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#### **ABSTRACT**

GRADES OR AGES: Grades K-3. SUBJECT MATTER: Physical health and nutrition. ORGANIZATION AND PHYSICAL APPEARANCE: The guide is divided into five sections: a) What is Food? b) Food for Energy, d) Food for Building, and e) The Varieties of Food. The publication format of four columns gives the reference, the major understandings and fundamental concepts, suggested teaching aids and learning activities, and supplementary information for teachers. The course objectives are presented in the introduction. The guide is soft-covered. OBJECTIVES AND ACTIVITIES: Each subsection contains questions and topics for discussion. The supplementary information provides teachers with further discussion material. INSTRUCTIONAL MATERIAL: A list of multimedia resources for the teacher is presented with a brief description of each item. STUDENT ASSESSMENT: No provision is made. OPTIONS: The guide is suggestive only. (BRB)

STRAND I

NMSU E.R.I.C.

PHYSICAL HEALTH NUTRITION GRADES K-3

1.8. DEPARTMENT OF HEALTH.

EDUCATION 1: WELFARE

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1970 Reprint

THE UNIVERSITY OF THE STATE OF NEW YORK/THE STATE EDUCATION DEPARTMENT THE CURRICULUM DEVELOPMENT CENTER/ALBANY, NEW YORK 12224



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TO THE TEACHER ---

people eat in many different ways, and beginning to understand the relation of food to health and food, accepting a variety of foods, appreciating eating as a pleasurable experience, realizing that The nutrition curriculum at the K-3 level is directed toward developing positive attitudes toward

social studies, arithmetic, spelling, reading, and art, for example. Much of the nutrition teaching at this level can and should be integrated with other subjects

explaining the activities and subject matter taught to children might be one way of informing parents in the home, where the child's main experiences with eating take place. Periodic letters to parents and enlisting their cooperation. The effectiveness of nutrition education in the school can be greatly enhanced if it is reinforced

progresses through the grades. some indication of grade level may help to avoid possible repetition of learning activities as the child Grade levels are suggested for learning activities and teaching aids for two reasons: aids and learning activities suggested are designed to help the student grasp the concept himself. ing aids are definitely geared to one end or the other of the age group under consideration. meant to be statements to be taught. They are rather understandings to be worked toward. The ideas listed under "Major understandings and fundamental concepts" in this curriculum are not First, some teach-The teaching Secondly,

desired way are more effective than talking about desired behavior. It is fundamental to nutrition education at this level that activities which help children act in



#### OUTCOMES

# Pupils in grades K-3 should:

- Be able to identify different varieties of food
- Appreciate the relationships between the foods they eat and their health, growth, and development
- Be cognizant of some factors that discourage or encourage individuals from eating certain foods
- Be encouraged to include a variety of foods (both familiar and unfamiliar) in their diets
- Recognize that families differ in the kinds of foods they eat and the manner in which foods are prepared for eating



WHAT IS FOOD?

H.

# MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

#### A. ALL LIVING THINGS NEED FOOD AND WATER

- -- Plants get their food from water, sunlight, air, and soil.
- If any of these things are missing, the plant cannot grow normally and cannot live.

## SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

# (1)\* Grow plants from seeds, with and without fertilizer (plant food). Compare the rates of growth and general health of the plants.

Keep plants in the class-room; compare their progress with and without adequate materials for manufacturing food.

Plant A - in soil, water twice a week, in sunlight

Plant B - in soil, do not water, in sunlight

Plant C - in soil, water twice a week, keep in the dark Plant D - in distilled water (or sand which has been washed several times, and water twice a week), keep in sunlight

Answer the following questions:

\* Grade level suggested

# SUPPLEMENTARY INFORMATION FOR THE TEACHER

A lima bean produces a rapidly growing plant. If you use a clear plastic glass for a container and place the bean in the soil at the edge, it is easy to see the growth of the sprout.

Tomato plants produce rapid results.

Soil is a source of soluble minerals for the plant.

Tap water contains enough minerals, usually, so that dramatic results are not seen unless distilled water is used.

Different plants have
different needs for nutrients and for water. For
example, the cactus can
store water and therefore
it can live on the dry
desert. Other plants must
have water often. A
dandelion can grow on almost any kind of soil; a
rose must have a more
carefully chosen mixture.

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How does a plant get its food?
Can a plant live without water?
Without light? Without soil? Why not?

Animals get their food from plants and from other animals.

Discuss: Can animals live without food? Without water? Can they live longer without food or without water?

