Looking Good — Food for Thought
This Book Belongs To:

NAME ____________________________

ADDRESS __________________________

PARENT(S) NAME ______________________

AGE ______ NUMBER OF YEARS IN 4-H ______

COUNTY _____________________________

NAME OF YOUR 4-H CLUB ______________________

NUMBER OF YEARS IN HEALTH PROJECT ______

GRADE IN SCHOOL _______________________


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LOOKING GOOD — FOOD FOR THOUGHT:

Health Unit II (Intermediate and Advanced Level 4-H Members)

and

Health Unit III (Advanced Level 4-H Members)

INTRODUCTION

It is often said, "you are what you eat." A working knowledge of food and nutrition is vital to everyone's well being and does not necessarily end with the "Basic Four". There are many aspects of nutrition that are constantly in the news and you should try to familiarize yourself with current information on additives, fads, and diets, and also learn how these factors may affect your health.

The stereotyped function of women as food buyer, food preparer, and food server is no longer true. In today's society, with an increased number of women working, husbands often take on meal planning and preparation responsibilities and find the challenges rewarding. Many world famous chefs are men and they find their job prestigious.

Boys as well as girls need to take an interest in nutrition because they never know when they will need to cook for themselves—example: right now if your parents work; during college; and, later in life.

Our society is geared toward slender girls and muscular boys with shiny hair and gleaming teeth. This is a sign of popularity and status.

It's not by chance that some teens are thin, some fat, some have clear skin and shiny hair or some have dull lifeless hair and acne. The amount of food you eat and the type of lifestyle you lead affects your health and the way you look.

Project 2 will provide a basic knowledge of the following areas and if further information is desired you can obtain it from the resource list at the end of this booklet or from your 4-H leader:

- Examining your food style;
- Growth spurt;
- Over-the-counter weight loss products;
- Weight control;
- Food additives;
- Skin, hair and teeth;
- Vitamins and Minerals: Functions and myths;
- Anorexia nervosa and obesity.

DIRECTIONS

ALL INTERMEDIATE AND ADVANCED 4-H'ers:
Complete all activities in Unit II Project 2, and the summary for Unit II, Project 2.

ALL ADVANCED 4-H'ers:
Proceed at your own rate through Unit III, Project 2, and complete the summary for Unit III, Project 2.
OBJECTIVES

Objectives of Project 2 are as follow:

1. To learn about eating patterns of teens;
2. To understand the growth spurt during adolescence;
3. To assess teens’ satisfaction with their body image;
4. To learn facts and myths about skin, hair, and teeth, and their care;
5. To learn facts and myths about vitamins and minerals;
6. To discuss food additives and how they are used;
7. To learn the effectiveness of over-the-counter weight loss products;
8. To learn the three key elements to weight control;
9. To understand the dangers of liquid protein diets;
10. To learn about two nutritional problems and how they relate to adolescents.

HEALTH UNIT II, PROJECT 2
(INTERMEDIATE AND ADVANCED LEVEL 4-H MEMBERS)

Examine Your Food Style

Parents and health professionals have always been concerned about the eating patterns of teenagers in general.

Over the years studies have indicated that teenagers’ diets are lowest or deficient in calcium, iron, Vitamin C, and Vitamin A.

Many authorities claim that teenage girls have the poorest diets usually because of self-imposed calorie restricted diets.

Teens are notorious for skipping meals: breakfast and lunch are the most frequently missed. Even though they skip meals, teens usually snack two to six times a day. Snacking often makes up for total nutrient intake, unless it’s all “empty-calories”.

Teens’ eating patterns change because they become more involved with after school activities, evening activities, and because peer influences cause them to conform and thus overlook eating habits of their family.

Irregular eating habits seem to be associated with ethnic and socio-economic factors. Research on this topic in various areas of the country have shown that race, parents’ education, family income, and mother’s employment all have an effect on eating habits.
Activity 1.

For one week, check all the balanced meals that you eat with your family (Refer to the Fabulous Four Guide listed at the end of this book).

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a. Are your eating habits regular?  
   [Yes] [No]

b. How many balanced meals did you eat in one week? ________

c. If you ate less than 10 balanced meals in one week, explain why you think your eating pattern doesn’t include the essential nutrients your body needs regularly.

__________________________

d. List on your health contract the problems you identified above. You will learn more in Project 2 about how to establish a healthy eating pattern.

Activity 2.

Personal Contract For A Healthier Lifestyle

MY PROBLEM AREA(S) AS IDENTIFIED FROM MY HEALTH PROFILE

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

MY PRESCRIPTION FOR A HEALTHIER LIFESTYLE

__________________________

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Moving Up (The Growth Spurt)

You often hear the saying, "growth spurt". During adolescence the rapid rate of physical growth is second only to that during infancy. This causes an increased demand for calories and all nutrients (protein, carbohydrates, fat, vitamins, and minerals). That's why you need to be concerned about regularly including essential nutrients in your diet.

