (optional)

Each of the 8 Groups:

- Cafeteria of Food worksheet (completed)
- One-Third RDA Chart
- Assigned Olympic Task Card
- Calculator (optional)

Advance Preparation

- Arrange the Food Tents in a cafeteria-style set-up.

Teaching Plan: Second Session

1. Redistribute or have students retrieve their Cafeteria of Food worksheets and One-Third RDA Charts. Redistribute the Olympic Task Cards.
2. If the groups have not totaled the columns, give them a few minutes to do so.

Completing the Worksheet

3. Have the students compare the totals of the columns to the RDA for their athletes. At this time have students compute the differences between the athletes' RDA and the nutrient totals from the meal selections.
4. If the groups have not met the RDA for their athletes, have them go back to the cafeteria and find other food(s) that provide the needed nutrients for the meals.
5. When each group has met the RDA for its athlete, have the group explain to the rest of the class who its athlete is.

Also have the group describe the meal it planned for the athlete. (Write their menus on the chalkboard.)

Discussing the Nutrients and Their Sources

6. Lead the class in a discussion of nutrients using the following information.

7. Protein

Ask the students:

- What foods supplied your athlete with protein?
Answers may include: T-bone steak, fried chicken, tacos, chili, pizza, blackeye peas, milk, milkshake, yogurt, cottage cheese.

Point out that:

- Protein is needed to build and repair body cells.
- Meats, fish, poultry, eggs, milk and milk products, legumes and nuts provide protein.

8. Vitamin A

Explain that:

- Vitamin A is important in maintaining healthy skin and other tissues. It is also important in vision. It prevents night blindness.

Ask the students:

- What foods from the cafeteria supply vitamin A?
Answers may include: greens, tossed salad, tomato juice, fruit salad, apple, pizza, chili, taco, cornbread, corn, buttermilk, milkshake, ice cream, chicken, blackeye peas, milk, butter, orange, cottage cheese.

Go on to explain that:

- Vitamin A is supplied by dark green, leafy vegetables (greens, spinach), orange vegetables and fruits (carrots, winter squash, sweet potatoes, pumpkins, apricots, cantaloupe), liver, milk, cheese, and egg yolk.

9. Vitamin C

Explain that:

- Vitamin C plays a primary role in growth and maintenance of healthy body tissues. It is also involved in resistance to infection.

Ask the students:

- What are some of the sources of vitamin C you chose from the cafeteria line?
Answers may include: fruit salad, greens, french fries, tomato juice, tossed salad, blackeye peas, orange.

Let them know that:

- Some important sources of vitamin C are broccoli, oranges, grapefruit, strawberries, spinach, tomatoes, and sweet and hot peppers.

10. B vitamins

Explain that:

- Thiamin, riboflavin, and niacin are all B vitamins.
- All 3 of these vitamins are involved in the use of energy. Since the athletes are using great amounts of energy, these vitamins are very important.

Ask the students:

- Did you have trouble getting enough of these vitamins in your meal? (Note: These 3 vitamins are found in a wide variety of foods.)

11. Calcium

Ask the class:

- Which nutrient do both males and females in the 11-14-year-old and 15-18-year-old categories need more of than any other age group? *Calcium.*
- What are the chief sources of calcium? *Milk and milk products, such as cheese and yogurt.*

Explain:

- Calcium is a mineral that is essential for bone growth and tooth development.
- Calcium is needed throughout the individual's life because bones are constantly being maintained.

Ask the class:

- Why do teens need more calcium than adults? *Because they are growing and new bone is being formed.*

12. Iron

Point out that:

- Iron is a mineral that is needed for red blood cells, which carry oxygen and nutrients to all the cells.
- Iron is especially important for women due to regular monthly loss of red blood cells through menstruation.
- Foods that supply Iron are red meats, dried beans and peas, liver, prune juice, and fortified/enriched cereals.

13. Calories

- Calories are not a nutrient.
- They are units of energy.
- Energy is required for growth, for all body processes, such as breathing and digestion, for maintaining body temperature, and for physical activity.
- Energy is obtained from the protein, carbohydrate (starches and sugars), and fats in food.

Ask students:

- How many calories does your athlete need?
- What groups on the chart need the most calories? *Males 15-18 years old and 19-22 years old.*
- Did anyone have an athlete who is in this category? *Otis Washington and Dan Wincovich*
- Do energy needs decrease or increase as the athlete gets older? *Energy needs decrease. Why? Because activity and growth slow down.*
- Which athlete needs the fewest calories? *Wendy Boglioli.*

14. Ask the class, as athletic trainers:

- Do you think athletes should eat pizza and tacos?
- What foods would you make sure are available at the training camp and at the Olympic Village?

15. In summary, ask each group a specific question about its athlete. (These may be answered as a homework assignment or as a post-test.)

Dan Wincovich

- Dan needs energy for the jump and the B vitamins needed to use that energy. What foods can supply Dan with both energy and the B vitamins? *The B vitamins, thiamin, riboflavin, and niacin, are found in a wide variety of foods, from meats and milk to cereals and nuts.*

Hans Grimm

- Hans seems to be losing weight even though he's eating all the recommended foods. What foods can Hans eat that will give him the extra calories he needs to maintain his weight? *Hans can increase the serving size of recommended foods and, in addition, can afford to eat some foods that supply mostly calories and few, if any, nutrients. These may include candy, soft drinks, cookies, cakes, pies, and potato chips.*

Susie Lin

- Susie needs extra iron—she may be slightly anemic (low red blood cell count). What foods does she need to eat often? *Iron-rich foods, such as red meats, dried beans and peas, liver, prune juice, and fortified/enriched cereals.*

Madeline Murphy

- Madeline trains several hours every day. What foods does she need to eat regularly to supply the protein used to maintain muscles? *Protein-rich foods, such as meats, fish, poultry, eggs, milk and milk products, legumes, and nuts.*

Otis Washington

- Otis has to play long hours on the court. What foods can he eat before, during, or after practice that give him energy but also supply him with calcium to maintain strong bones? *Calcium-rich foods, such as milk, cheese, yogurt, ice cream, and cottage cheese.*

Wendy Boglioli

- Wendy spends 4 hours a day in the pool and seems to be in great shape after having the baby. What foods can Wendy eat that will supply vitamin C to maintain healthy skin and other tissue? *Vitamin C-rich foods, such as broccoli, oranges, grapefruit, strawberries, spinach, tomatoes, and sweet and hot peppers.*

Juan Garcia

- Juan needs lots of energy to run in training and in competition. What foods can give him energy and the nutrients he needs? *Almost all foods yield some energy. Some foods that supply energy and nutrients are fruits, vegetables, breads, cereals, milk and milk products, meats, fish, eggs, poultry, nuts, and legumes.*

Beth Heinz

- Beth thinks that she needs snacks during her training sessions. What foods or beverages would you suggest she use that also supply vitamin A? *Some snacks that Beth could eat might be carrots, apricots, cantaloupe, milk, cheese, eggs (yolks) or tomato juice.*

Evaluation

Circle the correct answer.

1. Which of the following is needed in increased amounts when participating in athletic programs?

- 203
- a. Protein
 - b. Calories
 - c. Iron
 - d. Vitamin C

2. What are the RDA?

- a. Regulated Daily Allotments
- b. Regular Diets for Athletes
- c. Roberts Dining Advice
- d. Recommended Dietary Allowances

Match the nutrient with the foods that are its best sources

- | | |
|------------------------|---|
| 3. <u>D</u> Iron | A. Milk, cheese, yogurt, ice cream |
| 4. <u>E</u> Protein | B. Broccoli, oranges, grapefruit, strawberries, spinach, tomatoes |
| 5. <u>F</u> Vitamin A | C. Cereals, grains, spaghetti, bread |
| 6. <u>C</u> B vitamins | D. Red meats, dried beans and peas, liver, prune juice |
| 7. <u>A</u> Calcium | E. Meats, fish, poultry, eggs, milk, milk products, legumes, nuts |
| 8. <u>B</u> Vitamin C | F. Greens, carrots, winter squash, sweet potatoes |

Going Further

—Have students interview an athlete and find out what s/he eats before competition. Students can analyze the nutrient content of the athletes' diets using a worksheet similar to the *Cafeteria of Food*.

—Have the students plan a pre-game meal for one of the school's athletic teams. Discuss with the team's coach what types of foods are usually included in the meal. Also, if any types of foods are avoided, have students explore the reasons for these habits to determine if they are based on scientific facts or myths.

Resources

—Darden, Ellington. *Olympic Athletes Ask Questions About Exercise and Nutrition*. Winter Park, FL: Anna Publishing, Inc. 1977.

In a question-answer format, the author presents many common controversies and misconceptions about exercise and nutrition. Direct and simple responses based on research are given.

—*Nutrition and Exercise*. Pleasantville, NY: Sunburst Communications, Inc. 1980.

Part I of this 2 filmstrip and 2 cassette/record set focuses on nutritional myths and facts. Nutrients and their roles in athletic performance are discussed. Myths, such as eating extra protein and vitamin supplements, are also dispelled.

LESSON 9: Energy balance and activity patterns (2 day lesson and game)

Framework Objective:

1. Applies principles of energy balance to plan a food and activity pattern which results in desirable body weight.

Sub-objectives: Students should be able to:

1. Explain the relationship between calorie intake and energy output.
2. Define metabolism.
3. Explain the difference between kinetic and potential energy.
4. Name reasons why the body needs energy.
5. Explain basal metabolism rate and resting metabolism.
6. Define a calorie.
7. Explain the difference between metabolism and anabolism.
8. Plan a diet and exercise program to meet their individual needs and weights.

Activity 1

Review major points of activities.

Activity 2

Discuss goals and objectives of the lesson. Write on the board.

LD: Fill out Goals, Objectives, and Assignment sheet pp 206

Activity 3

Discuss the lesson, writing key points out on the overhead projector in large print with colored pens.
Hand out paper with additional information for all students.
Highlight important points on those of the LD students pp.
207-217

LD: Provide a highlighted copy of the lesson pp. 44-45
Tape lesson for those needing auditory stimulation (tape 2, lesson 9).

Activity 4

Review lesson by orally quizzing students over key points.

Activity 5

Assign vocabulary

LD: VAKT Approach pp. 218-225
Coded vocabulary sheet pp. 226
Content worksheet pp. 227-228
Daily contract pp. 229
Formal contract pp. 230

Activity 6

Slim Chance Game (HAP Activity).
Explain directions step by step by demonstrating after giving students needed handouts. Write directions on the board.
Follow the procedure on the activity.
Class discussion on how to arrive at one's best weight pp. 231-235.

Activity 7

Have students set up an activity program and diet which meets their particular life styles and needs. Stress good nutrition, RDA requirements, and their own activity levels.

LD: Allow the LD to express their programs in whatever mode of learning is best for them.

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 9 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Slam Chance Game

and it is due: Wed.

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

Please note: Text and images on p. 207-217 were redacted due to copyright concerns.

The Normal Metabolic Rate at Different Ages Shown
by Graphing the Caloric Needs at Different Ages

Desirable Weights for Height

Typical Reducing Graph

Energy Expenditure Per Hour During Different
Types of Activities

Examples of Energy Expenditure by Reference Man and Woman

. Desirable Weights for Adults

Calorie allowance for males by age and formulas for
adjustment by weight.

Calorie allowance for females by age and formulas for
adjustment by weight.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Metabolism

DIRECTIONS: Listen to the definition while tracing the letters.

METABOLISM: The total series of chemical reactions that make up the process of life.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Potential energy

DIRECTIONS: Listen to the definition while tracing the letters.

POTENTIAL ENERGY: Resting or stored energy found in food.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Kinetic energy

DIRECTIONS: Listen to the definition while tracing the letters.

KINETIC ENERGY: energy being used or working such as heat, motion, light, and electricity. It is used in the body for automatic functions and voluntary muscular contractions.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Catabolism

DIRECTIONS: Listen to the definition while tracing the letters.

CATABOLISM: Reactions breaking food down and releasing energy.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Anabolism

DIRECTIONS: Listen to the definition while tracing the letters.

ANABOLISM: reactions building up new substances and storing up energy.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Basic Metabolic Rate

DIRECTIONS: Listen to the definition while tracing the letters.

BASIC METABOLIC RATE: amount of energy required to just stay alive which is under the control of the thyroid gland.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9

Name _____

Vocabulary (VAKT) Approach

DIRECTIONS: While you are listening to the word on the tape, trace the letters on the word.

Resting Metabolism

DIRECTIONS: Listen to the definition while tracing the letters.

RESTING METABOLISM: The BMR plus the number of calories necessary for maintaining life at rest.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Kilocalorie

DIRECTIONS: Listen to the definition while tracing the letters.

KILOCALORIE: amount of heat required to raise 1 kilogram (2.2 pounds) of water 1 degree centigrade.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 9
Coded Vocabulary

Name _____

□	○	▷	⊙	▣	⊖	⊗	◻	⊕	△	⊗	⊘	>
A	B	C	D	E	F	G	H	I	J	K	L	M
<	◼	<	◼	>	⊕	⊖	∧	∨	≡	+	=	#
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

DIRECTIONS: Use the code above to decode the word being defined.

> ▣ ⊕ □ ○ ⊘ ⊖ ⊕ >

_____ is the total series of chemical reactions that make up the process of life.

< ◼ ⊖ ▣ < ⊕ ⊖ □ ⊘ ▣ < ▣ > ⊗ =

_____ is resting or stored energy found in food.

⊗ ⊖ < ▣ ⊖ ⊖ ▷ ▣ < ▣ > ⊗ =

_____ is energy being used or working such as heat, motion, light, and electricity. It is used for automatic and voluntary muscular contractions.

▷ □ ⊕ □ ○ ◼ ⊘ ⊖ ⊕ >

_____ are reactions breaking food down and releasing energy.

□ < □ ○ ◼ ⊘ ⊖ ⊕ >

_____ is reactions building up new substances and storing up energy.

○ □ ⊕ ⊖ ▷ > ▣ ⊖ □ ○ ⊘ ⊖ ⊕ > > □ ⊖ ▣

_____ is the amount of energy required just to stay alive which is under the control of the thyroid gland.

> ▣ ⊕ ⊖ ⊖ < ⊗ > ▣ ⊖ □ ○ ⊘ ◼ ⊖ ⊕ >

_____ is the BRM plus the number of calories necessary for maintaining life at rest.

⊗ ⊖ ⊘ ◼ ▷ □ ⊘ ◼ > ⊖ ▣

_____ is the amount of heat required to raise 1 kilogram of water 1 degree centigrade.

Lesson 9
Content Worksheet-Tape 2

Name _____

DIRECTIONS: Read over today's lesson in your notes, in your book, or on the provided outline given in class. (Sections IV. A.-C.) Answer the following questions from your reading.

LD: Listen to today's lesson on Tape 2-Lesson 9. Answer the following questions as you listen.

- (1) People need to eat in order to supply their bodies with needed _____ not synthesized in the body.
- (2) A well-fed person is not necessarily a _____ - _____ person.
- (3) The human body needs energy to function. Energy comes in two forms: _____ and _____.
- (4) Define potential and kinetic energy stating functions they have in the body. _____

- (5) Conversion of potential energy into kinetic energy occurs in the _____.
- (6) What is metabolism? _____

- (7) _____ occurs from breaking down food and releasing energy.

Lesson 9 Content Worksheet continued.

- (8) _____ occurs from reactions building up new substances and storing up energy.
- (9) _____ is the amount of energy required to maintain life controlled by the thyroid gland.
- (10) _____ is the BMR plus the number of calories used while resting.
- (11) Most people use _____ to _____ kilocalories/hour/kilogram of body weight.
- (12) Energy requirements also include how _____ a person is.
- (13) List the amounts of additional energy needed by different activity ranges.
- a. _____
 - b. _____
 - c. _____
 - d. _____
- (14) Quantity of energy released is measured in _____.
- (15) Define calorie. _____
- _____
- _____
- _____

DAILY CONTRACT

DATE 5-11

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: Slam Chance

and I understand that if I invalidate my contract, the following punishment will occur: I will have a 7:30 AM detention to finish my work.