E

Discuss: The different kinds of foods that various animals eat using examples of animals which are familiar: e.g. Horses eat grass, oats; hay; cats like fish, meat, milk.

 $\Xi$ 

Children may enjoy telling about the foods their pets eat at home.

2

Visit a zoo and observe what the different animals eat.

Introduce the idea that not all animals have the same kind of digestive abilities. e.g. Because a cow has a special stomach, she can eat some things (like hay) that people can't.

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

(S)

Discuss the fact that people like and eat more different kinds of food than other animals do.

Ξ)

Some young animals need

milk to help them to

grow.

A child who has new kittens or pupples at home may provide a personal experience for talking about milk as food for young animals.

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FOOD MAKES A DIFFER-

æ.

ENCE IN HOW WE FEEL

ABOUT OURSELVES,

Discuss: Row do you feel when you're hungry?
(Possible answers: restless, tired, unhappy, don't want to do anything, etc.)

OTHERS, AND THE WORLD AROUND US.

3

A child with a baby brother or sister at home will be able to relate that the baby cries when hungry and sleeps happily after being fed.

THERE ARE MANY DIFFER- () ENT KINDS OF FOODS.

ပ

(K) Have children sit on the floor in a circle.

SUPPLEMENTARY INFORMATION FOR THE TEACHER

Children of this age often have little choice as to what they eat (except that they can choose to eat or not to eat what is provided for them.)

Therefore, while it is important to lay the groundwork for informed choices of foods, at the primary level this can best be done by establishing positive attitudes toward food and the willingness to accept a variety of foods.

The state of the s

Pass around one at a time several objects -- nonfood and food. Talk about what each object is and what we do with it.

- several pictures from magazines of food products and nonfoods (some things that go in the mouth but are not foods, like toothbrush, lipstick, mouthwash). Ask children to circle the food items.
- (K) Use A Child's Dictionary - shows pictures of objects and words for them, including a good section on foods. (From Scott, Foresman, & Co.)
- (K) Use, as story books or coloring books, <u>Dan</u> and <u>Sue Meet the Friendly Foods</u>, or <u>The Good Foods</u>
  <u>Coloring Book</u>. (Both from USDA)
- (1) Have a tasting party to sample different kinds of vegetables. Bring some which will be familiar to all the children, and also some more unusual ones. Try presenting in a raw form

Often a child will try a new food or even eat one he has disliked if the rest of the class is trying it. In conducting a tasting party, present the foods to be tasted in small portions, preferably bite-

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

REFERENCES

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

some vegetables usually eaten cooked (e.g., small pieces of cauliflower, turnip strips). If time allows, let children participate in preparing the foods for the party.

Ask children which foods

they liked best.

A tasting party may also be used to familiarize children with different fruits. Point out the seeds in fruits; the wide variation in the size of the seeds.

A tasting party is useful in teaching about all the different foods made from milk. (cream, butter, cheese, cottage cheese, buttermilk, ice cream, chocolate milk). In conjunction with a dairy foods tasting party, use the booklet <a href="Ice Cream is Good">Ice Gream is Good</a>, from the Dairy Council.

An art activity might be combined with a tasting party, with children drawing the different foods and learning to spell their names.

(2) For second graders, have a tasting party with

SUPPLEMENTARY INFORMATION FOR THE TEACHER

sized pieces that can be picked up in the fingers so the texture can be felt. Teach the name of the food. Encourage each child to try every food. Don't force a child to eat a food if he refuses, or make an issue out of a dislike expressed by a child.

Appreciation of food depends on more than taste. Sight, smell, and texture all are involved in our reactions to food.

blindfolds. Ask children to try to identify the foods they are eating without looking. Use several foods of similar texture (apple & onion; lettuce and spinach; pear and peach)

- provide milk to drink. (1) Make butter at bread for each child and butter on a piece of afterwards, spread the the butter. add a pinch of salt to stage (buttermilk) and stage -- just a lick is sufficient. Pour off will be produced before the liquid at the butter children a taste at this reached. Give the the butter stage is beating. Whipped cream egg beater until butter heavy cream; beat with an school. Start with take turns doing the is formed. Have children For a snack
- (2) Use "Food and Nutrition Teaching Pictures"
  (from David C. Cock Publishing Company.) Set
  includes 12 pictures of
  poster size for classroom
  use. Small take-home

### MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

### SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

SUPPLEMENTARY INFORMATION FOR THE TEACHER

> each picture are included. Appropriate here are picpictures with messages to able. Rhymes to go with parents are also availtures,

(vegetables) #9 (fruits) (m11k)

(salad vegetables)

Booklet "Where We Get Our Food" (Dairy Council)

D. WHERE DO DIFFERENT

FOODS COME FROM?