This growth spurt begins earlier in girls than boys and often causes the girls to be self-conscious. But keep in mind that boys not only will catch up in a year or two, but will surpass girls and keep on growing. Remember the growth chart that you used in Project 1 and recall that it was stressed that each teen passes through puberty at his own rate. If you think you are far behind or ahead of your peers, you may want to check with your doctor. If you want to find out more about growth during puberty, refer to Health Projects 3 and 5.

Body Image Survey

Activity 3

Take about five minutes to complete the Body Image Survey and decide how satisfied you are with yourself.

The Body Image Survey is designed to measure how satisfied you are with the way your body looks. First, read all the questions and decide which body areas you are satisfied or dissatisfied with. Next, in the right hand column, list one or more things you can do to increase your satisfaction with or acceptance of your appearance. In some areas there may be nothing you can do but learn to like and appreciate yourself for your unique characteristics.

A. Extremely satisfied
B. Quite satisfied
C. Somewhat satisfied
D. Somewhat dissatisfied
E. Quite dissatisfied
F. Extremely dissatisfied

1. Height
2. Weight
3. Hair
4. Eyes
5. Ears
6. Nose
7. Mouth
8. Teeth

MY RECOMMENDATIONS

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<td>13. Shoulders</td>
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<td>14. Chest (Males), Breasts (Females)</td>
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<td>19. Size of Sex Organs</td>
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<td>20. Appearance of Sex Organs</td>
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<td>24. General Muscle Tone or Development</td>
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<td>25. Overall Body Appearance</td>
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**Skin—Your Best Cover-Up**

If you're like most teens, you are very conscious of your appearance, especially your skin, hair, and teeth. There is no one solution or one specific food to eat to give you healthy, shiny hair and clear soft skin. There are several solutions and they are no secret either:

- a well balanced diet
- adequate sleep
- regular exercise
- personal cleanliness
- stress management
Activity 4.

Take the Acne Quiz and discover truths and myths about food, hygiene, and other factors that affect your skin. Circle true or false for each question.

Acne Quiz*

1. Chocolate is a common cause of acne. True/False
2. Bacteria cause acne. True/False
3. Antibiotics are an effective treatment for the majority of people with acne. True/False
4. Eating greasy foods increases oil in the skin and thus increases acne. True/False
5. Acne increases in young people who are sexually active. True/False
6. Stress can make acne worse. True/False
7. Hair on the forehead makes acne worse. True/False
8. Dandruff and acne are commonly found together. True/False
9. Squeezing pimples is dangerous. True/False
10. A sauna or steam bath will help clear up acne by opening pores better than washing will. True/False
11. The birth control pill has been effective in treating some cases of acne. True/False
12. Sunburns and sunlamps are good treatment for acne. True/False
13. Taking Vitamin A can reduce acne. True/False

*Used with permission from Current Health, Highwood, IL, Curriculum Innovators, Inc., 2, 1977, 28-29
Now, check your answers against the correct answers below. Score 1 point for each question you answered correctly.

Your Total Score

1. **FALSE.** Chocolate is not a common cause of acne. Dermatologists agree that there is no one good food for skin. They used to say no chocolates, colas, or nuts for acne—but no longer. Some people may be allergic to these foods and experience trouble with the stomach but rarely do these foods cause skin problems.

Dr. Albert Kligman of the University of Pennsylvania Medical School says there is no scientific evidence that colas, peanuts, or chocolate cause or worsen acne. He recently fed two pounds of chocolate each day to volunteers with and without acne. The chocolate did not worsen acne of the first group nor cause acne in the second group. He and all dermatologists agree that a balanced diet is very important.

2. **FALSE.** Bacteria do not cause acne. According to the National Institute of Health, bacteria may cause acne to become worse by starting a secondary infection, but they do not cause acne.

3. **TRUE AND FALSE.** Antibiotics are an effective treatment for the majority of people with acne. Not all cases of acne require antibiotic therapy. It is effective in cases where a secondary infection was caused by bacteria. Some dermatologists prescribe long-term antibiotic therapy to help keep severe cases of acne under control.

4. **FALSE.** Eating greasy foods does not increase oil in the skin and thus increase acne. The grease one eats is NOT transported to the skin. Therefore, you can be reassured those potato chips weren't the cause of that last flare up.

Skin produces its own oil in a response to hormonal changes rather than in response to the diet. An increase in hormones causes an increase in oil (sebum). The hormone androgen (male sex hormone) is high in males, which explains why more boys than girls suffer from acne and why girls have a flare up prior to and during their menstrual cycle when their estrogen level is low and androgen level is high.

5. **FALSE.** Acne does not increase in young people who are sexually active. Sexual behavior has no effect on acne. Birth control pills may affect the skin either way: they can increase or decrease the number of pimples.

6. **TRUE.** Stress can make acne worse. Acne will commonly flare up in times of stress. This may be due to the reaction of the endocrine system, specifically, the adrenal glands, during stress.

7. **FALSE.** Hair on the forehead does not make acne worse. Dr. Kligman states there is no evidence that washing away oil will help cure acne even though the scalp has been labeled as a "fountain" of oil that drains onto the face.

A person will look and feel better if his hair is clean.