SIGNED: Debbie Walters

TEACHER: Debbie and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if Debbie does not keep to this agreement. I will try to help Debbie in any way to make his/her day better.

SIGNED: Mr. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of Debbie's's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-1

STUDENT: I agree to follow these rules of student behavior: _____

I will turn in 3 assignments
a week.

Signed: Debbie WaltersTEACHER: I agree to help Debbie by helping

her with difficult aspects of
learning and her assignments.

Signed: Mrs. HartenPRINCIPAL: I agree to help Debbie by providing

a tutor on her study hall.

Signed: Mr. PrincipalPARENTS: I/we agree to help Debbie by helping

her when necessary with her
homework.

Signed: Caron Walters
Joan Walters

SLIM CHANCE

231

NUTRITION/DENTAL HEALTH Module



OVERVIEW

The students play a board game in which they must balance their food intake with their exercise level in order to maintain a safe weight.

HEALTH BACKGROUND

The food we eat is like fuel. When our bodies combine food with oxygen in our cells, energy is released. This energy is what drives all body processes, including motion and maintenance. The *calorie* is the unit of measure for energy:

the energy available in food as well as the energy necessary for the functioning of the body. If, day after day, we eat foods that supply more calories than our bodies use, we store the surplus energy as fat, thus gaining weight. If we eat foods that have fewer calories than our activities require, the body uses its own tissues for fuel, and we lose weight. Whether it leads to excess fat or to loss of weight, an imbalance between calorie intake and calorie expenditure places stress on the body.

MATERIALS

For each student:

1 copy of Student Sheet SC* (optional: for HAP Sidetrip)

For the class:

7 "Slim Chance" game sets: game board, spinner, box of chips, 4 calories/stress racks, 4 markers, 36 Stress tickets, 24 Slim Chance cards: 16 each of Breakfast, Lunch, and Dinner cards (numbered for your convenience in inventorying)

4 blank Slim Chance cards

1 timer

duplicator master of Student Sheet SC

* Provided by the teacher.

SETTING UP

Suggested Time:

- Plan for 50 to 60 minutes for Part One.
- Plan for 30 minutes for Part Two.

Preparing for the Activity

1. Duplicate the Student Sheet if you plan to do the Sidetrip.

2. Copy the following information on the chalkboard:

Highest Spin =	25 chips
Lowest Spin =	5 chips
Other Spins =	15 chips

THE ACTIVITY: PART ONE

Introducing the Activity

1. Initiate a discussion on how eating and exercising habits affect health by asking the students:

- How do you think the amount of food we eat affects our weight?
- What effect do you think exercise has on weight?
- How do you think our weight affects our health?

2. If necessary, explain to the students:

- Eating more food than the body uses causes excess body fat, which places stress on the heart. (Weight gained due to

muscular development does not significantly increase the effort of the heart.)

- Not eating enough food over a long period of time is stressful because the body, after utilizing fat tissues, breaks down its own muscle tissues in order to obtain the energy it usually gets from food.

3. Tell the students that you have a game for them to play to find out if they can balance their food intake with their exercise level to maintain a safe weight.

Explaining the Object of the Game. Bring out one game set, and gather the students around you. Show the students each piece of equipment as you explain what that piece represents in the simulation.

1. The *calories/stress rack* represents your body and is designed to hold *calorie chips* (each chip representing 100 calories) and *Stress tickets*, which represent stress on your body.

- The Safety Zone represents a safe or healthful weight. The top of your stack of chips must be within this range for your body to be safe from stress.

2. The object of the game is to collect as few Stress tickets as possible while moving around the game board, which represents one day's time.

3. To keep your stack of chips within the Safety Zone and thus avoid "stress," you will need to balance the number of calories taken in with the number of calories used up during exercise.

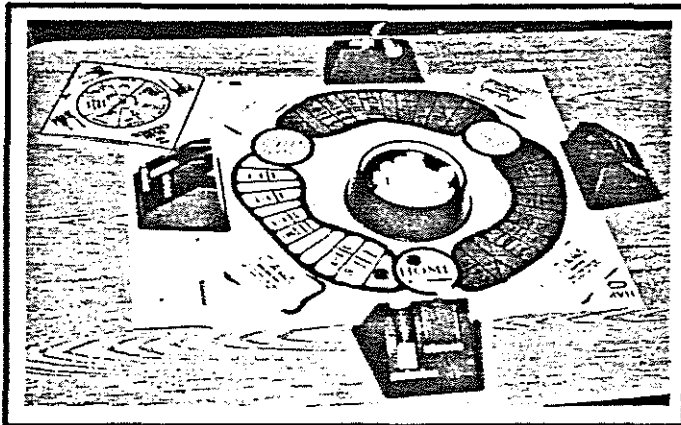
- You *take in* calories by eating, which is simulated by drawing a Breakfast, Lunch, or Dinner card.
- You *use up* calories by exercising, which is simulated by spinning the spinner and moving along the game board (1 space for every 100 calories indicated by the spinner).
- Unexpected events can affect your calorie balance, and these are represented by the Slim Chance cards drawn when the spinner points to Slim Chance or when you land on Slim Chance.

Explaining How to Play Slim Chance.

Make practice moves to illustrate the game rules.

1. **Setting Up.** In your groups of four, set out your game board and:

- Shuffle each deck of cards, and place the deck face down on its labeled rectangle on the board.



- Take a Breakfast, Lunch, or Dinner card, depending on your position on the board.
- Select only one food item from the card.
- Add chips to your rack until you have added 1 chip for every 100 calories in the food you choose.

Note: These rules are listed on the spinner.

- Ignore the other symbols on the food cards for this game.
- If you wish to “eat more,” you may stay put and take another food card on your next turn.

6. Slim Chance. If you land on a Slim Chance square or spin Slim Chance, you must draw a Slim Chance card. Read it aloud, follow the instructions on the card, and return it to the bottom of the Slim Chance deck.

7. Snack Spaces. If you land on or pass over a Snack space, you have the choice of snacking (and adding calorie chips) or not snacking.

8. When the timer rings, check your stack of calorie chips. If the top of the stack is either above or below the Safety Zone, your “body” is under stress, and you must take a Stress ticket.

9. The teacher again sets the timer for three minutes. This procedure continues until the end of the game. (See step 11 in this section.)

10. Home. Once you reach Home, you stop spinning and stop taking food cards. However, each time the timer rings after you reach Home until the end of the game, you must still take a Stress ticket if the top of the stack of chips in your rack is above or below the Safety Zone.

11. Who Wins? The game ends when everyone reaches Home. The player with the fewest Stress tickets wins. In case of a tie, the player who reached Home first wins the game.

Note: All per-serving calorie amounts have been rounded off to the nearest hundred for simplicity. Thus, foods containing less than 50 calories are listed as containing 0 (zero) calories.



Playing Game One

1. Remind the students that the object of the game is to balance exercise and eating in order to reach and maintain a safe calorie level, and thus avoid stress.

2. Divide the class into groups of four. (The game may also be played by two or three students.)

3. Give each group one game, and let them begin.

- Place the Stress tickets in their labeled area on the board.
- Place a calories/stress rack in front of each player.
- Set the box of calorie chips, uncovered, in the center of the board.
- Each player selects his marker and places it on Home.

2. The players determine how many calorie chips they will have in their racks at the start of play. Each calorie chip equals 100 calories.

- Each player spins the spinner and reads the number of Cal./hr. (calories per hour). If you spin Slim Chance or Your Choice, spin again.)

Highest Spin = 25 chips (2500 calories)

Lowest Spin = 5 chips (500 calories)

Other Spins = 15 chips (1500 calories)

(Note that these values are written on the chalkboard.)

3. The teacher sets the timer for three minutes.

4. The player with the highest number of chips takes the first turn, with the play moving clockwise around the board (to each player’s left).

5. When it is your turn, you have two choices: spin or take a food card.

a. If you decide to spin:

- Spin the spinner and move your marker one space forward for each 100 Cal./hr. indicated by the spinner.
- Remove one chip from your rack for each 100 Cal./hr. you lose (move). Return these chips to the calorie box.
- If there are not enough calorie chips in your rack to complete the move, you must take a Stress ticket. Put it in the slot on your rack.

b. If you decide to select a food card:

- Do not move your marker.

Name _____






BALANCING MY DAILY DIET

Choosing foods by food group is an excellent way to insure that you are getting a nutritionally adequate and balanced diet.

Each square on this chart equals one serving from a particular food group. The number of squares in each line indicate the number of servings you need for that food group each day.

Filling in Your Daily Food Groups Chart

- When you select foods from the meal cards or snack squares, fill in the appropriate squares as indicated by the symbols next to the foods.
 - Some combination foods belong to more than one food group. Fill in a square for each food group indicated.
 - Some foods, although equal to one serving in *quantity*, do not supply a full serving from a food group. These foods are indicated by half symbols. Fill in only 1/2 square for a food with such a symbol.
 - Some foods have essentially no value other than calories and do not help fulfill a food-group serving requirement. Such foods are indicated with a \bigcirc (zero: meaning empty calories).
- At the end of the game, you must have filled in all the squares in order to have a nutritionally balanced diet.
- If you have not filled in all the serving squares by the time you reach Home, continue adding Stress tickets to your rack whenever the timer rings.

	FOOD GROUP	SYMBOL	NUMBER OF SERVINGS			
	Breads, Grains, Cereals	●				
	Milk and Dairy Products	◆				
	Meat and Protein	■				
	Fruits	★				
	Vegetables	▲				

Permission is granted to reproduce this form for use in conjunction with HAP

PUBLISHED BY



P.O. BOX 104, NORTHBROOK, ILLINOIS 60062 • 312/272-7810

000-9564

HEALTH ACTIVITIES PROJECT



HAP Copyright © 1982 by the Regents of the University of California

4. At the end of play, have each student note how many Stress tickets he has.

Analyzing the Data

1. Ask the students what they learned by playing the game.
 - What kinds of foods or snacks did you find yourself choosing? Why?
 - When did you want high or low spins? Why?
 - If you had too few calories most of the time, what did you do to try to get back into the Safety Zone?
 - What did you do when you had too many calories?
 - Why should the player with the least number of Stress tickets be the winner of the game?
2. Ask the students to discuss the times they have eaten although they were not really hungry.
3. Have the students make up some new Slim Chance cards using the blank Slim Chance cards, to add to the deck for Part Two.

THE ACTIVITY: PART TWO

Introducing Part Two. Ask the students to suggest different strategies for winning the game. (For example: how to play if you start out with a lot of calories or with only a few calories.)



Playing Game Two

1. Challenge the students to play the game again with the same rules, but trying for fewer Stress tickets than they received in Game One.
2. Add the Slim Chance cards that the students made to the deck.

Analyzing the Data

235

1. How did your strategy in Game Two differ from the one you used in Game One?
2. How can a person eat more than she usually eats and still weigh the same? How can she eat less and still weigh the same?
3. Would you prefer to control your weight by eating less or by exercising more? Why?

HEALTH APPLICATIONS

You stay over at a friend's house and your friend's mother keeps insisting that you eat more.

- What would you do? Why?
- If you refused, how could you do it without hurting her feelings?

HAP SIDETRIPS

Ask the students to play the game again, this time using the food-group information on the food cards, in addition to the calorie values.

- Instruct the students to fill in the squares on their Student Sheets as they choose items to "eat" from food cards.
- After the game, ask the students how this variation affected their strategies.



Take-Home Idea. For one day, write down everything you eat, including the amount. Look up the calorie value of each food and find out how many total calories you take in that day.

LESSON 10: Nutrition and health (3 day lesson)

Framework Objectives:

1. Discusses major nutritional problems concerning teenagers, especially obesity, anemia, and periodontal disease.
2. Applies principles of energy balance to plan a food and activity pattern which results in desirable body weight.

Sub-objectives: Students should be able to:

1. Discuss nutritional problems common among teenagers, particularly obesity, anemia, and periodontal disease.
2. Discuss nutritional disorders resulting from deficiencies in needed nutrients.
3. Discuss disorders among adults due to poor diet and eating habits.
4. Identify causes of obesity.
5. Design programs to reduce weight and to correct eating habits.
6. Realize how peer pressure affects their food selections.

Activity 1

Review yesterday's lesson.

Activity 2

Discuss goals and objectives of the lesson. Write them on the board.

LD: Fill out the Goals, Objectives, and Assignment sheet pp. 238

Activity 3

Discussion of nutrition in relationship to health. Put key points on overhead projector as you discuss. Give students a chart such as the one used on the overhead, which can be filled in as you discuss the diseases pp. 239

LD: Use bright colored markers to draw attention to important points.

Activity 4

Review the lesson orally by quizzing students.

LD: Provide a taped lesson for the auditorially stimulated students (tape 2, lesson 10).

Activity 5

Assign vocabulary.

LD: VAKT Approach pp. 240-247
Vocabulary identification pp. 248-255
Food Mumbo Jumbo pp. 256-257
Food pretest pp. 259-263
Daily contract pp. 264
Formal contract pp. 265

Activity 6

Malnutrition-overweight worksheet pp. 266-269

LD: Provide additional time for instruction.
Allow LD to work together.

ALTERNATIVE ASSIGNMENT: Forbidden Fruit and Other Carbohydrates

LD: Allow LD to work together and provide the activity instructions. They are very easy to follow and are easily understood pp. 270-282

Activity 7

Out to Lunch activity by the National Dairy Council.

LD: Need additional instructions and step-by-step guidance.
Allow oral answers for questions at the end of the activity
pp. 283-287

GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 10 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Food Mumbo Jumbo

and it is due: Tues.

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Undernutrition

DIRECTIONS: Listen to the definition while tracing the letters.

UNDERNUTRITION: Insufficiency of calories in the diet.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Malnutrition

DIRECTIONS: Listen to the definition while tracing the letters.

MALNUTRITION: deficiency of certain essential nutrients.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Kwashiorkor

DIRECTIONS: Listen to the definition while tracing the letters.

KWASHIORKOR: a serious deficiency disease affecting children from weaning to six years of age due to too little protein and too much carbohydrate.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Goiter

DIRECTIONS: Listen to the definition while tracing the letters.

GOITER: results in an enlarged thyroid gland due to a lack of iodine in the diet.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Anemia

DIRECTIONS: Listen to the definition while tracing the letters.

ANEMIA: a condition resulting in a reduction of red blood or hemoglobin.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Obesity

DIRECTIONS: Listen to the definition while tracing the letters.

OBESITY: a condition resulting from too many calories being consumed in relationship to activity level.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

Anorexia nervosa

DIRECTIONS: Listen to the definition while tracing the letters.

ANOREXIA NERVOSA: an emotional condition resulting in starvation, malnutrition, and underweight.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____

2. _____

3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary (VAKT) Approach

Name _____

DIRECTIONS: While you are listening to the word on the tape, trace the letters of the word.

P
Periodontal disease

DIRECTIONS: Listen to the definition while tracing the letters.

PERIODONTAL DISEASE: Gum disease due to poor dental care and poor nutrition.

DIRECTIONS: Copy the word 3 times, spelling it correctly while verbally saying its definition.

1. _____
2. _____
3. _____

DIRECTIONS: Write the word in a sentence. Be sure the meaning of the word is correct.

Lesson 10
Vocabulary Identification

Name _____

Undernutrition

Insufficiency of calories in the diet.

1) Circle the letters that spell the word.

h u d r u t p r t o m n i i t n e n

2) Circle the right word. One in each line is correct.

umbrella undernutrition
undernutrition undershirt
Utah undernutrition

3) Circle the parts that spell the word.

under un shirt nu tion tri

4) Fill in the letters.

un _ _ _ nutr _ _ _ _ _

5) Fill in the word. One sentence uses the new word.

We visited _ _ _ _ _ last year.
Many people are _ _ _ _ _
_ _ _ _ _

6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Malnutrition

deficiency of certain essential nutrients.

- 1) Circle the letters
that spell the word.

g m o a l n o u t n r i y t l i o

- 2) Circle the right word.
One in each line is
correct.

malnutrition mountain monkey
monday mountain malnutrition
monkey malnutrition mountain

- 3) Circle the parts that
spell the word.

mon mal tion key tri nu

- 4) Fill in the letters.