- Cows give us milk.

Arrange a class field trip to visit a dairy farm. 3

Dairy Council Materials:

Dairy Farm Panorama  $\Xi$ 

Uncle Jim's Dairy Farm 3

"Uncle Jim's Dairy Farm" Film: 3

More Milk Please! ව

Use pictures and rec-Scott, Foresman, & Comord "Fa.m in the Zoo" (from the Foundations for Learning Series, pany). B

clear understanding of the originates on the farm, in plants and animals, rather children. In a rural area Relative emphasis on this children will likely need original sources of food. section should depend on the background of the children may have a very than in the supermarket. more help in developing the concept that food In an urban setting,

> - Many animals give us meat.

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

SUPPLEMENTARY INFORMATION FOR THE TEACHER

are included. pictures of the animals sounds to listen to; color Record has various animal

- (1) Using pictures of sausage, ham, bacon, liver. Include fish, meats come from what shellfish, poultry. hamburger, roast beef, their names, for example: those not obvious by animals -- especially animals, discuss what
- (2) Visit a farm where a poultry farm. meat and eggs, such as animals are raised for

are grown. etables and/or fruits Visit a farm where veg-

- Vegetables and fruits

grow on farms and in

gardens.

Teaching Pictures" (Cook Publishing Co.) #11, "Food and Nutrition How Carrots Grow.

1

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS Visit a bakery to see bread being made.

SUPPLEMENTARY INFORMATION FOR THE TEACHER

AND LEARNING ACTIVITIES SUGGESTED TEACHING AIDS

> which is used for making from grain, which grows on the farm. The grain is ground to make flour Cereal and bread come bread.

meat, milk, vegetables, fruits, and grain from food is prepared to go - The farmer sells the his farm. Then the to the supermarket, where we buy it.

different foods come from. Especially concentrate on ones, e.g. peanut butter, some of the less obvious cheese, raisins, jam or Using pictures of food models, discuss where jelly, cereal.

- supermarket and shoppers. Use "Urban Panorama Kit" (Dairy Council) shows
- Teaching Pictures" Cook Publishing Co.) #12: "Food and Nutrition The Supermarket. 1 1 1 1 1

- The farmer, the man who

owns the supermarket,

and all the other

food keep it clean and

good for us to eat.

people who handle our

- storekeeper by playing store using empty food boxes, cans, some real Have children act out roles of shopper and
- WE ALL HAVE FAVORITE FOODS THAT GIVE US

II. FOOD IS USED FOR

PLEASURE.

on a definition of the second second

favorite foods of all the (1) Make a list of the

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

SUPPLEMENTARY INFORMATION

Brongston and selection of

FOR THE TEACHER

students in the class. See how many different favorite foods there are.

Discuss: Everybody has his own idea of what foods taste good.

- sweet, salty, sour, and where the taste buds for of the tongue, indicating parts of the tongue. Try of each food on different students can drop a little With the toothpick, bitter foods the best? sweet, sour, salt, and blem: On what parts of which taste different the areas of the tongue bitter are located. Students can draw a map part of the tongue the the tongue can we taste flavors. Pose the proflavor is tasted best. to determine at which flavors by mapping out Discover how we taste
- HAPPY SITUATIONS THAT GIVE US PLEASURE. FOOD IS PART OF MANY cream in birthday parties. place of cake and ice be served. Discuss the cakes and ice cream can in a certain month. whose birthdays fall withparty for all the children Have a birthday

shells, toothpicks. lemon slices, grapefruit rind, linings from nut MATERIALS NEEDED: following: salt, sugar, Small amounts of the

of tongue; Sour; sides of around edges; Bitter, back Salt, tip of tongue and on sides halfway back; are located in the Taste buds on the tongue Sweet, tip of tongue and following places: tongue.

deal more to people -- in-People use food to serve and unpleasant feelings. people, places, pleasant are associated with events, than nourishment. cluding young children --Food means a great Foods

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### MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

### SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

SUPPLEMENTARY INFORMATION

FOR THE TEACHER

#### nourishment -- hospitality, recognize that food serves flict, guilt or loneliness. The important thing is to outlet for tension, con-Food is even used as an these basic purposes in love, concern, comfort. purposes other than

(2) Read the tea party the same).

Sure, but it wouldn't ba

day party without them?