8. **FALSE.** Dandruff and acne are not commonly found together. Dandruff is no more common in persons with acne than in those without acne. Relief of dandruff has no effect on acne.

9. **TRUE.** Squeezing pimples is dangerous. A doctor or specially trained assistant may mechanically extract material from a pimple under sterile conditions. The danger may be infection. You may press bacteria and oil further into the skin causing infection and this may result in scarring. Once you have a scar, you may have it for the rest of your life.

10. **FALSE.** A sauna or steam bath will not help clear up acne by opening pores better than washing will. Most dermatologists recommend washing with regular soap, not massaging the soap into the skin. Rinse with plenty of lukewarm water making sure to remove all traces of soap from folds and creases. "Steaming" the face may result in greater oil production.

11. **TRUE.** The birth control pill has been effective in treating some cases of acne. The birth control pill contains hormones such as estrogen which may be effective in the proper dosage for some people.

However, the effects of the pill are still unknown so this treatment is not recommended for everyone.

12. **TRUE AND FALSE.** Sunburns and sunlamps are good treatment for acne. Sunburn may camouflage acne, but studies have indicated there is no decrease in the number of pimples. If there is a decrease of acne after a sun exposure it was most likely due to a hormonal change or a decrease of stress.

13. **TRUE AND FALSE.** Taking Vitamin A can reduce acne. A new treatment of applying Vitamin A acid to the skin has been found to be an effective treatment, but not a conclusive cure for acne.

This is different from taking large doses of Vitamin A internally. That could be lethal because the body stores excess Vitamin A in the liver.

.completed
Other Skin Tips

- Girls should use **OIL-FREE** or **WATER-BASED** cosmetics to prevent excess oil in the skin.

- Everyone should bathe daily and use a deodorant.

- Sunbathe wisely:
  a. The sun is a known culprit in aging the skin. Have you ever seen a middle-aged man or woman with a deep tan? Does his/her skin appear leathery? Wrinkled?
  b. The sun can cause a leathery appearance and excessive wrinkles over a period of years if sunbathers bake themselves consistently without any protection.
  c. Recent research shows that the sun is a major cause of 90% of all skin cancer. This may seem unrealistic to you now, since most teens find it hard to imagine themselves twenty years from now when a skin cancer might become recognized.
  d. How should you sun bathe?
     1) First, don’t rush it! Start with short exposures.
     2) Get out of the sun before you are noticeably red. You’re not safe in the water; ultraviolet rays can penetrate up to three feet of water.

  3) If you’re the fair skin type, sunbathe before 10 a.m. and after 3 p.m. when ultraviolet rays are the weakest.

  4) You can burn on cloudy days too. Seventy to eighty per cent of ultraviolet rays penetrate clouds on overcast days.

  5) Apply and reapply sunscreens often. Use a sunscreen with PABA (Para-aminobenzoic acid) to block harmful ultraviolet rays.

Some Hair-Raising Facts

Dr. Joseph B. Jerome, of the American Medical Association, claims that vigorous brushing, shampooing, and massaging of hair will make it break. Even though the hair will grow back, if the root is alive, the broken hair will make the thinning problem more visible.

Below are some tips for healthy, shiny hair:

- Wash your hair at least once a week. Oily hair needs to be washed more often. Follow these tips for each shampoo:
  a. Wash and rinse hair twice.
  b. Be sure to rinse out all soap.
  c. Use a creme rinse or a lemon juice rinse (2 Tablespoons lemon juice to a glass of water).
  d. Rinse well.
  e. Wash your comb and brush once a week.
- Brush your hair thoroughly. Do not brush wet hair as it may cause breakage. Brushing keeps your hair healthy and shiny.

- Do not lend your brush and comb to anyone.

Lice. Head lice are epidemic in some schools. These pin-head-sized insects can spread by contact with clothing, hats, scarves, brushes, combs, furniture, and carpets. Even a clean person can become infested.

The life cycle of a louse is 30 to 40 days. It feeds off a person's scalp by stabbing an opening and sucking out blood. Then it injects its saliva, which acts as a blood thinner to prevent clotting. The saliva causes head itching and scratching can cause a secondary bacterial infection. The female deposits three to four eggs per day during her lifetime—a total of about 90. She attaches them to the hair with a cementlike substance close to the scalp. The eggs will hatch in eight days and become adults in eight more days.

Prevention would include not lending combs, brushes, hats, jackets, or other clothing. Keep a periodic check on your scalp, especially if you have itching.

If you have lice there are shampoo preparations available at the drugstore or your local health department can recommend appropriate treatment. Also, all combs or brushes must be soaked in water and disinfectant or placed in hot water at 150 degrees for 10 minutes. Any clothing, towels, sheets or anything that may have come in contact must be washed in the washer and cleaned with a disinfectant.
Your Teeth—Just A Smile Away

Your mouth works for you 24 hours a day, everyday. Do you know how to keep bright teeth, healthy gums, and fresh breath? Take the quiz below and find out what you can do for your mouth.

Activity 5.

Complete the quiz below and discover your knowledge of dental hygiene. Circle true or false for each question.