___ ___ nu ___ ___ tion

- 5) Fill in the word.
One sentence uses the
new word.

On _____ we go to the store.

_____ is
found in many poor homes.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Kwashiorkor

a serious deficiency disease affecting children from weaning to six years of age due to too little protein and too much carbohydrate.

- 1) Circle the letters that spell the word.

j o r i s w g k a h o k r p b l w

- 2) Circle the right word. One in each line is correct.

Kwashiorkor Kansas known
Kansas Keith Kwashiorkor
Kwashiorkor known Kansas

- 3) Circle the parts that spell the word.

kor sas kwash ior kan dog

- 4) Fill in the letters.

_____ ior _____

- 5) Fill in the word. One sentence uses the new word.

_____ lives in Kansas.

_____ is a protein deficiency disease.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Goiter

results in an enlarged thyroid gland due to a lack of iodine in the diet.

- 1) Circle the letters that spell the word.

t e u t r g l g i o p e w h v b n

- 2) Circle the right word. One in each line is correct.

golf	gland	goiter	goat
goat	goiter	goat	golf
gland	goiter	goat	golf

- 3) Circle the parts that spell the word.

tell gland ter golf gio goi

- 4) Fill in the letters.

- 5) Fill in the word. One sentence uses the new word.

My dad plays _____.

An enlargement on the neck is a

_____.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Anemia

a condition resulting in a reduction of red blood cells or hemoglobin.

- 1) Circle the letters that spell the word.

h e o a a n e m i p j g o l b i n

- 2) Circle the right word. One in each line is correct.

anemia another anther ants
ants another anther anemia
anther anemia anther another

- 3) Circle the parts that spell the word.

a ants ne mia ther motehr

- 4) Fill in the letters.

— — — — — a

- 5) Fill in the word. One sentence uses the new word.

— — — — — spoiled the picnic.

Having — — — — — causes you to feel tired.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Obesity

a condition resulting from too many calories being consumed in relationship to activity level.

- 1) Circle the letters that spell the word.

v a l i o b e y s o i t y p d x n

- 2) Circle the right word. One in each line is correct.

obtuse obesity opposite open
open opposite obsity obesity
opposite obtuse obesity open

- 3) Circle the parts that spell the word.

open site tuse obe si pos ty

- 4) Fill in the letters.

_____ ty

- 5) Fill in the word. One sentence uses the new word.

_____ results from eating too much.

Please _____ the door.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Anorexia nervosa

an emotional condition resulting in starvation, malnutrition, and underweight

1) Circle the letters that spell the word.

a s o v r e n a i x e r o n a p l g

2) Circle the right word. One in each line is correct.

another anorexia anemia ants
nervous nervosa nothing nuts
anorexia ants anemia answer

3) Circle the parts that spell the word.

rexia vosa ants ano mer ner

4) Fill in the letters.

An _____ ia _____ vosa

5) Fill in the word. One sentence uses the new word.

_____ is a serious teenage problem.

Will you _____ the phone?

6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Vocabulary Identification

Name _____

Periodontal disease

gum disease due to poor dental care and nutrition.

- 1) Circle the letters that spell the word.

e s a e s i d d o i r e p l a t o n

- 2) Circle the right word. One in each line is correct.

periodontal parent pancakes
disease dental doghouse
pancakes parent periodontal

- 3) Circle the parts that spell the word.

den perio di sease dog don tal

- 4) Fill in the letters.

Per _ _ _ on _ _ _ dieas _

- 5) Fill in the word. One sentence uses the new word.

My friend is in _ _ _ _ _ school.
_ _ _ _ _ disease
is another name for gum disease.

- 6) Use the word in 3 or more sentences to show its meaning.

Lesson 10
Food Mumbo Jumbo

Name _____

Below is an important message about food-related decisions, but it is written in a code. The code is simple. The letters of the alphabet have been rearranged so that each code letter stands for a different real letter. For example, F has been substituted for A. Code letters have been substituted for the real letters of each word in this message.

Q D R S M P A F W T A M B Z H M G H Z A T A M B Z H F H
T Z M K Z Q D R T M W W W M Y A H Z A W D V B A G H F V P
W D D X F V P L A A W Q D R S E A G H

Real Alphabet: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Code Alphabet: L O U N Q J

You can find the key to the code by correctly completing the sentences that follow this explanation. One word in each sentence is written using the code alphabet. Determine the word that completes each sentence correctly. Write this word above the word that is written in code. There should be one code letter for each real letter. By completing each sentence in this way you can find the code letter that stands for each letter in the real alphabet.

Each time you find a new code letter for a real letter in the alphabet, write in the key. When you know the entire key, you can decode the message by replacing each code letter with the real letter that it stands for.

- (1) C D R H Z Z R V B A S is the feeling that you get when you see cookies.
- (2) A K F W D S M A is a measure of the amount of energy in food.
- (3) If you are C F W V D R S M G Z A P, you are not eating the recommended amounts of nutrients from the basic food groups.

Food Mumbo Jumbo Continued.

- (4) F V D S A I M F V A S Y D G F is a disorder that occurs when some refuses to eat because of an emotional problem.
- (5) The main source of energy for all body cells is B W R K D G A.
- (6) P M F E A H A G C A W W M H R G is a disorder in which the pancreas does not produce enough insulin.
- (7) M V G R W M V G Z D K X results from a high level of insulin in the body combined with a low sugar level.
- (8) If you are overweight, you are more likely to develop D G H A D F S H Z S M H M G.
- (9) Eating is a Z F E M H.
- (10) Lack of exercise increases T A M B Z H problems.

Lesson 10
Dear Helper

Name _____

As your body uses the food you eat, calories provide energy for your daily activities. A calorie is a measure of the amount of energy in food. The number of calories you need depends on your age, sex, body build, and the amount of physical activity. Read the following letters to "Dear Helper" and write an answer which includes two nutritional facts.

Dear Helper:

I am very active. I enjoy running and bicycling. I am also underweight. Someone told me to decrease my activity and I will gain weight. What should I do?

Skinny

Dear Skinny:

Dear Helper:

I am overweight, and it is an effort to ride my bike to school. I want to begin taking the bus. My mom thinks I should ride my bike. She says it will burn calories. Will that help me lose weight?

Chubby

Dear Chubby:

Lesson 10
Food Pretest

Name _____

1. A craving to eat a particular food is called which of the following: a. appetite b. hunger
2. True-False During adolescent years, one's body fat decreases.
3. Nutrients are divided up into six general groups: proteins, carbohydrates, fats, minerals, water, and:
a. vegetables b. cholesterol c. vitamins
4. The heat energy in our body is measured in _____.
5. True-False Saturated fats are fats that become liquid at room temperature.
6. True-False About half of what you eat should be made up of protein.
7. True-False Athletes need considerably more protein than nonathletes of the same age.
8. Which of the following is considered to be a nutrient but not a food?
a. enzymes b. water c. starch

BASIC CONCEPTS AND UNDERSTANDING

1. What are some signs or conditions that there may be a nutritional problem in the body tissues.

2. Each of the following situations on the following page indicate an incorrect eating pattern. Describe for each cartoon the proper way of getting nutritional value from foods and correcting the eating pattern.

3. Why should high school students have a sufficient amount of protein in their diets? List some of the protein foods you would include.

4. Are sugar substitutes a good way to reduce calorie intake?

5. Your friend goes on a crash diet, eliminating all carbohydrates and fats from the diet. In a short period of time your friend begins to feel listless and tired and loses the vitality to accomplish daily activities. What advice would you offer concerning this method of dieting?

6. If your diet is too high in carbohydrates, what five foods would you eliminate and still maintain normal amounts of carbohydrate in your diet?

a. _____ b. _____ c. _____
d. _____ e. _____

7. Your body weight is _____. To change your body weight to kilograms, divide by 2.2. Your basal metabolism is 1 calorie per hour, per kilogram of body weight. Calculate your basal metabolism for 24 hours using this equation:
 $1 \times 24 \times \text{weight in kilograms}$.
8. Overweight is one of the greatest health problems in this country today. What are the danger of overweight?
-
-
9. Briefly describe the pinch test.
-
-

EXTENDING YOUR KNOWLEDGE

1. Calories do count! Write all of the calorie equivalents of the foods you consume in one day. There are many calorie counting guides available to help you. What is the total?
 _____ How does the total number of calories compare with what you should be eating for age and size?
-
2. Plan a menu for one day, according to the four basic food groups. You may include each group in every meal.

Breakfast	Lunch	Dinner

3. List the foods you have eaten and compare them with the foods in this menu. Which groups did you omit in the foods you ate?

YOUR OPINION COUNTS

- 1. Junk foods are very popular among teens. List some foods you consider to be in this category and why.

- 2. Many people go to weight-control groups to help them lose weight. Why do you think many people who attend these groups are successful in losing weight?

PUZZLE

ACROSS

DOWN

- | | |
|---|--|
| 3. Desire to eat | 1. Production of energy-basal ____. |
| 5. To consume food | 2. Found in fruits and grains. |
| 7. A leading health problem. | 4. Roughage |
| 9. Needed for bone and muscle growth. | 6. Good source of calcium |
| 12. Helps stomach and intestine activity. | 8. Aids in digestion |
| 13. Found in meats and eggs. | 10. Supplies body with sodium |
| 15. Digested slower than other foods. | 11. Helps prevent goiter |
| 17. Heat energy measurement. | 13. Maintains water balance. |
| 18. Acids contained in protein. | 14. _____ carbohydrates are found in potatoes. |
| | 16. What you eat. |

Please note: A crossword puzzle on this page was redacted due to copyright concerns.

DAILY CONTRACT

DATE 5-13

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: Food Pretest

and I understand that if I invalidate my contract, the following punishment will occur: I will be staying after school to complete my work

SIGNED: Chris Black

TEACHER: Chris and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if Chris does not keep to this agreement. I will try to help Chris in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of Chris's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-13

STUDENT: I agree to follow these rules of student behavior: _____

I will be respectful to Mrs.
Harter.

Signed: Chris Black

TEACHER: I agree to help Chris by being
fair and try to understand
why he disliked me.

Signed: Mrs. Harter

PRINCIPAL: I agree to help Chris by disciplining
him by suspension each
time he is disrespectful to
a teacher

Signed: Mr. Principal

PARENTS: I/We agree to help Chris by making
any suspensions from school a
miserable experience.

Signed: Mrs. Black

H. Part of my enjoyment of eating comes from the steps I take to fix the food.	5	4	3	2	1
I. I find eating pleasurable	5	4	3	2	1
J. I eat when I feel disturbed or upset about something.	5	4	3	2	1
K. I am very aware of the times when I am not eating.	5	4	3	2	1
L. I eat without realizing I am doing it.	5	4	3	2	1
M. I eat to give myself a lift if I feel sleepy or bored.	5	4	3	2	1
N. Part of my enjoyment of eating is seeing, smelling and tasting the food.	5	4	3	2	1
O. I get hungriest when I am comfortable and relaxed.	5	4	3	2	1
P. I eat when I feel blue or want to take my mind off cares and worries.	5	4	3	2	1
Q. I get a gnawing hunger for food when I have not eaten for a while.	5	4	3	2	1
R. I have found food in my mouth and did not remember putting it there.	5	4	3	2	1

- In the chart on the next page, write the number that you circled for statement "A" in box "A", statement "B" in box "B", and so on until all the boxes are filled.
- Total the numbers in the three boxes in line 1. Write the total in the appropriate space. Then follow a similar procedure for lines 2 through 6.
- Under "Factors" are factors involved in why some people might eat too much food and become overweight. A description of each factor follows.

Stimulation: Feeling of increased energy or vitality through eating
 Handling: Feeling of satisfaction from touching or manipulating food
 Relaxation: Feeling of reduced stress through eating
 Tension
 Reduction: Eating as a crutch
 Craving: Psychological addiction to food
 Habit: Eating without realizing it

5. To find your rating for the factor in line 1, look in the scoring key below the chart for the number from line 1 under "Totals." Write the rating for that number, which is shown in parentheses on line 1, in the appropriate space.
6. Follow a similar procedure for lines 2 through 6

STATEMENTS	TOTALS	FACTORS	RATINGS
1. A ___ + G ___ + M ___ = _____		Stimulation	_____
2. B ___ + H ___ + N ___ = _____		Handling	_____
3. C ___ + I ___ + O ___ = _____		Relaxation	_____
4. D ___ + J ___ + P ___ = _____		Tension Reduction	_____
5. E ___ + K ___ + Q ___ = _____		Craving	_____
6. F ___ + L ___ + R ___ = _____		Habit	_____

Questions to Answer and Discuss

1. What might an overweight person do to change his or her eating habits if those eating habits are found to be related to one or more of the factors characteristic of people who overeat?

Sample : Determine the situations that prompt those habits and try to prevent the habits and/or the situations.

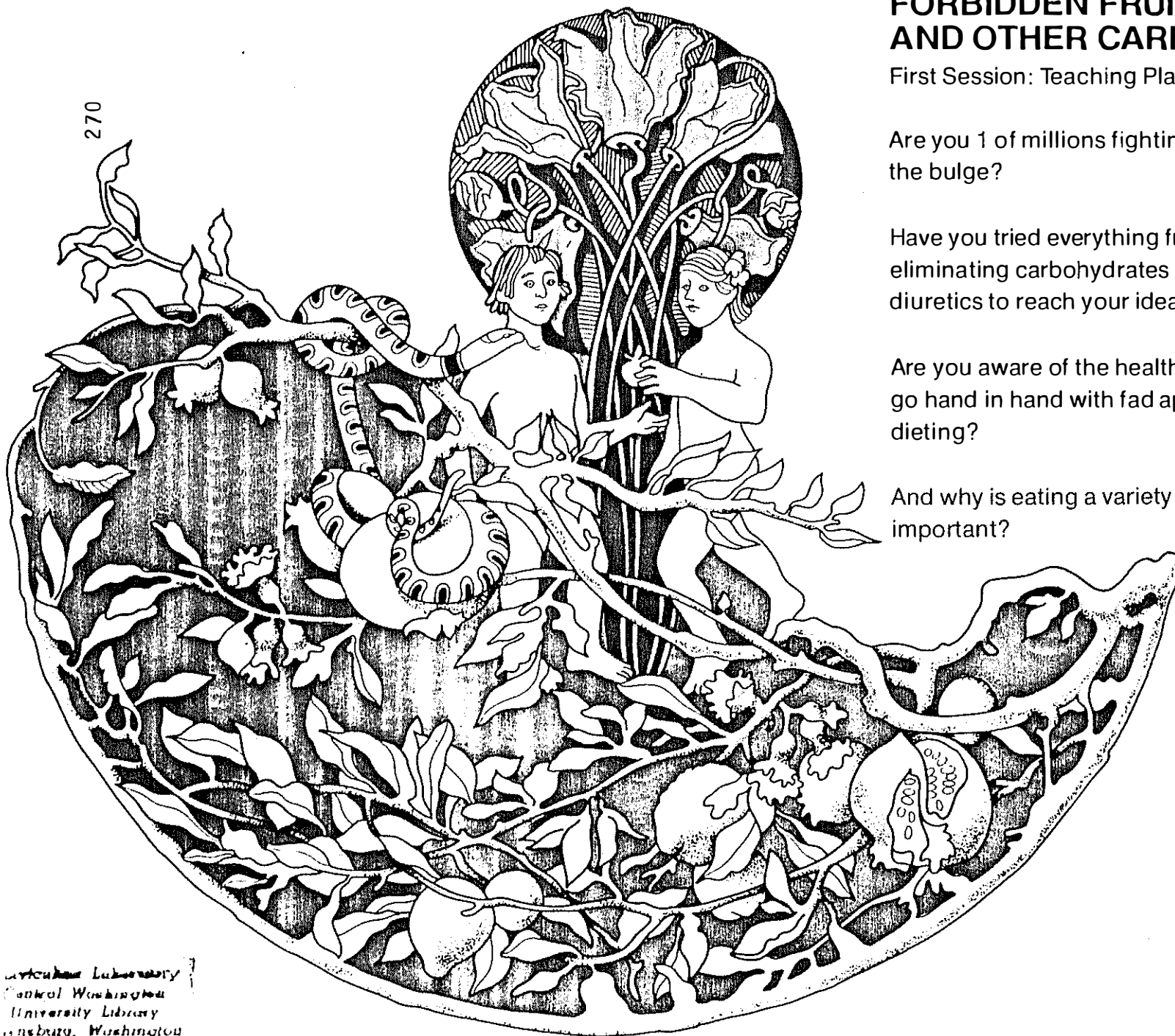
2. Do you think that a person whose rating is high for several of the factors listed in the chart must necessarily be overweight? Why?