(Could you have a birth-

sequence from Alice in Wonderland. (2) Use "Food and Nutrition Teaching Pictures" #4: Family eating together. (Cook Publishing

nutritive uses of food may

our lives. These non-

be perfectly appropriate.

Discuss: Mealtime is a time for the family to be together.

tional place. Make bulleat the appropriate times Thanksgiving, Christmas, (3) Discuss holidays in which food has a tradi-Passover, Easter, etc. foods traditional for tin board displays of during the year.

> DOING THINGS (ENERGY). III. FOOD IS USED FOR

A. FOOD IS THE FUEL FOR OUR BODIES.

- Food is used to produce energy to help us move.

the train runs out of fuel?" this?" "What happens when Show picture of train rethe train. Ask "What is (K) Show the picture of fueling.

MATERIALS: 3 sets of large refueled or an engineer 1. a train; a train being pictures:

shoveling coal into the

train.

2. a car; a car at a gas station.

de children running; children eating.

children should do. Show the activity except use the example of the car. and become a choo-choo eating. the pictures of children tired. Ask what the tired and children who look tures of children playing Summarize by showing picample of the children. repeat except use the ex-The next day or later, next day or later, repeat start going again. When it is refilled--they the train runs out of fuel train. What happens when Children form a long line - the children all stop. The

Pass a piece of paper to each child, each paper having two pictures: a boy running and a boy who is very tired. Ask children to circle the boy who had food to eat.

(1,2) Use pictures to show different kinds of fuel being used to produce heat. Examples:
Gas stove or burner, wood fire, coal furnace.
(3) Show that the body is kept warm by having students take their own

- Food is used to produce heat to keep our bodies warm.

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

B. LIKE ALL FUEL, FOOD
IS USED UP AND MUST BE
CONSTANTLY SUPPLIED FOR
OUR BODIES TO FUNCTION.

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

SUPPLEMENTARY INFORMATION FOR THE TEACHER

temperature inside the building and, if the weather is cold, outside the building. Show that the student's temperature inside his body remains the same even if the air outside is cold.

When we work or play we use up energy. Then we get hungry and need to eat food to give us more energy.

It is especially important to eat when we get up in the morning to give us energy for the morning's work and play.

that must be wound up.
It can run for hours but
eventually it runs down
and must be wound up
again. If wound before it
runs down it works better
and doesn't have to stop.

hours pass between the last food eaten in the evening and breakfast the next morning. Emphasize that like the clock which runs down, our bodies run out of energy and need to be refueled after so long a time.

(K) Use "Floor Puzzle:
Breakfast" (Scott Foresman & Co.) A colorful fiberboard jigsaw puzzle
36" X 24" depicts a family at breakfast.

The Child Nutrition Act of 1966 provided federal funds for a pilot School Breakfast Program for needy children and for those who travel long distances to school. If your school participates in the program, it can provide an opportunity for teaching the importance of food in the morning.

### SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

and hand to be a second of the tenton of tenton of

- Have children tell or draw pictures of what they like to eat in the morning.
- (2) Have children keep track of what they eat in the morning for a few days. Evaluate the breakfasts, keeping in mind the information under "supplementary information."
- (2) Use "Food and Nutrition Teaching Picture" #2: Breakfast (David C. Cook Publishing Co.)
  (3) Use Dairy Council materials What Did You
- children pictured. about the food habits in space for planning menus vidual use, reproduces Activity piece for indithe countries of the The teacher's guide tells the poster and provides different but still good help children recognize groups; is intended to countries and ethnic children from different that food habits can be Have For Breakfast This Morning? Poster shows materials What Did You Have children par-

# SUPPLEMENTARY INFORMATION FOR THE TEACHER

bacon and eggs or cereal and milk. It is not imdinner, the child may not over piece of meat, or may reply "nothing" when children, if asked what they ate for breakfast, the child have something to eat in the morning. In our culture the term breakchildren do not eat tradiof foods eaten. Many rice from last night's that something was a leftin fact they did eat somemany people. portant that they do so. tional breakfasts of need not limit the choice tional breakfast patterns thing that morning. rigid food pattern to fast" implies a rather ing'implies that tradithink of it as breakfast. The term "food in the morn-Some

The morning meal should contribute a substantial part of the calories and protein needed for the day. For example, all of the following breakfasts make significant contributions to total nutrient needs and provide enough calories for the morning's activities:

on the subject "Food in

bulletin board or display

ticipate in making a

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

the Morning". Perhaps the display could be used at a PTA meeting or a parents night.