1. You should brush your teeth after every meal. True/False
2. If brushing isn't possible, rinsing with water is a waste of time. True/False
3. Plaque is a bacterial deposit on teeth that can cause tooth decay. True/False
4. A stiff, hard toothbrush gets in the crevices better. True/False
5. The proper way to brush your teeth is side-to-side. True/False
6. A disclosure tablet shows you where cavities are, after you chew it. True/False
7. Fluoride in toothpaste or city water helps reduce tooth decay. True/False
8. You need to floss only your front teeth. True/False
9. Mouthwash is a good substitute for brushing your teeth. True/False
10. A visit to your dentist every year or two is sufficient. True/False
Now, compare your answers with the correct answer below. Score 1 point for each correct question.

Your Score

9-10 Smile and keep up the good work.
6-8 Brush and floss before it's too late.
4-5 Start brushing more often.
1-3 Make an appointment with the dentist!

1. True. You should brush immediately after each meal and snacks, if possible.
2. False. If you are unable to brush your teeth after eating, you should rinse your mouth out vigorously with some water. This will remove some unwanted food particles and bacteria that cause plaque.
3. True. Plaque is a sticky, not readily apparent substance that accumulates on everyone's teeth. Bacteria growing on the surface of a tooth form part of the plaque. If plaque is not removed by brushing, it may harden to form calculus or tartar which can be removed only by the dentist or a dental hygienist.
4. False. A stiff or worn toothbrush is ineffective. If can harbor bacteria and should be replaced at the first sign of wear. Consult your dentist about the stiffness of the bristles. Usually a soft brush will get into the crevices better to help remove food particles and massage the gums.
5. True and False. The latest viewpoint on the correct method of brushing, a combination of up-and-down and side to side, is appropriate as long as it systematically covers where the tooth meets the gum, the front, back, and chewing surfaces. Also, the top of the tongue should be brushed.
6. False. A disclosure kit, available in a drugstore, is educational in showing you how effective your brushing has been. After you chew the tablet, you will see a vivid red stain on your teeth where any residual areas of plaque remain. To remove the stain, brush away the plaque.
7. True. Fluoride in drinking water or toothpaste has resulted in decreased tooth decay of up to 65 per cent. Fluoride is either found naturally in some drinking water or is carefully added by some cities. Fluoride toothpaste is helpful even if you have fluoridated drinking water.
8. False. You need to floss between all teeth daily. This helps remove difficult food particles such as meat, candy, or nuts, and prevents buildup of plaque.
9. False. With regular toothbrushing using toothpaste, there is no essential need for mouthwash.
10. False. Most people need to visit a dentist every 6-12 months for a cleaning and a check up.
Activity 6.

Are You Puzzled About Nutrition?*

Complete the following puzzle to test your knowledge about nutrition. Check your answers in the back.

Across
4. What you eat is your ________.
5. Beware of this type of diet.
7. Fat tissue.
9. A mineral found in iodized salt.
10. One suffering from anorexia nervosa may become very ________.
11. Fruits and vegetables are a good source of this.
12. Part of this may be removed surgically to lose weight.
13. Considerably overweight.
15. Seldom lies about your weight.
18. A source of immediate energy.
19. This tells you what you should weigh.
20. Each one counts.
21. Some wire this closed to lose weight.
22. Instrument to measure skin thickness.

Down
1. Not chubby but ________.
2. The vitamin found in whole grain cereal.
3. Many would like these to melt away.
6. This disease is four times more common among the overweight.
8. Many overweight people blame their ________.
9. A mineral frequently missing in teens' diets.
14. Inadequate intake of nutrients may result in lack of this.
16. This mineral is a bone builder.
17. Natural fertilizers are used on these foods.
18. Name of test that measures skin thickness.

Vitamins

Vitamins are classified according to their solubility, for lack of a better classification system. There are a total of 13 (A, B-complex, C, D, E and K) discovered so far, but authorities say there are probably many more, yet undiscovered. Two broad groupings are:

- FAT-soluble vitamins: A, D, E, K
- WATER-soluble vitamins: C, B—complex

We'll review each vitamin briefly and discuss functions, food sources, and myths. You can refer to a Recommended Daily Allowance (RDA) chart in a nutritional text if you have further questons.

Numerous studies have been performed on the nutritional status of teenagers. Most of them reveal that teens aren't as undernourished as most people presume, but are shown to be deficient in vitamins C, A and D. These studies have varied among teenage populations and the results have not profiled every American teen. As discussed earlier, the increase in body demands for nutrients plus the change in eating patterns are the usual causes of diet deficiencies.

There are many misconceptions about vitamins as a whole. Probably, the worst misconception held by more people is that vitamins supply them with ENERGY.

THIS IS NOT TRUE!!!!!!!

Also, people misuse vitamins thinking that if a little is good more must be better.

To assess whether you may have been spend-

ing money foolishly, answer the questions below:

- Do you take a vitamin every day?

- Does your mother suggest it?
- Do you think it makes up for eating poorly?
- Do you think the more you take the better you'll feel?

- Do you think it gives you energy?