Sample: No. That person might have a high metabolism, exercise regularly, and/or eat foods that are low in calories.

3. Why, do you think, is it important for a person to be aware of his or her eating habits?

Sample: A person may wish to change them to prevent possible health problems, including overweight.

270



FORBIDDEN FRUIT... AND OTHER CARBOHYDRATES

First Session: Teaching Plan

Are you 1 of millions fighting the battle of the bulge?

Have you tried everything from eliminating carbohydrates to popping diuretics to reach your ideal weight?

Are you aware of the health hazards that go hand in hand with fad approaches to dieting?

And why is eating a variety of foods important?

Artwork Laboratory
Federal Washington
University Library
Washington, Washington

Activity Synopsis

Students discover the importance of eating a variety of foods as they explore a major American health problem—obesity.

They plan menus within the parameters of a low-carbohydrate, weight-loss diet. Students then evaluate their menus, using the U.S. RDA, to determine if the foods selected supply nutrients the body needs to function.

Finally, using worksheets, students identify the contributions made by 8 nutrients and predict the health consequences of continued nutrient deficiencies.

Activity Outcomes

After completing this activity, the student will be able to:

- Evaluate the nutrient content of (low-carbohydrate) eating patterns
- Describe health consequences of nutrient (vitamin A, vitamin C, thiamin, and calcium) deficiencies

Note

In this activity students add 3-digit numbers and work with percentages.

Activity Terminology

- Beriberi
- Carbohydrates
- Nutrients
- Nutritionally adequate diet
- Osteoporosis
- Scurvy
- U.S. RDA
- Xerophthalmia

Estimated Teaching Time

Two class periods (approximately 40-55 minutes each)

Teaching Materials: First Session

Each Group of 4-6 Students:

- Set of **Food Cards** (total of 24)
- Can Man Live on Steak and Salad Alone?** worksheet

Advance Preparation: First Session

- Duplicate and cut apart the **Food Cards**. Assemble them into sets of 24 different foods. (These can be collected and reused with other classes.)
- Duplicate the **Can Man Live on Steak and Salad Alone?** worksheet.
- Write the column headings from the **Can Man Live on Steak and Salad Alone?** worksheet across the chalkboard, with "Percent of the U.S. RDA" above them.
- Refer to pages 17-18 of the *Nutrition Source Book* for additional information about the U.S. RDA.

Teaching Plan: First Session

1. Introduce the activity by asking the class:
 - What health problem has reached epidemic proportions in the United States? (Write the responses on the chalkboard.)
2. Once all their guesses are in, explain that obesity is the epidemic. (Circle obesity or add it to the chalkboard.) Give students the following statistics:
 - Today about 35 percent of those people over 40 are obese.
 - They are so obese that their excess weight may interfere with their health and their lifespan.
 - Many students do not have a weight problem now.
 - But do they realize that 42 percent of boys who are of average weight as teenagers become obese adults. And so do 18 percent of average weight girls.
 - The percentages go up. If they are obese teenagers they have at least an 80-percent chance of being obese adults.
 - In short, students have at least a 20-percent chance of becoming obese sometime in their lives.
3. Ask students:
 - If you were overweight, do you think you'd have the willpower to stay on a diet?
 - What foods would you give up to lose weight? (Write the foods mentioned on the chalkboard.)
4. Try to tantalize students with a new diet, using the information below.
 - Do they think they could stay on a diet that promises they'll never have to go hungry to lose weight?
 - This diet lets them eat all the steak, lobster, turkey, shrimp, lamb chops, ground beef, corned beef, chicken, pork chops, butter, eggs, roast beef, ham, bacon, and cream they want.
 - All they have to give up are foods that have carbohydrates in them.

5. Ask the class:

- Could you stick to this diet?
- Do you think you'd have enough to eat?

6. Ask for the class's help in planning a few menus based on this diet.

272 Planning a Low-Carbohydrate Menu

7. Divide the class into work groups of 4-6 students. Appoint, or have each group select, a recorder.

Distribute a **Can Man Live on Steak and Salad Alone?** worksheet and a set of **Food Cards** to each group.

8. Assign the work group tasks, telling the class:

- The job, for the moment, will be to finish step 1 on the worksheet.
- Each group should plan menus (breakfast, lunch, dinner, and snacks) for 1 day using only the foods on the **Food Cards**.
- One student at a time should choose a food to add to the menu.
- The recorder should then write the name of the food on the chart, under the selected meal, and the initials of the student who selected it.
- Each student in the group should select at least 2 foods for the day's menu.

9. Go on to point out:

- This low-carbohydrate diet suggests eating unlimited amounts of most of the foods on the **Food Cards**.
- And most foods can be used more than once because the serving sizes on the **Food Cards** are relatively small.
- However, the following foods are limited during the first week of the diet:

Salads	2/day
Cheese	4 ounces/day
Cream	4 teaspoons/day
Coffee and/or diet colas	6 cups/day

(Write these restrictions on the chalkboard.)

10. Before students begin, tell them not to worry about the other columns on the worksheet for the moment. Their only task, for the next 5-10 minutes, will be to select foods for their menus.

11. Now have all the students work in their groups. Circulate to each group to answer any questions and make sure students are filling in the worksheet correctly.

Plotting the Nutrient Content of Menus

12. When each group has planned its menus, call the class's attention to the chalkboard. Explain that:

- Even when dieting, it's important to provide the body with all the nutrients it needs.
- Nutrients are chemical substances needed by the body.
- And the body gets nutrients from food, through digestion.
- Protein, vitamin A, vitamin C, thiamin, riboflavin, niacin, calcium, and iron are just 8 of the 50 or so nutrients the body needs.

13. Point out the nutrient headings on the chalkboard, as well as on the **Can Man Live on Steak and Salad Alone?** worksheet. Show the class the same nutrient names on the **Food Cards**.

14. Point out the phrase "Percent of the U.S. RDA" on the chalkboard. At this time define the U.S. RDA (U.S. Recommended Daily Allowances) for the class. Explain that:

- The U.S. RDA were developed by the Food and Drug Administration (FDA) for use in the nutrition labeling of foods.
- The Food and Drug Administration has set these allowances for 20 nutrients.
- The percentages of the U.S. RDA that are on the **Food Cards** are similar to the nutrition information on food packages.

15. For demonstration purposes, choose 1 food on a group's chart. Ask the student who selected that food to come up and write the nutrient values for that food under the correct columns on the chart.

You may want to have a student read off the percentages from the **Food Card** as the other student writes them down on the chalkboard.

16. Now ask the groups to complete step 2 on their worksheets. Have each group's recorder fill in the chart with the percentage of the U.S. RDA for the nutrients in the foods as the group members who selected the foods read off the percentages.

17. When the groups have finished filling in their charts, ask students:

- If you ate the same type of meals you planned for over a year, do you think you would remain healthy?

18. Explain that, in the next class session, students will find out if they're right.

Collect the **Can Man Live on Steak and Salad Alone?** worksheets and **Food Cards**. Keep them until the next class session.

19. Recommend that students bring calculators, if available, to the next class session.

CAN MAN LIVE ON STEAK AND SALAD ALONE?

- 273
1. Plan a menu using only the foods on the Food Cards. Write your selections under "Food."
 2. Transfer the percentages of the U.S. RDA from the Food Cards onto the chart below.
 3. Add up each vertical column.
 4. Add more foods to bring your total for one nutrient up to 100 percent.

RECORDER

GROUP MEMBERS

PERCENT OF THE U.S. RDA

Selected by:	Food	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin	Niacin	Calcium	Iron
	BREAKFAST								
	LUNCH								
	DINNER								
	SNACKS								
	TOTAL								

	% of U.S. RDA
Protein	50
Vitamin A	908
Vitamin C	38
Thiamin (B ₁)	15
Riboflavin (B ₂)	209
Niacin	70
Calcium	1
Iron	42

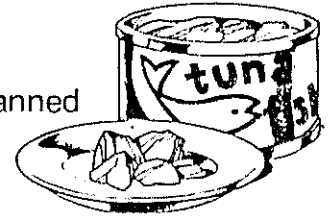
BEEF LIVER
(3 oz fried)



FOOD CARD

	% of U.S. RDA
Protein	54
Vitamin A	1
Vitamin C	—
Thiamin (B ₁)	3
Riboflavin (B ₂)	6
Niacin	51
Calcium	1
Iron	9

TUNA
(1/2 cup, 3 oz canned in oil, drained)

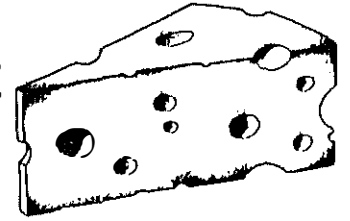


FOOD CARD

*University of Washington
The variety Library
Psychology, Washington*

	% of U.S. RDA
Protein	18
Vitamin A	5
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	6
Niacin	—
Calcium	27
Iron	—

SWISS CHEESE
(2 thin slices, 1 oz natural)



FOOD CARD

	% of U.S. RDA
Protein	64
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	5
Riboflavin (B ₂)	13
Niacin	28
Calcium	1
Iron	19

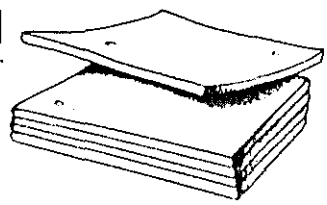
T-BONE STEAK
(3 1/3 ounces edible portion)



FOOD CARD

	% of U.S. RDA
Protein	14
Vitamin A	7
Vitamin C	—
Thiamin (B ₁)	1
Riboflavin (B ₂)	6
Niacin	—
Calcium	17
Iron	1

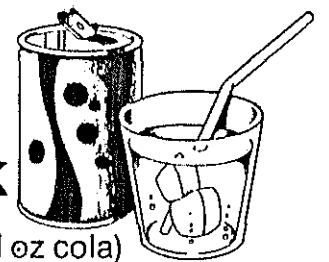
AMERICAN CHEESE
(1 slice, 1 oz processed)



FOOD CARD

	% of U.S. RDA
Protein	—
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	—
Calcium	—
Iron	—

DIET SOFT DRINK
(1 cup, 8 fl oz cola)

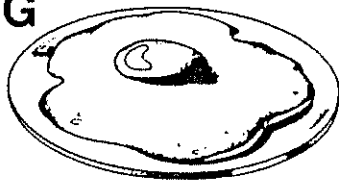


FOOD CARD

	% of U.S. RDA
Protein	12
Vitamin A	6
Vitamin C	—
Thiamin (B ₁)	2
Riboflavin (B ₂)	7
Niacin	—
Calcium	3
Iron	5

FRIED EGG

(1 large)

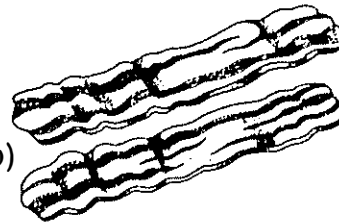


FOOD CARD

	% of U.S. RDA
Protein	10
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	5
Riboflavin (B ₂)	3
Niacin	4
Calcium	—
Iron	3

BACON

(2 slices,
1/2 oz broiled crisp)



FOOD CARD

	% of U.S. RDA
Protein	58
Vitamin A	3
Vitamin C	—
Thiamin (B ₁)	4
Riboflavin (B ₂)	22
Niacin	30
Calcium	1
Iron	11

FRIED CHICKEN

(leg and thigh,
3 oz cooked edible portion)



FOOD CARD

	% of U.S. RDA
Protein	—
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	3
Calcium	—
Iron	1

COFFEE

(1 cup,
11 oz black)



FOOD CARD

	% of U.S. RDA
Protein	13
Vitamin A	5
Vitamin C	—
Thiamin (B ₁)	2
Riboflavin (B ₂)	8
Niacin	—
Calcium	3
Iron	6

HARD-COOKED EGG

(1 large)

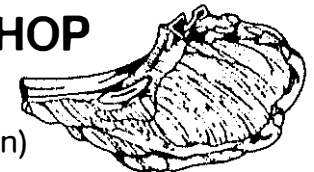


FOOD CARD

	% of U.S. RDA
Protein	46
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	55
Riboflavin (B ₂)	14
Niacin	25
Calcium	1
Iron	15

PORK CHOP

(3 oz cooked
edible portion)

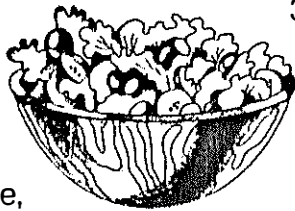


FOOD CARD

	% of U.S. RDA
Protein	1
Vitamin A	11
Vitamin C	16
Thiamin (B ₁)	1
Riboflavin (B ₂)	2
Niacin	1
Calcium	3
Iron	3

TOSSED SALAD

(¾ cup, lettuce, cucumber, celery, radish)

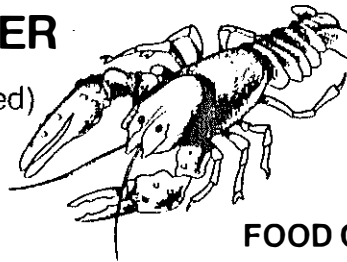


FOOD CARD

	% of U.S. RDA
Protein	42
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	7
Riboflavin (B ₂)	4
Niacin	—
Calcium	7
Iron	4

LOBSTER

(3 oz cooked)



FOOD CARD

	% of U.S. RDA
Protein	11
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	1
Niacin	6
Calcium	—
Iron	3

BEEF BROTH

(1 cup)

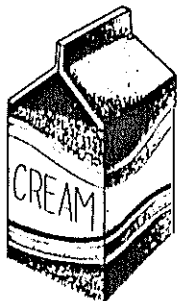


FOOD CARD

	% of U.S. RDA
Protein	1
Vitamin A	2
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	1
Niacin	—
Calcium	1
Iron	—

CREAM, LIGHT

(1 tbsp)

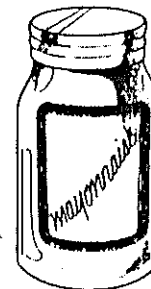


FOOD CARD

	% of U.S. RDA
Protein	—
Vitamin A	1
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	1
Niacin	—
Calcium	—
Iron	1

MAYONNAISE

(1 tbsp)



FOOD CARD

	% of U.S. RDA
Protein	36
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	6
Riboflavin (B ₂)	5
Niacin	8
Calcium	3
Iron	6

FRIED PERCH

(3 oz breaded)



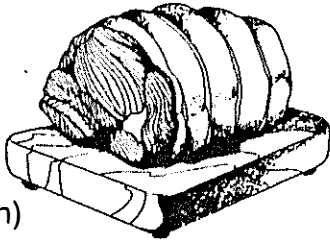
FOOD CARD

	% of U.S. RDA
Protein	57
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	3
Riboflavin (B ₂)	12
Niacin	20
Calcium	1
Iron	18

277

ROAST BEEF

3 oz cooked
edible portion)

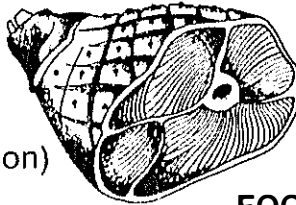


FOOD CARD

	% of U.S. RDA
Protein	57
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	37
Riboflavin (B ₂)	15
Niacin	25
Calcium	1
Iron	18

BAKED HAM

(3 oz
edible portion)



FOOD CARD

	% of U.S. RDA
Protein	52
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	5
Riboflavin (B ₂)	12
Niacin	26
Calcium	1
Iron	17

MEAT PATTY

(3 oz ground beef,
cooked)



FOOD CARD

	% of U.S. RDA
Protein	4
Vitamin A	—
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	—
Calcium	—
Iron	—

ARTIFICIALLY SWEETENED GELATIN DESSERT

(1/2 cup plain)

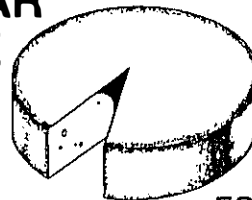


FOOD CARD

	% of U.S. RDA
Protein	16
Vitamin A	6
Vitamin C	—
Thiamin (B ₁)	1
Riboflavin (B ₂)	6
Niacin	—
Calcium	20
Iron	1

CHEDDAR CHEESE

(1 oz wedge)

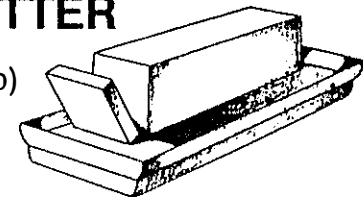


FOOD CARD

	% of U.S. RDA
Protein	—
Vitamin A	3
Vitamin C	—
Thiamin (B ₁)	—
Riboflavin (B ₂)	—
Niacin	—
Calcium	—
Iron	—

BUTTER

(1 tsp)



FOOD CARD

FORBIDDEN FRUIT... AND OTHER CARBOHYDRATES

Second Session: Teaching Plan

278



(18.7)
1.1c

University Library
K11 - Surg. Washington

Teaching Materials: Second Session

teacher:

- Photos of people with vitamin A, vitamin C, thiamin, and/or calcium deficiencies (optional)

Each Group of 4-6 Students:

- Can Man Live on Steak and Salad Alone?** worksheet (partially completed)
- Set of **Food Cards**
- Nutrients for Your Health** worksheet
- Calculators (optional)

Advance Preparation: Second Session

- Duplicate the **Nutrients for Your Health** worksheet.
- Write the 8 nutrient names from the **Can Man Live on Steak and Salad Alone?** worksheet across the chalkboard.
- Review the nutrient data in step 15 to prepare for a discussion of specific nutrient deficiencies
- Refer to pages 5-11 of the *Nutrition Source Book* for additional information about the 8 nutrients mentioned in this activity.