(1) Discuss children's

- (1) Discuss childre favorite foods for
- LunchDinner or supperAfter school snacks

several times every

day.

- We need to eat

(2) Use Food and Nutrition Teaching Picture #3: Lunch (Cook Publishing

(3) Use Dairy Council Poster "Join Us For Lunch"

(1-3) If your school has a School Lunch Program, take advantage of the opportunity to teach about food.
Study the school lunch menus for the week ahead; learn about new foods in class before they are encountered in the lunchroom.

SUPPLEMENTARY INFORMATION FOR THE TEACHER

- Orange juice, ready-to-eat cereal, milkToast, butter, milk
- shake - Peanut butter sandwich,
  - ice cream
- Grits, ham, milk
   Tomato juice, rice sugar,
   milk
- "Instant" breakfast drink made with milk.

nutrition, but may, especially if nutritious food is Scme reasons, may not often sit necessarily result in poor children who must fend for families, however, due to facilities for eating to-Many children are accusnot easily available to This does not divergent schedules of tomed to three regular gether, and for other meals a day at home. down to a meal as a themselves. family.

themselves.
Emphasis on meals per se may not be at all relevant for such children.
Emphasis on eating nutritious foods at meais, for snacks, and all through the day will be a more effective approach for all

SUPPLEMENTARY INFORMATION

FOR THE TEACHER

If most of your

A lunch does not need to be hot to be perfectly adequate. Variety of foods is not essential to adequacy, but is desirable from the standpoint of learning to accept a variety of foods.

pupils bring their
lunches, observe and compare the foods eaten. If
most of them leave school
and go home for lunch,
observe any practices
(stopping at corner store
for candy on the way)
that may interfere with
getting an adequate lunch.

### IV. FOOD IS USED FOR BUILDING

### A. ALL LIVING THINGS NEED FOOD FOR GROWTH

- To grow as we should, we need to have enough food; we also need to have the right kinds of food.

demonstration using

Conduct an animal feeding

It is wise to use two rats for each category of diet, in case one rat should die of disease or malnutrition

Differences in growth should be obvious within three to four weeks. The animals can be weighed at intervals (weekly or twice weekly) and their weights recorded graphically.

stricted amounts of an adequate diet, two other

rats can be fed unre-

rats can be fed a very

right kinds of food. In the first instance, two young, white rats. Two different demonstrations will illustrate that for

growth, living things

After the differences in growth have become obvious, rehabilitate the rats whose growth was slowed by feeding them adequate diets.

one diet should be

demonstration, both groups of animals should be fed unrestricted amounts, but

same diet. In the second

restricted amount of the

- 17

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

AND LEARNING ACTIVITIES SUGCESTED TEACHING AIDS

diet of meat, bread, fruit to feed the first group a and vegetables, with milk to drink; the other group their own diets more easily if fresh foods are used rather than prepared At the end of the experiway of achieving this is children will be able to cereal, with water to drink. Less extreme excan receive only bread, amples can be used, but see the relationship to adequate and the other cooked spaghetti, and should be lacking important nutrients. mixtures.

- Which rats have gained ment, ask the following questions:

- Which rats have the the most?
  - nicest fur?
    - Which rats have the brightest eyes?
      - Which rats are the friendliest?
- Which rats seem to be healthiest?
- What made them healthier than the others?

### SUPPLEMENTARY INFORMATION FOR THE TEACHER

ing and caring for animals, and maintaining cages, may be found in the National "Animal Feeding Demonstrapreparing diets, building tions for the Classroom". Instructions for obtain-Dairy Council booklet

### MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

- GROW AS WE SHOULD. ALL NEED FOOD IN ORDER TO LITTLE DIFFERENTLY, BUT WE EACH OF US GROWS A
- are tall will probably Every person has his own whose mother and father be short; a boy or girl short will probably also and father are both individual pattern for also be tall. boy or girl whose mother growth--how much and how fast he will grow. A
- good food. getting enough rest and you must be healthy. To grow as you should doctor for checkups, exercise, and eating This means visiting the
- Good food will help each person to grow to the size he was meant to be
- not everybody will be body should grow, but ner than others. girls are shorter or normal. Differences in size are the same size. taller, fatter or thin-Some boys and Every-

#### SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

whattoeat (Refer to page 27) Henry J. Whodoesn'tknow-Read The Story of

girls who are the same age grownups the same size? Discuss: Are all boys and the same size? Are all 

booklet <u>Growing Up</u> (2) Use Dairy Council

(3) Have each child keep his own height and weight, or use the record "How I Grow" from the Dairy colorful chart to record and weight at intervals. Each child can make a a record of his height inches for each child, 2¢ Council: a tag 5 1/2 X 3