The Federal Drug Administration (FDA) fears that Americans are uninformed about vitamins. A study showed these results:

- Sixty million people thought they needed supplemental vitamins to be healthy.
- Twenty million thought that without vitamins, they would get sick.
- Some thought that without a daily vitamin pill they would get cancer.
- Most thought they needed to take vitamins to make up for poor eating habits.

Most authorities say that daily vitamin supplements are unnecessary if you eat a well-balanced diet daily. Even a lunch at McDonald's (two burgers, one order fries, and a milkshake) provides 1,000 calories and is well balanced except for slightly low Vitamin A. Vitamins and their functions are listed below.
VITAMIN A

Functions:  • Protects against night blindness
            • Promotes strong bones and teeth
            • Aids digestion.
            • Maintains smooth and soft skin
            • Maintains mucous membranes resistant to infection
Food Sources: liver
            cream, butter, whole milk
            egg yolk
            green and yellow vegetables
            fortified margarine
            yellow fruits
            cheddar cheese

CAUTION: TOO MUCH VITAMIN A causes Hypervitaminosis A. Vitamin A is stored in the liver and large doses can be toxic.

Myths: Vitamin A has been promoted by some megavitamin therapists in high doses for acne and other skin disorders; however, high doses can cause headache, nausea, hair loss, liver damage, and has been known to mimic signs of brain tumor. These high doses have not been researched nor reported successful in preventing any type of skin problem.

VITAMIN D—“The Sunshine Vitamin”

Functions: Promotes strong bones and teeth; associated with the absorption of calcium and phosphorus and their deposit in bones.
Food Sources: Vitamin D milk
            butter
            fish liver oil
            main source is sunshine

CAUTION: EXCESS VITAMIN D causes Hypervitaminosis D. The excess is potentially harmful and can cause damage to bones, kidneys, or the lungs.
VITAMIN C—Ascorbic Acid

Functions: • Provides cementing substance necessary to build supportive tissue  
• Helps resist infection  
• Aids in body stress situations (injury, shock)  
• Makes iron available for hemoglobin  
• Influences conversion of folic acid to citrovorum factor (folinic acid)

Food Sources: citrus fruit  green and yellow vegetables  
tomatoes  broccoli  
strawberries  green peppers  
cantaloupe  asparagus  
cabbage  chard  
white potatoes  kale  
sweet potatoes  turnip greens

Myths: Volumes of research have been performed on the hypothesis that Vitamin C:  
• prevents colds  
• increases the body resistance to disease  
• lessens the severity of colds  
• plays a role in activating enzymes that aid the body in expelling cancer-causing substances such as DDT  
• combats cancer

The validity of these studies ranges from well-designed to suspect. The conclusion of most authorities is that vitamin C beyond the level of tissue saturation is excreted in the urine. In other words, it’s wasted.

Also, there are studies being performed to prove that megadoses of water-soluble vitamins may be hazardous over a long period of time.

Research has indicated that high doses may actually destroy vitamin B₁₂ (needed to prevent pernicious anemia) and may also be implicated in gout, bleeding ulcers, formation of kidney stones, severe diarrhea, liver and genetic abnormalities, and termination of pregnancy.

VITAMIN E

Functions: • Aids reproduction (in animals only).  
• Acts as antioxidant (is used with vitamin A to prevent it from oxidizing before it’s absorbed).

Food Sources: vegetable oils  
milk  
eggs  
meat  
fish  
cereal  
leafy vegetables

Myths: Vitamin E has been touted as a treatment for everything from sexual problems to heart disease. It’s alleged to protect against aging, pollution, and to give “speed” to sluggish athletes. None of these functions are conclusive.

VITAMIN E does NOT  
• increase stamina  
• improve circulation or delivery of O₂ to muscles  
• lower blood cholesterol  
• prevent graying of hair  
• enhance sexual potency or cure infertility
B VITAMINS

In the past, the “B-complex” vitamins were associated with preventing diseases. Now they are recognized as serving other purposes: a central role in energy metabolism, cell growth, and blood forming factors.

Thiamine (B,
Riboflavin (B,
Functions: Play a central role in energy metabolism.

Niacin:
Functions: • Assists nervous system function • Aids in normal digestion • Maintains healthy skin

Food Sources: meat
fish
poultry
eggs
dried peas and beans
milk
cheese
ice cream
whole grain and enriched bread and cereal
white potatoes

Pyridoxine (B,
Pantothenic acid
Lipoic acid
Biotin
Functions: Serve as essential coenzymes in metabolism.

Food Sources: meats
potatoes
dark green leafy vegetables
whole grains
dry beans

Folic acid
Para-aminobenzoic acid
Cobalamin (B,
Functions: • Promotes cell growth • Aids in the formation of red blood cells

Food Sources: milk
cheese
eggs
meats
green vegetables
whole grains
dry beans

That is a very brief overview of the B-complex vitamins. If you wish further in-depth information, you can consult a nutritional text.