Teaching Plan: Second Session

1. Reconvene the work groups. Give the partially completed **Can Man Live on Steak and Salad Alone?** worksheets and sets of **Food Cards** to the group recorders.
2. Review the last session, asking students:
 - Did you have any trouble planning menus using the foods permitted on this diet?
 - Did you have a wide enough variety of foods to choose from?
 - Would you like to have been able to include any additional foods? Which foods?
 - Do you think your menus are nutritionally adequate?

Assigning the Group Task

3. Explain to the groups that:
 - They will be doing step 3 on their worksheets (totaling the nutrients in the menus they planned).
 - They are to add up the vertical percentage columns on the charts for each nutrient.
 - Each student should have a chance to add up at least 1 column.
4. Give the groups time to complete step 3 on their worksheets. Circulate to all the groups to answer questions.
5. When all the groups have finished, ask someone from each group to describe the foods in the group's menus.
6. After the meals are described, ask another student from that group to call out the totals for all 8 nutrients on the group's **Can Man Live on Steak and Salad Alone?** worksheet. (List these percentages on the chalkboard, under the appropriate nutrient headings.)
7. Ask volunteers from the other groups to describe their meals. Also list their percentages on the chalkboard, below the first group's totals.

8. Explain that:

- The U.S. RDA is expressed as a percentage in this situation.
- And 100 percent means that all of the recommended amount of the nutrient has been met.
- If 100 percent of the U.S. RDA for all 8 nutrients is obtained from a variety of foods, a person has greater assurance that the diet is nutritionally adequate.

9. Ask the class:

- Are your menus nutritionally adequate?
- Did you reach 100 percent of the U.S. RDA for all 8 nutrients?
- Did you reach 100 percent for any of the nutrients?

10. Circle any totals on the chalkboard which fall below 100 percent. Continue asking the class:

- Which nutrient did your group have the most trouble getting enough of in your menus?
- Are all the totals circled for any nutrient?
- What would happen if your body continually got less of that nutrient than you needed?
- What would happen if you had a nutrient deficiency?

Explaining Another Group Task

11. Distribute a copy of the **Nutrients for Your Health** worksheet to each group. Assign each group a nutrient whose total falls below 100 percent on its **Can Man Live on Steak and Salad Alone?** worksheet. (Some nutrients may be assigned to more than 1 group.)
12. Clarify the worksheet instructions. Explain that:
 - The **Nutrients for Your Health** worksheet includes a description of each nutrient's functions.
 - Knowing this, the groups should be able to determine what might happen if there wasn't enough of a nutrient.
 - Each group must write down at least 2 symptoms of a deficiency of the nutrient it was assigned.
 - The groups should also write down 2 foods from their **Food Cards** that provide at least 10 percent of the U.S. RDA for their nutrient.

—Then have them add foods to the group's **Can Man Live on Steak and Salad Alone?** worksheet to bring the total for that nutrient up to 100 percent

13. Give the groups about 10 minutes to complete their assignment. Circulate around the room to clarify the task.

14. When the groups are finished, ask each group

- What does your nutrient do for the body?
- What could happen if there was a deficiency of that nutrient?
- Does anyone from another group disagree with these deficiency symptoms? Why? (If necessary, correct any misconceptions or disagreements about the deficiency disease with the information in step 15.)
- What is a deficiency of that nutrient called?

Optional: Show students photos of people suffering from the deficiency disease.

15. You may want to expand on the symptoms of a deficiency disease with the following information. Information on vitamin A, vitamin C, thiamin, and calcium deficiencies has been provided for your use. You may need to restate the information in terms of your class's academic level.

Vitamin A

- Xerophthalmia, a vitamin A deficiency, is 1 of the most common nutritional deficiency states and a common cause of blindness in parts of Asia and the Middle East.
- However, the disease is almost unknown in the U. S.
- It causes the cornea and conjunctiva (inner surface of the eyelid) of the eye to become dry, robbing the eye of its normal protection.
- Night blindness, the inability to see well in dim light, is an early sign of the disease
- If the deficiency is uncorrected, the cornea softens and perforation may occur, resulting in total blindness.
- Skin also becomes dry and rough with a vitamin A deficiency.
- Eruptions occur at the sites of hair follicles.

- Mucous linings in the gastrointestinal and urinary systems degenerate, too.
- The body stores vitamin A in the liver.
- Therefore, the vitamin A concentration in the blood must be low for a prolonged period (approximately 9-22 months) before clinical signs of the deficiency appear.

Vitamin C (Ascorbic Acid)

- Scurvy, a vitamin C deficiency, involves tissue deterioration and hemorrhages.
- In adults, the disease is characterized by general weakness, lassitude, and irritability.
- Hemorrhages into the joints cause painful swelling and immobility
- Gums swell and bleed easily.
- Teeth loosen and may fall out.
- Wounds fail to heal.
- Anemia usually accompanies it.
- This deficiency disease usually occurs only after considerable time on limited, monotonous diets, such as the Zen macrobiotic diet.
- After about 90 days without ascorbic acid, shortness of breath, weakness, and aching joints and muscles may be experienced.
- And, after 6 months without the nutrient, in an experimental situation, wounds did not heal.

Thiamin (Vitamin B₁)

- Incidences of beriberi, a thiamin deficiency, are still a problem in parts of the world where people subsist on highly polished (refined) rice.
- In Thailand, Burma, and Vietnam, thiamin deficiency is a major cause of death among infants 2-5 months old.
- Beriberi affects those whose diets are based principally on refined, unenriched cereal grains.
- In the U.S., the disease is confined mainly to alcoholics.
- In adults, thiamin deficiency usually manifests itself with the victim tiring easily and with a tingling and numbness in the extremities.
- Paralysis may eventually result.
- Unless treated, this deficiency can result in death.
- The body is unable to store any large quantity of thiamin.

- After 21-28 days without the nutrient, there may be a loss of body weight, loss of appetite, and insomnia.
- After 30-300 days, there is marked weight loss and a slower heart rate.
- After an estimated 200 days or more, the heart becomes enlarged and the cerebellum begins to degenerate.

Calcium

- Osteoporosis is a skeletal disorder in which the bones become porous and fragile because calcium is being withdrawn faster than it is being deposited.
- Osteoporosis is frequently observed in the elderly, particularly in women.
- The disease often accompanies a marked reduction in physical activity.
- The precise cause of osteoporosis remains obscure.
- The demineralization process characteristic of the disease is possibly the end result of several metabolic influences acting either alone or in combination on the skeleton.
- However, evidence is accumulating that a long-term deficiency of calcium is an important contributing factor in osteoporosis.
- Manifestations of osteoporosis include weakness, anorexia, hip and back pain, muscle tenderness and cramping, stooped posture, decreased height due to shrinkage of the spine, and a tendency of the bones to fracture easily.

16. When all the groups have identified their deficiency symptoms, ask the class:

- What foods from your **Food Cards** are good sources of that nutrient? Answers may include:
 - Protein: American cheese, bacon, baked ham, beef broth, beef liver, cheddar cheese, fried chicken, fried egg, fried perch, hard-cooked egg, lobster, meat patty, pork chop, roast beef, swiss cheese, T-bone steak, tuna.*
 - Vitamin A: beef liver, tossed salad.*
 - Vitamin C: beef liver, tossed salad.*
 - Thiamin: baked ham, beef liver, pork chop.*

- Riboflavin*: baked ham, beef liver, fried chicken, meat patty, pork chop, roast beef, T-bone steak.
 - Niacin*: baked ham, beef liver, fried chicken, meat patty, pork chop, roast beef, T-bone steak, tuna.
 - Calcium*: American cheese, cheddar cheese, swiss cheese.
 - Iron*: baked ham, beef liver, fried chicken, meat patty, pork chop, roast beef, T-bone steak.
- What foods did you add to your menu to bring the total for that nutrient up to 100 percent?
- What foods, not available on the diet, are also good sources of that nutrient?
- Is it possible to get all the nutrients your body needs on this diet?
- Can you get all the nutrients you need from meat alone? Or from any 1 food?

17. End the session by explaining that:

- The diet the class just based their menus on is a low-carbohydrate diet. (Write "low-carbohydrate diet" on the chalkboard.)
- Low-carbohydrate diets are some of the most popular fad diets. Every year or so, another new version is introduced.
- This particular low-carbohydrate diet practically eliminates all foods that contain carbohydrates—foods like grain products, fruit, almost all vegetables, and most dairy products.
- As students found out by planning menus, these carbohydrate sources also provide many vitamins and minerals the body needs—nutrients that meals don't always provide in adequate amounts.
- No single food supplies all the nutrients the body needs.
- So, it is important to eat a variety of foods to get all the nutrients the body needs, even while dieting.
- When trying to lose weight, people should cut down on the amount of foods—not the variety of foods—they eat.

18. Collect the Food Cards and Can Man Live on Steak and Salad Alone? and Nutrients for Your Health worksheets.

Evaluation

Teacher:

The first 4 questions below can be used for 4 different nutrients: vitamin A, vitamin C, thiamin, and calcium. Fill in the name of the nutrient discussed in class in the blanks below. If more than 1 nutrient was discussed, repeat these same questions, filling in the other nutrient's name.

Student:

Circle the correct answer.

1. What is 1 effect of a _____ deficiency?

a. Difficulty seeing in dim light	vitamin A
b. Wounds fail to heal	vitamin C
c. Loss of appetite	thiamin
d. Bones tend to fracture easily	calcium
2. A lack of _____ could eventually lead to:

a. Osteoporosis	calcium
b. Beriberi	thiamin
c. Scurvy	vitamin C
d. Xerophthalmia	vitamin A
3. One function of _____ in the diet is:

a. To help form collagen which holds body cells together	vitamin C
b. As part of bones and teeth	calcium
c. To help the body use energy, especially from carbohydrates	thiamin
d. To help keep eye tissues healthy	vitamin A
4. One good source of _____ on the low-carbohydrate diet is:

a. Pork chops	thiamin
b. American cheese	calcium
c. Coffee	
d. Tossed salad	vitamin A/C
5. Someone has told you that *the* way to lose weight is to go on the Easy-Off Diet. What would you need to know to determine if the diet is nutritionally adequate?
 - a. Whether or not it recommends attending meetings with other dieters
 - b. Whether or not you could still eat your favorite foods
 - c. Whether or not it provides essential nutrients
 - d. How much it will cost

Going Further

- Have students calculate the fat content of the meals they planned in this activity.
- Have students analyze the nutrient contents of other popular diets using the **Can Man Live on Steak and Salad Alone?** worksheet and food composition tables.
- Teach activity 18, **The Last Laugh**. This activity recreates a television talk show and discusses ketosis and other health problems associated with low-carbohydrate diets.

Resources

- Los Angeles District California Dietetic Association. *A Dozen Diets for Better or Worse*. Los Angeles: California Dietetic Association, 1973.

This booklet critiques 12 diets, including the low-carbohydrate diet discussed in this activity. Based on sample menus, the diets are evaluated by both a 4 food group and a nutrient content approach.
- Latham, M., McGandy, R., McCann, M., and Stare, F. *Scorbutic Manual on Nutrition*. Kalamazoo, MI: Upjohn Company, 1972.

This nutrition book includes several color photos of vitamin A, vitamin C, and thiamin deficiencies.
- Marlin, M. *The Great Vitamin Mystery*. Rosemont, IL: National Dairy Council, 1968.

Written for junior and senior high students, this booklet features historical tales of intrigue and adventure relating the cure of several deficiency diseases.
- Shaping Up*. Malibu, CA: The Polished Apple, 1979.

These 35mm, color filmstrips with cassettes come in 2 parts. Part I discusses the role of a sound diet in a weight control program. Part II goes on to discuss exercise.

RECORDER

GROUP MEMBERS

NUTRIENTS FOR YOUR HEALTH

Nutrients ²⁸²	Important Functions	Two Symptoms of a Deficiency	Two Foods That Supply 10% or More of U.S.RDA
Protein	<ul style="list-style-type: none"> — Supplies energy — Is part of every cell—such as muscle, blood, bone — Builds and repairs body cells — Is part of enzymes, some hormones, and body fluids — Is part of antibodies that resist infection 		
Vitamin A or Retinol	<ul style="list-style-type: none"> — Helps form and repair skin and membranes that line the body—such as inside the nose and intestines — Helps resist infection — Forms visual purple—which helps you see in dim light — Helps keep eye tissues healthy 		
Vitamin C or Ascorbic Acid	<ul style="list-style-type: none"> — Forms collagen—which holds body cells together — Strengthens blood vessels — Helps wounds and broken bones heal — Helps resist infection — Helps the body use iron 		
Vitamin B ₁ or Thiamin	<ul style="list-style-type: none"> — Helps the body use energy, especially from carbohydrates — Keeps the appetite normal — Helps the nervous system work 		
Vitamin B ₂ or Riboflavin	<ul style="list-style-type: none"> — Helps produce energy in body cells — Keeps skin healthy — Keeps eyes healthy and vision clear 		
Niacin	<ul style="list-style-type: none"> — Helps the body use energy, especially from carbohydrates — Helps make fat — Helps tissues breath — Keeps skin healthy — Keeps nerves working — Keeps digestive system working — Keeps the appetite normal 		
Calcium	<ul style="list-style-type: none"> — Part of bones and teeth — Helps stop bleeding — Helps muscles contract and relax — Helps nerves send messages to brain 		
Iron	<ul style="list-style-type: none"> — Helps the body use energy — Part of hemoglobin—the red part of blood that carries oxygen to cells — Prevents anemia — Helps resist infection — Helps tissues breath 		



OUT TO LUNCH

Teaching Plan

Have you ever been talked into having 'just 1 more drink' by your friends? Or a second piece of pie by a pushy hostess?

How susceptible are you to peer pressure? How do you handle it?

NO MORE,
PLEASE...
I'M ON A
DIET!

Activity Synopsis

Students experience the powerful influence of peer pressure as they role-play dieters going out to lunch with their diet leaders. The leaders try to convince the dieters to select low-calorie menu items while the dieters attempt to persuade the leaders to break their diets.