Health: Health Status. Correlate with curriculum for Strand I, Physical

(1) List all the parts of muscles, teeth, hair, etc.) short one can wiggle into food. (Bones, skin, the body that depend on

### SUPPLEMENTARY INFORMATION FOR THE TEACHER

cluding disease, race, with other influences inress is influenced by nuhaps other factors. endocrine balance, and pergrowth, and in interaction hereditary potential for that a child's growth progthe framework of the child's ence takes place within trition. But this influ-It is well established

child is older. age can help avoid more consciousness when the acute feelings of selfnormal differences at this classmates but is healthy, dren. If a child is small and weights of other chilgrowth progress, rather a child should be compared realize that his size is it is important to help him or large in relation to his than against the heights height and weight, to show against his own previous normal. Acceptance of Height and weight data for

reach high places; the tage for each type of perthings which are an advan-It may help to think of the tall child can

REFERENCE MA

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

- Every part of our body depends on good food to grow and be healthy.
- C. CELLS ARE THE BUILDING BLOCKS OF THE BODY.

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

(1) Use Dairy Council
piece "Do You?"--poster
d
miniature on dental health. 1

(3) Construct a make-believe person using styrofoam blocks held together with toothpicks, or use a bulletin board display built with discrete units of colored paper. The units can be compared to cells. Discuss the size of real cells. (They are too small to see without a microscope. It is only when many, many cells are together that they can make a person, or a flower, or any other living thing.)

Show how the make-believe person can be made to grow bigger by adding more "cells" and by replacing "cells" with larger ones.

enlarging existing cells.

- Our bodies grow by mak-

ing more cells and by

Discuss and show what happens when a "cell" of the make-believe person is damaged. It must be replaced with a new one to make him whole again. Compare this to the healing of a cut, a scratch, or a burn.

damaged or worn-out ones.

Our bodies need to make

new cells to replace

SUPPLEMENTARY INFORMATION FOR THE TEACHER

small places; plump children find it easier to learn to swim; thin ones may be more agile.

Growth occurs by two means: cell division and cell enlargement. During phases of most rapid growth for any organ, cells are dividing. It is during this phase of rapid cell division that an organ or organism is most vulnerable to nutritional deficiencies.

division by about 6 months.) gins again in the reproduclife and infancy; cell divis characteristic of fetal tive organs in adolescence example, has completed cell means of cell enlargement. complete by 6 or 8 months Later in childhood, growth Whether cell division be-This type of rapid growth ision for most organs is of age. (The brain, for more gradual and subtle is accomplished by the is not known.

D. FOOD SUPPLIES THE MATERIALS NECESSARY FOR MAKING NEW CELLS.

Discuss what happens when you run out of new "cells" for the make-believe person. (You must get some more-from the supply room or the store-but somebody had to make them to begin with.) The body cannot buy new cells-it has to make its own. The body uses food to make new cells.

V. PEOPLE EAT MANY
DIFFERENT KINDS OF FOOD.

A. DIFFERENT FAMILIES EAT DIFFERENT KINDS OF FOOD.

- 2) Read story "Kenny learns about food and Mothers," available from Scott, Foresman Co. (Reprinted from the book Health for All, Book 3).

  The story of Kenny Lee and Manuel Gomez, who learn about food and mothers by eating lunch at each other's houses.
- (2) Every family has its own favorite foods; encourage the students to talk about foods their families especially enjoy. If some children cite foods some of the others have never eaten, arrange to bring some of that food to class for the other children to taste.

B. PEOPLE IN DIFFERENT PARTS OF THE WORLD EAT DIFFERENT FOODS AND EAT IN DIFFERENT WAYS.

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS

SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES

SUPPLEMENTARY INFORMATION

piece "What Did You Have For Breakfast This Mornhabits in several couning?" to discuss food (3) Use Dairy Council tries.