Myths: All the B-complex vitamins have gone in and out of vogue in treatment of ills over the years.
Niacin has been tested in large doses in therapy for schizophrenics; results were ineffective.
Thiamine has been touted as an anti-depressant that also increases the body’s energy.
Pantothenic acid has been prescribed for treatment of gray hair, pyridoxine for beautiful skin and providing energy, and cyanocobalamin has often been prescribed for fatigue or hangovers.
None of these has been substantiated by scientific research.
Riboflavin is now being tested for a possible linkage to cancer.

VITAMIN K

Functions: Required for blood clotting (synthesis of pro-thrombin in intestine)

Food Sources: liver
cheese
egg yolk
green, leafy vegetables
Activity 7.

1. Did you have any misconception about vitamins?
   ________________________________
   ________________________________
   List them: ________________________________
   ________________________________
   ________________________________

2. Which two vitamins can become harmful if taken in over doses?
   Vitamin _______ and Vitamin _______

3. Which vitamin is important to blood clotting? Vitamin _______

4. List the 3 vitamins teens have been found to be deficient in.
   a. ________________________________
   b. ________________________________
   c. ________________________________

List foods you can eat daily to provide you with these vitamins.
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________

??????????????????????????????????????????????????????????????????????????????????????
Minerals

Minerals also are a part of a well balanced diet. Minerals may be classified according to the amount in which they are found in the body. Listed below are the major groups present in the body:

**Group I: Major minerals (60-80%)**
- Calcium (Ca)
- Magnesium (Mg)
- Sodium (Na)
- Potassium (K)
- Phosphorus (P)
- Sulfur (S)
- Chlorine (Cl)

**Group II: Trace minerals**
- Iron (Fe)
- Copper (Cu)
- Iodine (I)
- Manganese (Ma)
- Cobalt (Co)
- Zinc (Zn)
- Molybdenum (Mo)

**Group III: Trace minerals (function unknown)**
- Fluorine (Fl)
- Aluminum (Al)
- Boron (Br)
- Selenium (Se)
- Silicon (Si)
- Cadmium (Cd)
- Chromium (Cr)
- Vanadium (V)
- Tin (Sn)
- Nickel (Ni)

Minerals play an important role in maintaining good Health. Listed below are the functions of minerals and sources for a well-balanced diet.
CALCIUM

Calcium is present in an amount larger than any other mineral; 99% of all Calcium is in the bones and teeth. The remaining 1% is in plasma and performs a highly important metabolic task.

Functions:
1. Builds and maintains skeletal tissue (bone and teeth formation).
2. Aids in clotting of blood.
3. Initiates muscle contraction and relaxation.
4. Promotes nerve impulse transmission.
5. Controls cell wall permeability.
6. Activates certain enzymes.

Food Sources: dairy products
- green leafy vegetables
- egg yolk
- nuts
- whole grains
- legumes

Recommended Daily Allowance (RDA)
Calcium
Males and Females
Age 11-18 = 1,200 mg.

PHOSPHORUS

Phosphorus is closely related to calcium in function and bone building but has unique characteristics of its own.

Functions:
1. Works with Calcium in bone and teeth formation.
2. Promotes the absorption of glucose and glycerol from the intestine.
3. Provides for the transportation of fat (phospholipids).
4. Aids in energy metabolism.
5. Provides a buffer system (acid—alkaline).

Food Sources: milk and milk products, lean meat

RDA
Phosphorus
Males and Females
Age 11-18 = 1,200 mg.

MAGNESIUM

Magnesium occurs mostly in red blood cells and is stored in bones.

Functions:
2. Important ion of intracellular fluid.

Food Sources: nuts, seafood, cocoa, whole grain, peas, dried beans

RDA
Magnesium
Males 11-14 = 350 mg.
Males 15-18 = 400 mg.
Females 11-18 = 300 mg.
SODIUM

Sodium is present in the skeleton and extracellular fluids. Sodium is very important to several metabolic functions.

Functions:
1. Maintains fluid balance.
2. Regulates acid-base balance.
3. Aids cell permeability — aids passage of glucose through cell walls.
4. Maintains normal muscle irritability.

Food Sources:
- salt
- milk
- meat (hot dogs)
- eggs
- asparagus

RDA Sodium
NONE ESTABLISHED

POTASSIUM

Potassium is vital in the regulation of fluid balance, along with Sodium.

Functions:
1. Maintains fluid—electrolyte balance.
2. Active in acid—base balance.
3. Plays a significant role in muscle contractility (especially the heart).
4. Assists in carbohydrate metabolism (stored with glycogen).
5. Required for storage of nitrogen as muscle protein.

Food Sources:
- whole grains
- bananas, avocados, raisins, dried apricots, dates, leafy vegetables
- meat—large amounts
- legumes

RDA Potassium
NONE ESTABLISHED

CHLORIDE

Found in the body as chloride ion (Cl⁻)

Functions:
1. Maintains fluid and electrolyte balance (along with sodium).
2. Active in acid-base balance.
3. Aids in regulation of gastric acidity (provides correct medium for digestion).

Food Sources: If sodium intake is adequate, so is chloride. TABLE SALT is sodium chloride.

RDA—Chloride
NONE ESTABLISHED
SULFUR

Functions: 1. Maintains protein structure.
2. Activates enzymes.
3. Active in energy metabolism.
4. Detoxifies toxic materials into nontoxic form and excretes them in urine.