Students then identify the positive and negative aspects of peer pressure, describe how it influences their real-life food choices, and formulate strategies to cope with peer pressure situations.

Activity Outcome

After completing this activity, the student will be able to recognize forms of peer pressure on food choices.

Activity Terminology

- Peer pressure
- Peers

Estimated Teaching Time

One class period (approximately 40-55 minutes)

Teaching Materials

Teacher:

- Radio, cassettes and cassette player, or records and record player for background music (optional)
- Waiter's towel or waitress's apron (optional)

Each Student:

- Menu worksheet

Advance Preparation

- Duplicate the Menu worksheet.

Teaching Plan

1. Begin the activity by asking each student:
 - If you had your choice of any restaurant, where would you go for lunch? (Record their responses on the chalkboard.)
2. Focus on some of the more frequently mentioned restaurants. Ask the class:
 - What would you order there if you were trying to lose weight?
 - Do these restaurants serve low-calorie foods?
3. Explain that today the class will get some practice in selecting a low-calorie lunch from a restaurant menu.

Setting up the Peer Pressure Situation

4. Ask the class to pretend, for the next 30-40 minutes, that they are all members of Dieters Unlimited, a new weight-watching club. Explain that:
 - Everyone in the class has already lost a lot of weight.
 - But they each have a few pounds to go before they reach their goals.
 - Today the club is celebrating its fantastic weight losses by going out to lunch.
5. Divide the class into groups of 4-6 students. Have them move their chairs into clusters to simulate seating in a restaurant.
6. Ask each group to select someone to represent the table. Suggest the groups choose very strong, persuasive people because those individuals will be their weight control leaders.
7. Take the leaders out of the room. Give each of them a copy of the Menu worksheet. Suggest they:
 - Begin selecting low-calorie foods from the menu.
 - Design a few persuasive strategies to convince their groups to choose these low-calorie foods.

Emphasize that, whatever they do, they must not let their group members fall off their diets!

- 285
- While the leaders are out of the room, tell the rest of the class:
 - Today, they've all decided to cheat on their diets.
 - They've been dieting for months, starving on rabbit food and diet soft drinks.
 - They've come to this restaurant to celebrate. So why not order what they really want—fried foods, desserts, the works!
 - Besides, what harm can 1 little binge do?

- Encourage students to order anything they want. Tell them they do not have to pay attention to their weight control leader. Today's their day to enjoy themselves.

- Suggest that they'll probably feel less guilty about cheating on their diets if they can get their weight control leader to cheat too.

They should use any persuasive tactics, short of outright violence, to tempt their group leaders to cheat on their diets.

- Distribute the **Menu** worksheet to each student in the room. Give each group a few minutes to discuss their plan of action.

They may also want to determine, before their leaders return, which foods on the menu they want to order.

Remember, today calories don't count!

Ordering from the Menu

- Call the group leaders back into the room. Have them rejoin their tables.
- Welcome Dieters Unlimited to _____ (your name) 's Place.

Optional: To set the mood, add a little restaurant-type background music.

Ask everyone to take a look at the menu and make their selections. Tell them not to worry about how much the meal will cost because lunch is "on the house."

- Explain that you, acting as a waiter or waitress, will soon be coming around to each table to take their orders (and monitor the activity).

Ask each group to write their group's lunch selections on 1 of their **Menu** worksheets. Tell them they cannot place orders until everyone at their table agrees on the selections.

- Go around to each table to tell them about today's gourmet special:

- Baked lasagna
- Garlic bread
- Cannoli (an Italian pastry) for dessert

- Go around the room again to ask the tables if they are ready to order yet. As soon as they begin disagreeing, suggest that you'll come back later when they've decided.

Note: You may also act as an antagonist (devil's advocate) if students are reluctant to put pressure on one another.

- Give the groups about 10 minutes to make their selections. Go around and collect their orders.

Carefully watch the groups. End the simulation before the pressure becomes too stressful for any group members.

Discussing the Simulation

- Have students turn their attention to the class as a whole. Read each of the tables' orders to the rest of the class.

- Survey the group leaders, asking each of them:

- Were you successful in getting everyone in your group to order a low-calorie lunch?
- If you were, how did you do it?
- If not, what problems did you have?

- Ask the rest of the class:

- Did other group members face similar problems?
- Was anyone pressured into changing his or her order?
- Did you force your decision on the rest of the group?

- What tactics did you use to tempt or convince others in your group? (Write their answers on the chalkboard.)
- How did you feel during the activity?

- Continue the discussion, generalizing the problems encountered in the restaurant simulation to other eating situations. Ask students:

- How do your friends influence what you eat in the lunch room?
- Alter school?
- At parties?

- Explain that pressure from others of the same age, grade, or social status is called peer pressure. (Write "peer pressure" on the chalkboard.)

Give the class a few examples of specific people who are your peers. Then ask students:

- Who are your peers?

- Focusing back on situations in which students were pressured by their peers, ask:

- Do you usually give in to pressure from your peers?
- Why does peer pressure work? (Emphasize that it is normal for people to want to belong and be liked by their peers.)
- Is peer pressure good or bad? (Make sure that both the positive and negative aspects of peer pressure are mentioned. For example, the group leaders in the restaurant situation, who tried to keep the dieters on their diets, were exerting positive pressure. The dieters who tried to get their leaders to fall off their diets were using negative peer pressure.)
- What tactics do your peers use to get you to change your mind? *Answers might include: name calling, "everyone's doing it" appeals, ostracism, threats, violence.* (Add these to the list generated in step 20. Label the list "peer pressure tactics.")

24. Ask for an example of a situation where a student gave in to peer pressure but would have preferred to resist it. Ask other students:

- How would you have handled that problem?
- What are some consequences of resisting pressure from your friends?

25. End the session by having the class formulate a list of strategies they might use to handle peer pressure situations in general. Answers might include:

- Avoiding those people that exert peer pressure
- Letting them know you can't be pressured
- Using peer pressure on them, too
- Taking a course in assertiveness training
- Giving in to the pressure

Evaluation

(These are open-ended questions with no single correct answer.)

1. How can peers influence what someone eats?
2. Can peers ever have a positive influence on what someone eats? Give an example to support your answer
3. Sally spent Saturday afternoon with a group of friends. Although she was on a diet and didn't feel hungry, she ended up eating several pieces of pizza and a soft drink. Since no one put "pressure" on her to eat this food, why do you think she decided to eat?

Going Further

-Have students describe, anonymously on paper, 1 personal situation in which they were unhappily pressured into changing their position by their friends. Collect and redistribute the papers. Have each student suggest a solution for another student's problem.

Collect and read the problems and solutions to the entire class. Solicit other solutions from the rest of the class.



MENU

FOR THE DIETER

- SUPER OMELETTE**
Three farm-fresh eggs with all the trimmings—cheese, onion, mushrooms, ham. (If we've got it, we'll make it for you!)
- PROTEIN PLATE**
Protein plus for you calorie counters. Broiled half pound of ground beef, cottage cheese, hard-cooked egg, and other trimmings. Preserve your curves with this dieter's delight.
- OUR SALAD BAR**
You know exactly how you like your salad—crisp fresh greens, spinach, cherry tomatoes, Bermuda onions, sliced cucumbers, beets, garbanzo beans, cheese, bean sprouts, three homemade salad dressings. Now, make it your way.
- FISH OF THE DAY—IT CHANGES DAILY**
From our morning trip to the fish market, a fish selected for your enjoyment and broiled our special way. Served with the vegetable-of-the-day.

FOR HEARTY APPETITES

- GOURMET SPECIAL**
Ask about today's gourmet treat.
- TOP SIRLOIN STEAK**
Choice sirloin, freshly cut in our kitchen and grilled to your taste. Served with a salad and baked potato.
- BARBECUED RIBS**
Beef ribs simmered in our own barbecue sauce and seasoned with special spices. Perfect for barbecue lovers. Served with french fries.

FOR SANDWICH LOVERS

- AVOCADO, SHRIMP, AND BACON**
A mouth-watering combination of delicious avocado, tender shrimp, and Canadian bacon piled high on the freshest of bread. You have to see it to believe it! Served with fresh fruit.
- BEEFEATER**
Juicy, thick slices of roast beef topped with their own tasty gravy—served open-face on a slice of fresh bread. A natural with homemade mashed potatoes.
- REUBEN**
In its original New York style. Shaved corned beef stacked high with sauerkraut and Swiss cheese. Served on dark rye with our own thousand island dressing. Comes with french-fried onion rings.
- THE GREAT AMERICAN HAMBURGER**
A half pound of lean ground beef with french fries, of course. Just the way you like it—with cheese, onions, mushrooms, plain or anything in between.

FOR YOUR SWEET TOOTH

- STRAWBERRY SHORTCAKE**
- CHOCOLATE CAKE**
- CHEESECAKE**
- FRESH FRUIT**
- SUPER SUNDAES**
Hot fudge, caramel, or fresh strawberry

BEVERAGES

- MILK**
(WHITE, CHOCOLATE, OR SKIM)
- DOUBLE-THICK MILKSHAKES**
- SOFT DRINKS**
(REGULAR OR DIET)
- COFFEE**
- ICED TEA**

LESSON 11: Nutrition throughout life

Framework Objective:

1. Identifies the role of food in health at different stages of the life cycle.

Sub objectives: Students should be able to:

1. Discuss nutritional needs during pregnancy, infancy, preschool, school age, teenage, and adult years.
2. Discuss nutritional problems which often develop during each stage in the life cycle.
3. Discuss the importance of good nutrition during pregnancy and lactation.

Activity 1

Review lesson on undernutrition and malnutrition.

Activity 2

Talk about goals and objectives of the lesson as you write them on the board.

LD: Have LD fill in Goals, Objectives, and Assignment sheet pp. 290

Activity 3

Discussion of nutritional needs for life cycles by using the overhead projector and by having students fill in a chart as you discuss pp. 293

LD: Provide LD with a tape of the lesson (tape 2, lesson 11).

Activity 4

Divide the class into 7 groups (pregnant, infants, pre-schoolers, school aged, teenagers, adults, and the elderly). Role play their lives and express their individual group nutritional needs. Have each group make posters, charts, or graphs to present their information. Hang posters up after role playing.

Activity 5

Have each student prepare a nutritional guide for each family member living at home, according to their places in the life cycle.

Activity 6

Content worksheets pp. 294-296

LD: Use taped lesson to help in questions.

ALTERNATIVE: Make flash cards covering various aspects of nutritional health at various life cycles. Those with the most points get rewards pp. 297-305

Activity 7

Major review over entire unit by orally quizzing students and providing a review sheet. p. 306

LD: Review taped lessons.

-GOALS, OBJECTIVES, and ASSIGNMENT SHEET

LESSON 11 CHAPTER _____ NAME _____

Today's goals for our lesson are: _____

Today's learning objectives are: _____

My assignment for today is: Nutrition Throughout Life Chart

and it is due: _____

After completing today's lesson, I had learned: _____

I did not understand: _____

and I would like some individualized help.

DAILY CONTRACT

DATE 5-16

STUDENT: I agree to behave in class and to do my work without being a distraction to others. My assignment for today is: taking notes and completing a chart in class.

and I understand that if I invalidate my contract, the following punishment will occur: I will not get to play in the game tonight.

SIGNED: Tom Davis

TEACHER: Tom and I have discussed today's assignment and we have agreed upon what is fair and what punishment should occur if Tom does not keep to this agreement. I will try to help Tom in any way to make his/her day better.

SIGNED: Mrs. Harter

PRINCIPAL: I agree to carry through with any punishment or reward for success or invalidation of Tom's daily contract with Mrs. Harter.

SIGNED: Mr. Principal

Formal Contract

Date: 5-16

STUDENT: I agree to follow these rules of student behavior: _____

I will stay in my seat and not
get up unless I have permission

Signed: Amy Miller

TEACHER: I agree to help Amy by giving
tokens for not getting up out
of her seat.

Signed: Mrs. Harter

PRINCIPAL: I agree to help Amy by letting
her be an office aid if she
behaves in class.

Signed: Mr. Principal

PARENTS: I/We agree to help Amy by subtracting
\$1.00 from her weekly allowance
for class disruptions.

Signed: George Miller
Darlene Miller

Nutrition Throughout Life ²⁹³

Cycle	Frequent Problems	How to improve diets.
Pregnancy and Lactation		
Infancy		
Preschool		
Elementary School		
Teenagers and Athletes		
Adults		
Elderly		

Lesson 11
Content Worksheet Tape 2

Name _____

DIRECTIONS: Read over today's lesson in your notes, in your book, or on the provided outline given in class. (Sections VI. A.-E.) Answer the following questions from your reading.

LD: Listen to today's lesson on Tape 2. Answer the following questions as you listen.

- (1) During pregnancy, women need between 300-500 additional calories in _____, _____, and _____.
- (2) Pregnant and lactating women need to drink plenty of _____ and snack on _____ and _____.
- (3) Why are additional nutrients needed during pregnancy and lactation? _____

- (4) Why do pregnant teenagers need additional calories beyond adults? _____

- (5) Why do more births from teenagers result in illness or death? _____

- (6) What nutrients do lactating mothers need especially? _____

Lesson 11 Content worksheet continued.

- (7) How can poor nutritional patterns early in infancy effect the growing infant? _____

- (8) Dietary patterns for the pre-schooler should be based on the _____
- (9) What nutrients do pre-schoolers need the most? _____

- (10) How can parents enhance a pre-schoolers nutrition?

- (11) School aged children demand an _____ in energy and dietary requirements.
- (12) Children need additional amounts of _____,
_____, _____, iodine,
_____, _____, and _____
_____.
- (13) Which meal of the day is most important to children?

- (14) Lunch should provide _____ of RDA requirements.
- (15) _____ are cited as having the poorest diets in the United States.

Lesson 11 Content worksheet continued.

(16) Name 2 ways to improve nutrition for the school aged person. _____

(17) Why do athletes require slightly higher amounts of well-balanced meals? _____

(18) Calorie intake should _____ as an adult grows older.

(19) For adults, how are calorie needs determined? _____

(20) Name 3 ways to improve nutrition for adults.

a. _____

b. _____

c. _____

(21) The elderly need to reduce their calorie intake by _____ percent.

(22) Name 3 ways to maintain good diets for the elderly.

a. _____

b. _____

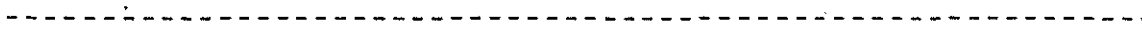
c. _____

Lesson 11
Flash Card

Name _____

DIRECTIONS: Cut out the following card. Fold the paper in half on the dashed line and fill in the requested information on the back side. You and a partner are to quiz each other. The one to get the most vocabulary terms correct will receive a reward.

Name 3 nutrients pregnant women need extra amounts of in their diets.



Pregnancy

Adults

How are calories needs of adults determined?

Teenagers

Why are some teenage girls cited as having the worst diets in the United States?

Pre-schoolers

What should dietary patterns for the pre-schooler be based on?

Infancy

How can poor nutritional patterns early in infancy affect the growing infant?

Pregnancy

Pregnant and lactating women need to drink plenty of _____
_____ and snack on _____ and _____.

Elderly

By how much do the elderly need to reduce their calorie
intake?

Why do pregnant teenagers demand additional calories?

Teenagers

Name 3 ways to improve the diets of the adult population.

Adults

School-aged

School aged children demand an _____ in energy and dietary requirements.

Pre-schooler

How can parents enhance a pre-schoolers nutrition?

Infancy

What is the basic nutrient needed by the infant?

Lactation

What nutrients do lactating mothers need especially?

Elderly

Name 3 ways to maintain good diets for the elderly.

School-aged

Name 5 nutrients school aged children need additional amounts of in their diets.

Why do birth from teenagers result in higher numbers of deaths.

Pregnancy

Why do athletes need slightly more amounts of well-balanced meals?