Invite a foreign stuthey differ from foods in dent from the high school or a college to come and talk to the class about the foods eaten in his native country and how

so that everyone is com-

fortable.

of holding knife and fork countries; different ways in Europe and America; no tries (chopsticks in the of eating in other coun-(3) Discuss the methods utensils at all in some pieces and doesn't have countries because the knives in some Asian food is all in small Orient; no eating

offer choices (between nuatschool, snacks, lunches, tasting parties. Talk natives) to the students-tritionally sound alter-(K-3) Whenever possible, tasting parties.

how things are to be done; "Manners" can be presented as basic agreements about portant to know the rules not good or bad in themselves, and varying the world over. It is im-FOR THE TEACHER

ing the attitude that there "those I like" and "those to realize that more than be down-graded. Personal children should be helped in choosing foods to eat. taste should be involved food is liked show d not Strive to avoid instilltaste is a valid reason are two kinds of foods: which are good for me." A choice made because a for eating a food.

C. WE CAN CHOOSE WHAT WE EAT FROM WHAT IS AVAIL-

A STATE OF THE STA

about why a child chose a certain food (usually because he likes the food.)

#### Discuss:

- Are there other reasons for choosing foods?
- Why do you think your mother chooses the foods healthy.) foods you need to be knows what kinds of like them, because she other family members likes them, because family? (Because she she does for your

into the tasting parties suggested under Section experiment. to try new foods and to I. Encourage children Incorporate this idea

TO EAT A VARIETY OF DIFFERENT FOODS.

WE SHOULD BE WILLING

adequacy.

situations and in adaptwill pay off in social will be an attitude which of foods are eaten. Willments, as well as helping ability to new environmore likely when a variety nutritional adequacy is for an adequate diet. But to insure nutritional ingness to try new foods Variety is not essential

foods can be presented as a "grown up" attitude to Willingness to try new parents and other adults. food likes and dislikes of Children often mimic the

#### APPENDIX I.

Summary of School Lunch Standards.

To qualify as a In order to qualify for federal school lunch funds by participation in the National School Lunch Program, a school must serve meals meeting established nutritional requirements. "Type A Lunch", a lunch must include:

- 8 ounces of fluid whole milk
- A protein-rich food: 2 oz. of cooked or canned lean meat, fish, or poultry; or 2 oz. of cheese, or 1 egg, or 1/2 cup cooked dried beans or peas; or 4 tablespoons of peanut butter; or an equivalent combination of these foods.
- Vegetables and fruits: two or more to equal 3/4 cup total. Undiluted juice can be used as the equivalent of 1/4 cup of the total. The inclusion of an ascorbic acid source daily and Vitamin A food on alternate days is recommended.
- Bread or a bread substitute: either whole grain or enriched, one slice or its equivalent. 4.5
- 2 teaspoons used as a spread or in preparation of other Butter or fortified margarine:

1968, require that local school authorities develop and publicly announce their policy for determining which children are eligible to receive free or reduced price meals. The food service programs must be operated in such a way that children receiving free or reduced-price meals cannot be identified reduced prices for needy children. U. S. Department of Agriculture regulations issued in October If schools participate in the National School Lunch Program, they must provide lunches free or at or singled out in any way.

### MULTIMEDIA RESOURCES TEACHER REFERENCES

#### SOURCE

David C. Cook Publishing Co. Elgin, Illinois 60120

Consumer and Marketing Service U. S. Department of Agriculture Washington, D. C.

National Dairy Council
Address requests to regional offices:

The Administration Building Room 106 Menands Regional Market Albany, N. Y. 12204

834 Front Street
Binghamton, New York 13905

812 Kenmore Avenue Buffalo, N. Y. 14216

202 E. 44th Street New York, New York 10017

#### HITEM MATIT

- size pictures. Packets of small pictures for taking home are also available, each picture with a letter to parents and a rhyme printed on the back. Each packet of small pictures contains five of each picture; you will need one packet for each five children.
- 1. Dan and Sue Meet the Friendly Foods (coloring book)

(Note: The book is not available in quantity but a single copy may be ordered, and the book can be reproduced locally.)

2. The Good Foods Coloring Book (free)

#### BOOKLETS:

Ice Cream is Good. 40-page booklet, 2-page teacher's guide.
Copy and simple illustrations tell about how ice cream is enjoyed in family meals and what goes into ice cream. 15 cents.

where We Get Our Food. 20-page booklet, teacher's guide. Explains where we get dairy foods, fruits, vegetables, eggs, cereals, and meat. Artwork depicts foods in their natural environment and workers who help bring food to us. 25 cents.

My Friend the Cow. 36-page booklet, teacher's guide. The history of milk and where it comes from, planned for preschool and kindergarten children. 15 cents.

Uncle Jim's Dairy Farm. 24-page booklet, teacher's guide. Depicts daily living on a dairy farm. 18 cents.