Food Sources: milk cheese
meat nuts
eggs legumes

RDA
Sulfur
NONE ESTABLISHED

IRON

Functions: 1. Aids in hemoglobin formation.
2. Active in cellular oxidation.

Food Sources: organ meats whole wheat
liver seafood
meats green leafy
egg yolk vegetables
nuts enriched bread
legumes cereal

RDA
Iron
Males and Females
Age 11-18=18 mg.

Activity 8.

1. Drink an 8 oz. glass of milk. How much calcium was in one glass? ________ mg. How many glasses of milk a day should you drink to meet the RDA for calcium?

2. List all the foods you ate for one 24-hour period. After consulting a nutrition text, figure out whether you had your RDA for all the vitamins and minerals. Ask your 4-H leader for help if needed.
ADDITIVES

How many of you read LABELS of foods either before you buy them or before you eat them?

Most labels list about one ingredient you may recognize and the rest of the items may include: benzoic acid (a preservative), calcium silicate (an anticaking agent), or benzaldehyde (a synthetic flavoring).

The majority of people are not familiar with these names and just casually acknowledge that they must be needed for some purpose.

Let’s test your knowledge!!

Activity 9.

The Ingredients Game*

Below is a list of ingredients. They are listed in descending order with most frequently used listed first. See if you can name the food that each group constitutes. The answers are in the back.

Here is a key to the abbreviations used.
MA—Miscellaneous Additives
PRES—Preservative
Sqtst—Sequestrant
Stble—Stabilizer
Srvc—Surfactant
Nutr Sup—Nutrient Supplement
Syn Flv—Synthetic Flavoring

1. _______russet flakes, vegetable emulsifier, sodium acid pyrophosphate (MA), sodium bisulfite (PRES), citric acid (Sqtst), butylated hydroxyanisole (PRES), butylated hydroxytoluene (PRES).
2. _______water, shortening, sugar, corn syrup, flour, lemon puree, nonfat dry milk, whole wheat flour, invert syrup, edible mono and diglycerides (Srvc), gelatin, salt, leavening, artificial color, molasses, sodium pyrophosphate (MA), artificial flavor, starch, vanilla, algin (Stble), polysorbate 65 (Nutr Sup), and vanillin (Syn Flv.)
3. __________fumaric acid (MA), sugar, monosodium phosphate (Srvc), artificial flavor, Vitamin C, propylene glycol (Srvc), artificial color, calcium carbonate (Nutr Sup), dioctyl sodium sulfosuccinate, BHA (PRES).
4. __________carbonated water, sugar, citric acid (Sqtst, MA), sodium citrate (MA), and flavor derived from lemon and lime oils.
5. __________carbonated water, sugar, citric acid (Sqtst, MA) sodium citrate (MA), sodium saccharin (not included on U. S. Food and Drug Administration’s list of additives “generally recognized as safe”, natural flavors, stannous chloride (PRES).
6. __________ripe tomatoes, natural sweetener, distilled vinegar, salt, onions, and spices.
7. __________milled corn, sugar, salt, and malt flavoring with niacinamide (Nutr Sup), thiamine (B1) (Nutr Sup), riboflavin (B2) (Nutr Sup), and iron phosphate added. BHT added to packaging materials to preserve product freshness.
8. __________potatoes, vegetable oil, salt.
9. __________water, mustard seed, distilled vinegar, salt, white wine, tartaric acid (Sqtst, MA), and spices.

*Adapted with permission from Go To Health, New York, Dell Publishing, 1972.
Food additives are divided into categories by the Federal Drug Administration (FDA) according to their purpose:

Preservatives—prevents spoilage

Antioxidants—related to preservatives—prevent rancidity in fatty foods

Anticaking—keeps salt and powders free flowing

Stabilizers—improves consistency; (smooth texture, like frosting)

Synthetic flavoring—flavor enhancer

Nutrients and Dietary Supplements

Sequestrants—prevents oxidative activity (leading to rancidity)

Surfactants—combines liquids that would otherwise separate

Miscellaneous—flavor enhancers, neutralizing agents, moisture retainers, glazing agent, crisping agent, bleaching agents, and more.

Because of the recent controversy over nitrates and cyclamates, more people are becoming concerned and the FDA is cracking down on its rules.

The FDA has a list referred to as the GRAS (generally recognized as safe), which itemizes 670 substances. In addition, there are 1,700 flavors and spices, 400 non-flavor additives, 117 color additives, and as many as 10,000 indirect food additives under review. Each item on the list has been laboratory tested on animals and has been found to have no harmful effects.

Let’s review several substances that have been banned or are in question.

In 1969 cyclamate, a sugar substitute, was banned because injections of it in skin of mice caused tumors.

Do you know the name of the bill protecting consumers from harmful substances?

Under the Delaney Clause the FDA has the right to ban any food, drug, or cosmetic that seems harmful.

It states: “no additive shall be deemed safe...if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animal.”

The Delaney Clause has been acted on only eight times, most recently in banning the use of cyclamates and Red Dye Number 2.