Athletes

NUTRITION UNIT REVIEW

- (1) Review all assigned vocabulary
- (2) Be able to explain what the Four Basic Food Groups represent and what the purpose of the DRA is. Know nutritional needs for age groups.
- (3) Be able to discuss nutritional problems of teenagers; causes, effects, and solutions.
- (4) Be able to discuss various disorders resulting from deficiencies in nutrition.
- (5) Know the 6 nutrients and their functions in the body.
- (6) Be able to explain how one can analyze one's nutritional patterns and attempt to improve one's diet.
- (7) Explain how a person can obtain a desirable weight through careful dieting and energy balance.
- (8) Be able to explain the different nutritional needs throughout life.
- (9) Review your assignments.
- (10) STUDY YOUR NOTES.

LESSON 12: Nutrition test

Activity 1

Briefly review with the class the major points of the unit.

Activity 2

Pass out tests and give the entire class period time for the test.

- LD:
1. Allow the LD to take the test orally before or after school.
 2. Allow expression of their learning in whatever mode best shows their mastery of the material. This could involve creative projects, art, or written essays.
 3. Allow the LD to demonstrate their learning through role playing to you, to verbalize their thoughts.
 4. Ask them personally what is best for them when it comes to expression. They will know.

NUTRITION TEST

NAME _____

DATE _____

MULTIPLE CHOICE QUESTIONS

1. Which of the following is a water-soluble vitamin?
 - a. vitamin A
 - *b. vitamin C
 - c. vitamin D
 - d. vitamin E
 - e. vitamin K
2. The amount of energy in each food is measured in
 - a. calories
 - b. ounces
 - c. grams
 - d. units
3. Minimum daily requirements are
 - a. the amount of vitamins needed to prevent vitamin deficiency
 - b. generally less than the recommended daily allowances
 - c. the same as the recommended daily allowances
 - *d. both a and b
 - e. both a and c
4. Since water is considered so essential to the body, a safe guide to water consumption should be
 - a. drink 2 quarts of water every day
 - b. drink at least one glass per 25 pounds of body weight per day
 - c. drink merely what one's thirst indicates
 - *d. drink slightly in excess of what one's thirst indicates
 - e. drink as little water as possible, especially when eating
5. If a housewife were generally to overcook her food she would be apt to be destroying
 - *a. vitamin C
 - b. vitamin B-1
 - c. vitamin D
 - d. niacin
 - e. any two of the above
6. If a person drank several glasses of milk daily he would be obtaining a rich supply of
 - a. calcium
 - b. fluoride
 - c. phosphorus
 - d. both a and b
 - *e. both a and c
7. Foods such as rice, grains, potatoes, and sugars have a high content of
 - a. amino acids
 - b. fats
 - c. proteins
 - *d. carbohydrates
 - e. fatty acids

8. Which of the following statements is true regarding vitamins?
- *a. many vitamins function as parts of enzymes
 - b. vitamins are a rich source of calories
 - c. vitamins are inorganic compounds
 - d. both a and b
 - e. both a and c
9. The main use that the body makes of proteins is
- a. to add bulk to the diet and thus prevent constipation
 - *b. for growth and replacement of tissues
 - c. to stimulate the flow of bile
 - d. for quick energy
 - e. to aid digestion
10. Graphing your progress of weight loss
- a. is essential in any reducing program
 - *b. serves merely as a psychological aid
 - c. reduces the time required for the given weight loss
 - d. eliminates the necessity for exercising
 - e. can effectively substitute for pharmaceutical aids which may otherwise be required
11. A source of information on foods and nutrition which may be unreliable would be that of
- a. your local physician
 - *b. the manufacturer of food supplements
 - c. the American Medical Association
 - d. the Council on Drugs and Nutrition
 - e. Federal or State departments of agriculture
12. A fat molecule is the union of
- *a. one glycerol molecule and three fatty acid molecules
 - b. three glycerol molecules and one fatty acid molecule
 - c. one glycerol molecule and one fatty acid molecule
 - d. three glycerol molecules and three fatty acid molecules
 - e. none of the above
13. Which of the following vitamins, found in citrus fruits, tomatoes, green peppers, and broccoli is necessary for the prevention of scurvy?
- a. thiamine
 - b. riboflavin
 - c. nicotinic acid
 - d. pyridoxine
 - *e. ascorbic acid
14. Overweight, by definition, is
- a. cutting out of fatty tissue
 - b. an increase in body weight beyond skeletal and physical requirements
 - *c. an excess of more than 10 percent above the desirable weight
 - d. any disorder of nutrition
 - e. failure of the jaws to close properly

15. Factors which might contribute to overweight would not include
- a. home environment
 - b. occupation
 - c. emotional factors
 - d. age and disease
 - *e. negative caloric balance
16. Generally, a reducing diet should provide at least
- a. 3,500 calories per meal
 - b. 500 calories per day
 - c. 1,500 calories per week
 - *d. 1,200 calories per day
 - e. any number of calories, since calories do not count
17. In any reducing regimen, a guideline to include in the plan should be to
- a. cut out the foods that are most cherished
 - b. after a close scrutiny, choose the best reducing products your druggist can recommend
 - c. find a good calorie chart and follow it religiously
 - d. lose at least 10 pounds the first week
 - *e. consult your physician
18. The most sensible way to lose weight is to
- a. skip breakfast
 - b. take vitamin pills
 - *c. reduce food intake
 - d. exercise daily
 - e. sweat it off
19. A balanced diet
- *a. contains a wide variety of common foods
 - b. need include only carbohydrates, proteins, and fats
 - c. must be balanced weekly
 - d. guarantees good health
 - e. must be balanced daily
20. The most common cause of obesity is
- a. improper functioning of the liver
 - b. heredity
 - c. endocrine dysfunction
 - d. lack of adequate exercise
 - *e. a diet high in calories
21. In determining an acceptable weight to maintain, the most favorable health expectation is associated with the weight of a person
- a. at age 12
 - *b. at age 22
 - c. at age 35
 - d. at time of marriage
 - e. none of the above

22. The body's most valuable source of carbohydrate energy is provided by
- *a. breads and cereals
 - b. fruits
 - c. vegetables
 - d. meat, fish, poultry and eggs
 - e. dairy foods
23. Some amino acids are called essential because
- a. every protein molecule must include one of these
 - b. they do not contain nitrogen
 - *c. they cannot be produced within the body
 - d. they can be produced within the body
 - e. a person really does not need these in his diet
24. A hormone which has a distinct effect on the basal metabolic rate of the body is
- *a. thyroxin
 - b. testosterone
 - c. estrogen
 - d. gonadotropic
 - e. thyrotropic
25. The conversion of energy from a potential form into a kinetic form takes place through the action of
- a. amino acids
 - b. metabolism
 - c. calories
 - *d. enzymes
 - e. vitamins
26. A well-balanced diet should contain
- a. vegetables and dairy products
 - b. breads, cereals, and fruits
 - c. fruits and vegetables
 - d. meat, eggs, breads, and cereals
 - *e. all of the above
27. A person's main source of calcium would be found in
- a. eggs
 - b. whole grain
 - *c. milk
 - d. dark green, leafy vegetables
 - e. oranges
28. Any reducing diet should reduce the intake of
- a. vitamins
 - b. minerals
 - *c. calories
 - d. water
 - e. proteins
29. The principal killer of overweight persons is
- a. cancer
 - b. tuberculosis
 - *c. heart disease
 - d. low blood pressure
 - e. pneumonia

30. The best variety of protein is found in
a. breads
b. cereals
*c. meats
d. vegetables
e. fruits
31. Most girls/boys your ages need about _____ calories per day:
a. 1600/2000
*b. 2400/2800
c. 3200/3600
d. 4000/4400
32. All of the following are sources of unsaturated fat except
*a. fish
b. butter
c. turkey
d. poultry
33. The main source of energy for your body's cells is
a. protein
*b. fats
c. glucose
d. vitamins
34. A disorder that occurs when a person refuses to eat is
a. osteoarthritis
*b. anorexia nervosa
c. diabetes
d. insulin shock
35. The major health hazard of eating too much sugar is
a. cirrhosis
b. high blood pressure
*c. tooth decay
d. obesity
36. The underlying cause of anorexia nervosa is
*a. mental
b. physical
c. malnutrition
d. lack of exercise
37. All of the following are sources of saturated fat except
a. pork
b. milk
*c. chicken
d. hamburger

DISCUSSION QUESTIONS

1. List four ways your health is influenced by being overweight.
2. What are the relationships between the nutritional needs of our bodies and the food we consume?
3. What is undernutrition? Who are those most severely hit by under-nutrition? What can be done to correct undernutrition within these groups?
4. Many kinds of human disorders arise from faulty nutrition. Explain the two most common in the world. Are these disorders ever found within the United States?

5. State three ways that a person can plan to maintain an ideal weight.
6. Which nutrients supply energy to the body? How do we measure these nutrients? How much of each nutrient do you need per day?
7. List four ways to reduce cholesterol intake.
8. Sugar is known by several names. List four of these names.
9. Discuss the differences in nutritional needs during various times in the life cycle.
10. Discuss various guidelines to good nutrition which have been established by the U.S. Government.

TRUE OR FALSE QUESTIONS

1. Amino acids are the structural elements of carbohydrates.
2. Calcium is an energy source for the body.
3. Carbohydrates include sugars and starches.
4. There are eight essential amino acids.
5. It is safe to eat excessive carbohydrates since they have no relationship to body fat.
6. The basal metabolic rate is lowest in childhood.
7. The use of drugs for weight loss has long been considered completely useless.
8. To increase body weight, a person should create a positive caloric balance.
9. A weight loss of 500 calories per day would represent the loss of two pounds of stored fat per week.
10. Carbohydrates are sugars, starches, and oils.
11. Sugar from sugar cane and sugar from sugar beets are identical in chemical structure.
12. A fat is made up of one glycerol molecule connected to three fatty acid molecules.

13. Proteins containing all eight essential amino acids in significant amounts are called saturated proteins.
14. Carbohydrates, proteins, and fats are not the only nutrients which can be converted into energy.
15. Vitamins are an essential energy source for the body.

Chapter 5

Summary, Conclusions, and Recommendations

There is growing concern among educators today about their legal obligation to teach the mainstreamed learning disabled student. The concern originates in the confusion over the term "learning disability." For years people believed learning disabilities were a form of mental retardation, emotional disorder, behavioral disorder, and/or cultural deprivation. Little documented information was being published because of disagreement among professionals.

Today the public is becoming more informed. Learning disabilities are being more thoroughly investigated, understood, and accepted. More and more remediation methods are being devised, but the process is slow. Therefore, few resource materials are available for the secondary subject areas.

Since very few teachers have actual training for educating exceptional children, a challenging problem has arisen. Teachers feel frustrated and helpless when confronted with the mainstreamed student. They do not know where to locate resource materials for their specific teaching areas, and they may not understand the student's learning disability.

Therefore, it is very important for teachers today to become more informed about learning disabilities. Approximately 3 percent of our

population has been diagnosed as being learning disabled, with an estimated 3.9 percent being unidentified. If teachers understand the basic problems involved with the learning disabled, the frustration and confusion can be partially eliminated.

The learning disabled student is a unique individual who requires special learning modes. Once self confidence and trust are established, a regular subject matter teacher can educate the learning disabled student. The instruction requires patience, effort, and dedication in finding instructional resource materials and remediation techniques which work for each student.

Since learning disabilities is a relatively new area in education, much discussion and debate exist about what is best for the learning disabled student. Programs have been devised along with numerous materials for the elementary level. This effort needs to be continued at the secondary level. There needs to be more emphasis placed on secondary subject matter instruction when content becomes more difficult, demanding, and varied. Secondary teachers are having to be pioneers in their subject areas to create or locate good materials for their exceptional mainstreamed students.

In addition to the development of more materials and instructional strategies, college and university undergraduate education programs need to place greater emphasis on methods for instructing of exceptional children. Now that teachers are legally obligated to teach the handicapped student, many are returning to school to learn more about the

exceptional student and how they can improve their classroom teaching methods to enhance learning for these students. Such emphasis, along with development of appropriate materials, should result in effective learning for a group of students too long ignored.

BIBLIOGRAPHY

1. Ash, Joan, and Michael Stevenson. Health: A Multimedia Source Guide. New York: R. R. Bowker Company, 1976.
2. Blinstrub, Nini. The Perpetually Handicapped Adolescent. Chicago Association for Children with Learning Disabilities, 1975. Reprint in John P. Quirk, ed. Readings in Learning Disabilities. Guilford: Special Learning Corporation, 1978, p. 83-84.
3. Bloomer, Corinne. "The L.D. Tightrope." Teacher, March, 1975, p. 11-14.
4. Briggs, Kenneth A. "Heath and the LD." MS. Kenneth A. Briggs Papers, Central Washington University, Ellensburg, Washington.
5. Bryan, Tanis H. and James H. Bryan. Understanding Learning Disabilities. Port Washington, New York: Alfred Publishing Co., Inc., 1975.
6. Bryant, N. Dale. "Some Principles of Remedial Instruction for Dyslexia." Learning Disorders: Special Report. No. 2, (April 1965). Reprint in John P. Quirk, ed. Readings in Learning Disabilities. Guilford: Special Learning Corporation, 1978, p. 139-147.
7. Cashin, William E. "Motivating Students, Idea Paper Number I." MS. William E. Cashin Papers. Kansas State University, Manhattan, Kansas. August, 1979.
8. Coble, Charles R., and Dale R. Rice. Life Sciences. Englewood Cliffs: Prentice-Hall, 1980.
9. Corder, Billie F. "L.D. Adolescents: A Structured Activity Approach." Academic Therapy, 13 No. 1, p. 91-97.. September, 1977. EJ 171708
10. Cruickshank, Wm., and others. A Teaching Method for Brain-injured and Hyperactive Children. Syracuse, New York: Syracuse University Press, 1961.
11. Diamond, Irene M. A Guide to Tailoring Writing Assignments for the Mainstreamed Student. ED 193 658.
12. Ensor, Phyllis G., and Richard K. Means. Instructor's Resource and Methods Handbook for Health Education. Boston: Allyn and Bacon, Inc., 1977.

13. Gardner, David C., and Margaret A. Kurts. "Teaching Technical Vocabulary to Handicapped Students." Reading Improvement, 16, No. 3 (1979): p. 252-257. EJ 212168.
14. Gearheart, Bill R. Learning Disabilities Educational Strategies. 3rd ed. St. Louis: E. V. Mosby Company, 1981.
15. Gearheart, Bill R. Teaching the Learning Disabled. St. Louis: E. V. Mosby Company, 1976.
16. Grossman, Alberta N. "Language Play and the Learning Disabled." English Journal 71 No. 3, (March, 1982): 32-35.
17. Hallahan, Daniel P., and James M. Kauffman. Introduction to Learning Disabilities: A Psycho-Behavioral Approach. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1976.
18. Hallahan, Daniel P., and William M. Cruickshank. Psycho-educational Foundation of LD. New Jersey: Prentice-Hall, Inc., 1973.
19. Hammil, Donald D., and Nettie B. Bartel. Teaching Children with Learning and Behavior Problems. Boston: Allyn and Bacon, Inc., 1982.
20. Harlin, Vivian K., and Esther D. Schulz. Basic Concepts of Human Life: Facts for Youth to Know. River Forest: Laidlaw Brothers, Publishers. 1975.
21. Hayes, Marnell L. "The Auditory Learner." The Tuned-In Turned-On Book About Learning Problems. Academic Therapy Publications, 1974.
22. Hayes, Marnell L. "The Visual Learner." Oh Dear, Somebody Said Learning Disabilities. Academic Therapy Publications. (1975) Reprint in John P. Quirk ed. Readings in Learning Disabilities. Guilford: Special Learning Corporation, 1978, p. 76-79.
23. Jones, Kenneth L., Louis W. Shainberg, and Curtis O, Byer. Dimensions III: A Changing Concept of Health. San Francisco: Canfield Press, 1976.
24. Jones, Kenneth L, Louis W. Shainberg, and Curtis O. Byers. Health Science. 2nd ed. New York: Harper and Rowe, Publishers, 1968.
25. Keogh, Barbara. "Hyperactivity and Learning Disorders: Review and Speculation." Exceptional Children, 38, 1971, p. 101-109.