(Dairy Council regional offices, continued)

P. 0. Box 1335 Poughkeepsie, N. Y. 12601

249 Highland Avenue Rochester, N. Y. 14620

101 E. Darlington Road Syracuse, N. Y. 13208

about production, processing, distribution, and consumption of milk. Importance of our milk supply and the inter-dependence of rural and Questions are used to help the child find out more 20-page booklet, teacher's guide. More Milk, Please! urban areas. 15 cents.

Growing Up. 16-page booklet. Drawings and rhyme depict everyday experiences and point out proper food and health habits. 8 cents.

### OTHER MATERIALS:

\$3.00 per set. Food Models 171 life sized, color photographic models of foods, and teacher's guide.

Film: Uncle Jim's Dairy Farm

Dairy Farm Panorama Kit. Wall panel, including 15 black and white photographs; record; teacher's guide. Panel shows overall view of dairy farm, while individual pictures show inside farm buildings and help \$2.00 per kit. children see more about life on a dairy farm. Record has farm sounds.

Gives overall Wall panel, 16 black and white sketches, record, and teacher's guide. \$2.00 per kit. view of the city, including supermarket and shoppers. Urban Panorama Kit.

Tell the story of milk from the farm to the Six posters, 20 X 16 inches. More Milk, Piease! 75 cents per set. Posters: table.

Designed to create favorable attitudes toward school Poster 15 X 19 inches. For Lunch. Join Us 15 cents. lunch. Colorful tag, 5 1/2 X 3 inches. For recording height and weight of children. How I Grow.

Teacher's Set of Materials: What Did You Have for Breakfast This Morning? Poster (35 cents), activity piece (8 cents), and teacher's guide (20 cents). Poster shows youngsters from different ethnic groups. Activity piece for individual use reproduces the poster and provides space for menu planning. guide tells about food habits in the countries of the children pictured.

Scott Foresman & Co. 99 Bauer Drive Oakland, New Jersey 07436

A Child's Pictionary. For kindergarten or pre-schoolers, just be-ginning to learn to read. Shows pictures and the words for the item pictured. Good section on food items.

"Kenny Learns about Food and Mother." From Health For All, Book 3. Reprinted from Kenny and Jane Make Friends by Elizabeth Vreeken. Oceana Publications, Inc. Dobbs Ferry, N. U. 1963.

Floor Puzzle: Breakfast. 36" X 24" sturdy fiberboard puzzle. Brightly colored and delightfully drawn picture of family eating breakfast, in the form of a large jigsaw puzzle. \$10.20.

Farm in the Zoo. 33 1/3 record and set of color pictures depicting farm animals and the sounds they make. From "Foundations for Learning" Series."

The Story of Henry J. Whodoesn'tknowwhattoeat by Karen Fimbel.

Department of Foods and
Nutrition
New York State College of
Home Economics
Cornell University
Ithaca, New York

### FOR THE TEACHER

#### books

- 2nd edition Ames, Iowa Teaching nutrition; Eppright, E., Pattison, M. & Barbour, H. Iowa State University Press. 1963.
- Dolphin Books, Doubleday & Company, Inc. 1961. (Paperback, \$.95) See especially chapter XIII, "The first dozen years." Leverton, M. Food becomes you. Garden City, New York. 2
- McWilliams, M. Nutrition for the growing years. New York. John Wiley & Sons, Inc. 1967. ъ.

### Periodical Articles

- 684. April 1968. Sliepcevich, E. M. & Creswell, W. H. "A conceptual approach to health education: implications for nutrition education." American journal of public health. 58: Sliepcevich,
- No. <del>ر</del> "Teaching while cooking with young children." Head start newsletter November, 1968. Spencer, M. 5

### Leaflets and Booklets

- A source book on food practices. National Dairy Council. Focuses on food habits, how they develop, factors which influence them -- with emphasis on children and adolescents.
- Animal feeding demonstrations for the classroom. National Dairy Council. \$.30. 5
- \$.10. Good before six. National Dairy Council. Useful for work with parents. <del>ب</del>
- Closing the nutrition gap: the child nutrition act of 1966. Washington, D. C. U. S. Department of Agriculture, Consumer and Marketing Service. U. S. Government Printing Office. 4.

### For work with parents:

- Do you know a classroom when you see it? Denver, Colorado. American School Food Service Association, 4101 East Iliff Street. Leaflet describes the role of school lunch in promoting health and in nutrition education. First 6 copies free, additional ones \$.04 each. ij
- Your school lunch program. Albany, New York 12224. The State Education Department; School Lunch Supervision. 2