26. Kogan, Edward. Health: Man in a Changing Environment. 2nd ed. New York: Harcourt Brace Jovanovich, Inc., 1974.
27. Health, Level 4. National Dairy Council. Rosemont, Illinois 60018. 1980.
28. Lehtinen-Rogan, Laura E. "How Do We Teach Him?" The Educator's Enigma: The Adolescent With Learning Disabilities. Government Document (1978) Reprint in John P. Quirk, ed. Readings in Learning Disabilities. Guilford: Special Learning Corporation, 1978, p. 182-195.
29. Lewis, Rena B., and Donald H. Doorlag. Teaching Special Students in the Mainstream. Columbus: Charles E. Merrill Publishing Company, 1983.
30. McClendon, Edwin J., Wanda H. Jubb, Robert G. Norred, and Geraldine Moore. Healthful Living for Today and Tomorrow. River Forest: Laidlaw Brothers, 1981.
31. Marsh, Gearheart, and Gearheart. The Learning Disabled Adolescent: Program Alternatives in Secondary School. 1978.
32. Ramsey, William L., Lucretia A. Gabriel, James F. McGuirk, Clifford R. Phillips, and Frank M. Watenpaugh. Life Science Resource Book. New York: Holt, Rinehart, and Winston, Publishers, 1978.
33. Read, Donald A., and Walter H. Greene. Creative Teaching in Health. New York: Macmillan Publishing Company, 1975.
34. Ross, Alan O. Psychological Aspects of Learning Disabilities and Reading Disorders. New York: McGraw Hill Book Company, 1976.
35. Rowan, Ruth Dinkins. Helping Children With Learning Disabilities. New York: Abingdon Press, 1977.
36. Schragar, Jules. "The Hyperkinetic Child: Some Consensually Validated Behavioral Corrolates." Exceptional Children, May 1966. Reprint in John P. Quirk, ed. Readings in Learning Disabilities. Guilford: Special Learning Corporation, 1978, p. 87-88.
37. Slingerland, Beth H. "Recognition and Help for Today's Intelligent Specific Language Disability Children." Government Document, (1975). Reprint in John P. Quirk, ed. Readings in Learning Disabilities. Guilford: Special Learning Corporation, 1978, p. 113-117.

38. Smith, Monte D., J. Michael Coleman, Paul Doliecki, and Carl E. Davis. "Intellectual Characteristics of School Labeled Learning Disabled Children." Exceptional Children, March, 1976, P. 42-47.
39. Snyder, Myrtle. Personal Interview. February 4, 1983.
40. Sutherland, Mary S. Health Education Teaching/Learning Methodologies. ED 198 106.
41. Towle, Maxine, and Allen Ginsberg. "An Educator's Mystery: Where Do Performance Problems Come From?" Journal of Learning Disabilities 8, No. 8 (1975) 12-14.
42. Weiderholt, J. Lee, Donald D. Hammill, and Virginia Brown. The Resource Teacher: A Guide to Effective Practices. Boston: Allyn and Bacon, Inc., 1978.
43. Woodward, Dolores M. Mainstreaming the Learning Disabled Adolescent. Rockville, Maryland: Aspen Publication, 1981.
44. Zukow, Arnold H. "Helping the Hyperkinetic Child." Today's Education. 64, No. 4, November-December 1975 p. 89-91.

AVAILABLE HEALTH TEACHING AIDS

- * Troll Associates
401 Westport Avenue
Norwalk, CT 06851
- * Health Audio Visual Narrative Arts, Inc.
Box 9
Pleasantville, NY 10570
- * Encyclopedia Britannica
425 North Michigan Avenue
Chicago, IL 60611
- * Guidance Associates
41 Washington Avenue
Pleasantville, NY 10570
- Coronet Instructional Media
65 East South Water Street
Chicago, IL 60601
- * Educational Audio Visual, Inc.
Pleasantville, NY 10570
- Educational Dimensions, Inc.
P.O. Box 126
Stamford, CT 06904
- Clearview, Inc. (kits, masters)
6666 North Oliphant
Chicago, IL 60631
- Health Activities Project
(Hubbard)
P.O. Box 104
Northbrook, IL 60062
- Multi Media Production, Inc. (audio programs)
P.O. Box 5097
Stanford, CA 94305
- Current Affairs (filmstrips w/records)
24 Danbury Road
Wilton, CT 06897

- * Readers' Digest Services (Film/cassettes - science)
Education Division
Pleasantville, NY 10570
- * Opportunities for Learning
Department 9 AB
8950 Lurline Avenue
Chatsworth, CA 91311
- * Xerox Educational Publications
1250 Fairwood Avenue
Columbus, OH 43216

LEARNING DISABLED - FREE MATERIALS

1. American Foundation for the Blind
15 West 16th Street
New York, NY 10011
2. Association for the Advancement of Health Education
1201 16th Street NW
Washington, DC 10036
3. National Institutes of Health
9000 Rockville Pike
Bethesda, MD 20014

MEDIA

1. National Braille Association, Inc.
85 Godwin Avenue
Midland Park, NJ 07432
2. Lawren Production, Inc.
1881 Rollins Road, Suite C
Box 1542
Burlingame, CA 94010
3. The Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

FILM RENTAL SOURCES

1. Educational Film Guide
H. W. Wilson Company
950 University Avenue
New York , NY 10452
2. Educational Media Index
McGraw-Hill Book Company
330 West 42nd Street
New York, NY 10036
3. Educational Television Motion Picture Descriptive Catalog
Containing Series, Data, Subject, and Use Level Index for 16mm
Educational Television Programs
NET Film Service
Audio-Visual Center
Indiana University
Bloomington, IN 47401
4. Library of Congress Catalog: Motion Pictures and Filmstrips
Washington, DC 20540
5. U.S. Government Films for Public Educational Use
Office of Education
U.S. Department of Health, Education, and Welfare
Washington, DC 20402
Attention: Superintendent of Documents

NUTRITION FILM RENTALS

1. AIMS Instructional Media Services, Inc.
Box 1010
Hollywood, CA 90028
2. Benchmark Films, Inc.
145 Scarborough Road
Briarcliff Manor, NY 10510
3. Encyclopedia Britannica Educational Corporation
425 North Michigan Avenue
Chicago, IL 60611

4. University of Maine Film Rental Library
16 Shibles Hall
Orono, ME 04473
5. The National Foundation - The March of Dimes
1275 Mamaroneck Avenue
White Plains, NY 10605
6. Southern Illinois University
Learning Resources Service
Carbondale, IL 62901
7. Cereal Institute, Inc.
135 South LaSalle Street
Chicago, IL 60603
8. Baker and Taylor Company
Audiovisual Service Division
Box 230
Momence, IL 60954
9. Eye Gate House
146-01 Archer Avenue
Jamaica, NY 11435
10. McGraw-Hill Films
1221 Avenue of the Americas
New York, NY 10020
11. Modern Talking Picture Service
2323 New Hyde Park Road
New Hyde Park, NY 10040
12. Nutrition Series
311-0 East Sierra Madre Boulevard
Sierra Madre, CA 91024
13. Sunburst Communications
Fancher Road
Pound Ridge, NY 10576
14. Sunkist Growers, Inc.
Consumer Service
AV-72
Box 7888, Valley Annex
Van Nuys, CA 91409

15. "Eat to Your Heart's Content"
American Heart Association Film Library
267 West 25th Street
New York, NY 10001
16. "Toward the Victory of Health"
Modern Talking Pictures
2323 New Hyde Park Road
New Hyde Park, NY 11040
17. "Food and Nutrition"
Parent's Magazine Films, Inc.
52 Vanderbilt Avenue
New York, NY 10017

NUTRITION PUBLICATIONS

1. St. Martin's Press
175 5th Avenue
New York, NY 10010
2. International College of Applied Nutrition
Box 386
La Habra, CA 90631
3. R. R. Bowker Company
1180 Avenue of the Americas
New York, NY 10036
4. Educators Progress Service, Inc.
Randolph, WI 53956
5. Campbell Soup Company
Department 630-I
Camden, NJ 08101
6. American Academy of Pediatrics
1801 Hinman Avenue
Evanston, IL 60204
7. Society for Nutrition Education
2140 Shattuck Avenue, Suite 1110
Berkeley, CA 94704

8. Eli Lilly and Company
307 East McCarty Street
Indianapolis, IN 46206

NUTRITION - FREE MATERIALS

1. American Association for Maternal and Child Health
Box 965
Los Altos, CA 94022
2. Food and Drug Administration
Consumer Inquiries, HFG-20
5600 Fisher Lane
Rockville, MD 20852
3. Nutrition Foundation
489 5th Avenue
New York, NY 10017
4. Educators Progress Service, Ind.
Randolph, WI 53935

SUMMARIES OF ACTIVITIES AND THEIR APPLICATION TO THE LEARNING DISABLED STUDENT

(VAKT) Approach to Vocabulary Lessons

The VAKT approach to learning is a multisensory means of incorporating all four senses of a person. A student possessing a learning disability will experience learning in all four areas when involved in such activities. The VAKT approach is excellent for perceptual motor disorders because of the varied means of learning and the emphasis on visual and auditory learning. This approach is also good for hyperkinetic students because it is a highly manipulative learning means and reduces environmental stimuli. Dyslexic students also find the VAKT approach good because it is slow-paced, working one step at a time on the pronunciation, spelling, and meaning of a word.

Formal Contract

Formal contracts are basically designed for hyperkinetic students who need to take responsibility for their behavior and learning. Punishments and rewards are clearly spelled out among student, teacher, parent(s), and principal.

Daily Contract

Daily contracts are primarily designed for the hyperkinetic as a control method for both teacher and student. It is an activity similar to the Formal Contract, but operates on a daily basis. This contract is good for motivating or for breaking down learning into steps; this is crucial for all learning disabled students.

Coded Vocabulary

Studies show that visual learners excel at work using visual means to learn. Coded vocabulary causes the student to concentrate more on the terms or words to be learned. This type of lesson is good for dyslexics because they see and sound out the word letter by letter.

Goals, Objectives, and Assignment Sheet

This form is designed to help LD students develop structure and direction in their daily lessons. Students fill out their forms daily, in

order that they can see what they are to learn and concentrate on during that day. To LD students a lesson without direction is overwhelming, and they don't know how to approach it adequately.

Vocabulary Identification Worksheet

This activity is designed primarily for the dyslexics, who have difficulty learning, spelling, sounding, and identifying words.

Flash Cards

Flash cards are excellent for almost all forms of learning disability, especially for the dyslexic and for the visual learner. The mechanical nature of the activity helps provide direction for the excess energy of the hyperactive student.

Learning Wheels

This is an excellent activity for the visual learner and the hyperkinetic. Since it is a hands-on project, more mental concentration will be used on the objectives to be attained.

Cure for the Common Cold National Dairy Council

This activity is fine for the LD present in the classroom. Adjust directions to step-by-step instructions. When introducing the activity, go step by step with students, providing demonstration and using plenty of oral and visual aids.

Four Food Groups Worksheet

Having students fill in a chart as the teacher is providing concepts is good for the LD, since it simplifies and organizes the learning material.

Seven Diet Goals Worksheet

This is particularly well suited to the visual learner, to the student learning aurally from tapes, and to the dyslexic. Again, the worksheet is large, visual, and simple.

Leader Nutrient Worksheet

This is an excellent "all-purpose" worksheet for the LD. It causes the LD to organize and break down the task into steps. By adding the learning wheels it becomes mechanical in nature, which is excellent for the hyperkinetic. It also makes the activity very visual.

McDonald's Food Group Chart

This activity is well suited to the student who needs to be given extremely simple tasks in order to learn. The pictures make it good for the dyslexic and for visual learners. The mechanical nature of the activity makes it good for use with hyperkinetics.

Role Playing

Many students learn more effectively by experiencing than they do by rote learning. Role playing is very good for LDs (auditory learners, dyslexics, and hyperkinetics especially) who find reading and following directions to be difficult and at times overwhelming.

Self-Contract

This activity reviews through application all the information provided in the particular lesson. LDs use learning wheels and other activities.

Eating Awareness

This is a good activity for LDs because it is a hands-on activity involving themselves. It is good for most LDs since it encourages more thinking and less written work.

Lunch Time

This activity is easily adjusted to meet LD needs. It is mechanical and visual in nature, which is good. Since it allows the usage of previous learning aids, LD students should be able to do this activity well. Direction must be broken down into steps in order for the most effective learning to occur.

Pizza Before the Game

This is an excellent activity for the LD. The activity is game-oriented,

with picture cards and many visually stimulating handouts. The directions are simple and are written out step by step. Very few adjustments are needed to make this a successful activity for the LD.

Slim Chance Game (HAP Activity)

This is an excellent game for all students. The directions are simple, and the activity itself is fun as well as being educational. It is an especially good activity for hyperactive and dyslexic students. There is no need for any alteration.

Food Pretest

This is a good review of material covered over the unit. It incorporates varied means of questioning and reasoning using cartoons, puzzles, and charts. No particular aids are necessary except for the dyslexic. Terms and construction may be overwhelming. Oral testing may be best.

Food Mumbo Jumbo

This is a coded worksheet which causes students to concentrate more on the content. Most auditory learners enjoy codes. It also incorporates the vocabulary very well.

Dear Helper

This is a good application activity which could easily be adapted for role playing by the LO. It requires writing a letter, however, which may "turn off" dyslexics and auditory learners.

Malnutrition

This activity rates students' eating habits and helps them discover ways to improve their diets and reduce weight, if necessary. This activity could be done by all students. LO students would require help in the form of additional directions.

Forbidden Fruit and Other Carbohydrates Game

Directions for this are easy and are listed step by step. This is a good activity for the LD since the game involves pictured cards with

information relating to weight control and diet. LD students can easily do this activity with few problems. It is an especially good activity for hyperkinetics, visual learners, and dyslexics.

Out to Lunch Activity

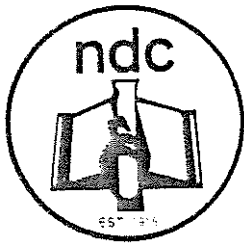
This activity is a role playing one in which students analyze a menu in order to select the most nutritious meals. This is a good activity since students learn by experience. It is excellent for all students, including the LD. Extra directions will be required by the LD.

Permission to Copy Published Activities

The National Dairy Council and the Health Activities Project by Hubbard Publishing have been contacted by phone and have granted the writer verbal permission to photocopy the following activities:

1. A Cure for the Common Cold (NDC)
2. Eating Awareness (HAP)
3. Lunch Time (HAP)
4. Pizza Before the Game (NDC)
5. Slim Chance. (HAP)
6. Forbidden Fruit and other Carbohydrates

Written release papers are being processed and will be sent shortly.



335
National Dairy Council

5300 North River Road, Rosemont, Illinois 60018

Telephone (312) 696-1020

April 27, 1983

Sharon Harter
560-F Spengler Rd.
Richland, WA 99352

Dear Ms. Harter:

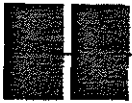
Thank you for writing to confirm our telephone conversation.

National Dairy Council grants you permission to reprint FOOD...Your Choice, Level 4-Health, activities 12-"A Cure for the Common Cold," 9-"Pizza Before the Game," and 2-"Forbidden Fruit and Other Carbohydrates" in your master's degree project on Nutrition and the Learning Disabled Student. Please use the customary credit line Courtesy National Dairy Council, FOOD...Your Choice, Level 4, Health.

Sincerely,

Joyce R. Wincovitch
Writer/Editor
Nutrition Education

JRW:em



HUBBARD

1946 Raymond, Northbrook, Illinois 60062 • 312/272-7810

336

April 28, 1983

Ms. Sharon Harter
560-F Spengler Rd.
Richland, Washington 99352

Dear Ms. Harter:

Confirming our phone conversation of April 27, we have received verbal permission from Lawrence Hall of Science for you to use the following activities in your master's project:

Slim Chance
Lunch Time
Eating Awareness

The credit should read: These three activities are included in the Nutrition/Dental Health Module of the Health Activities Project (HAP), developed by Lawrence Hall of Science, Berkeley, California, and published by Hubbard, Northbrook, Illinois. Copyright © 1982 by the Regents of the University of California.

Sincerely,

Ann Perce
Editor

cc: Dave Buller
Lawrence Hall of Science

AP/sj