Saccharin was discovered in 1879 and diabetics were overjoyed. It was the only sugar substitute until 1944. It was reviewed in 1955 and deemed safe for use.

When cyclamates were banned in 1969, saccharin was reviewed again.

In 1971 the FDA proposed removing it from the GRAS list. More studies were ordered.

In 1972 studies showed that large amounts of saccharin caused bladder tumors in some animals.

Then, in 1974, the National Academy of Sciences declared there was no positive evidence that saccharin was carcinogenic (cancer-causing).

Finally on March 9, 1977, the FDA reported it could ban saccharin in October due to the Canadian research that showed bladder cancer in animals fed a diet of which 5% was saccharin.

On April 15, 1977, the FDA commissioner declared that saccharin was to be banned except for certain medical purposes.

Can you name any products with saccharin in them?

Have you noticed anything unusual about the packaging of products with saccharin in them?

The Government regulations state that the following warning must be printed on any item containing saccharin: “Use of this product may be hazardous to your health. This product contains saccharin which has been determined to cause cancer in laboratory animals.”

>>> >>> >>> >>> >>>
CLUB ACTIVITY: DEBATE

Have a debate over the controversy of saccharin. You've read the facts leading up to the decision to ban it. As a consumer you should evaluate the facts and decide if you will eat any products that contain saccharin.

You may want to set your topic as...

Drugs—The Saccharin Controversy...

In planning the debate, consider the following steps:

- You might set up a debate situation so you may see the magnitude of the saccharin controversy. Have four students pose as diabetics and let them debate four students who will pose as senators concerned for the safety of everyone involved. Have one of the diabetics introduce the idea of having saccharin classified as a drug, to be regulated by the FDA along with prescription drugs. What effect might this idea have on the food industry?

- The amount of foods and beverages that contains saccharin is fantastically high. To get the students to understand the scope of the problem, prepare a list of foods, with the help of the students, that contain saccharin as a sweetener. The local diabetes association may be able to help.

Nitrates.

Another issue as well as the current decision faced by the FDA and the United States Department of Agriculture (USDA), is use of nitrates.

In 1974 researchers became concerned about the significant incidence of cancer in rats caused by nitrates. The FDA ordered further tests. Recently it was announced publicly that "nitrates may increase the incidence of human cancer." Important facts of the study include:

1. Almost 2,000 rats were used (ten times the usual number).
2. The rats were fed nitrite levels not much higher than those found in bacon and hot dogs.

The problem is that nitrates have been useful as a preservative to prevent BOTULISM—a deadly disease caused by spoiled meat.

The FDA plans a gradual phaseout of nitrates, through a two-step program:

Step 1—Introduction of a new preservative to prevent botulism. (Preparation is underway).

Step 2—Use of nitrites other than in botulism prevention will then be banned promptly.

A phaseout may drag on for months or years. How aggressive a stand do you think the FDA and USDA should take?

LIQUID PROTEIN. The popularity of using liquid protein began in 1976 with the diet book, *The Last Chance Diet*. It is estimated that more than 100,000 people began using liquid protein.

The FDA is currently investigating 58 deaths associated with that diet. There is no conclusive evidence that the diet caused the deaths, but the FDA has issued warnings about the safety of the diet. Since the FDA’s warning, sales have dropped 90-95%.

Authorities say that this diet followed even by healthy people under the supervision of physicians, can prove fatal. CAUTION—seek medical supervision for dieting and don’t use products believed to be harmful.

There are numerous brands available by mail or at the drugstore. Be wary. Ask these questions:
- Do they really work?
- Are they dangerous?
- Does the weight stay off permanently?

The FDA is investigating the safety and effectiveness of these products.

There are five major categories of weight reducers. We will review each.

1. Before Meal Candies. Have you ever wanted to try the before-meal-candies that are supposed to suppress your appetite?

The candies are supposed to quickly raise your blood sugar level and make your body feel full. Does this work? NO!

The amount of sugar, about three teaspoons or 50 calories, isn’t enough to fool the brain. There is no conclusive evidence that this will suppress appetite. If it does work, it’s because the candy is used in conjunction with a diet and exercise plan which lead to the weight loss. But it rarely leads to permanent weight control.

In addition, the “added vitamins and minerals” in the candies are a waste, too. If you eat a well balanced diet, you’ll get all the nutrients you need.
2. Bulk Producers. Crackers or cookies are supposed to swell in the stomach and diminish hunger contractions. These do not work for two reasons:
- People overeat because of appetite rather than hunger pains.
- These products leave the stomach rapidly so the reported effect doesn’t last long.

There is no proof that these crackers or cookies taken before meals diminish hunger pains, but it is true that repeated use may result in diarrhea.

3. Appetite Suppressant Drugs. Amphetamines were the original drug for weight loss available only by a prescription. They did suppress appetite and stimulate the user’s nervous system. People began to develop a tolerance and to misuse them. Problems developed: drug dependence, high blood pressure, irregular heart beat, and no permanent weight loss.
New preparations were developed with a drug similar to amphetamine (phenylpropanolamine), but the American Medical Association (AMA) has stated: “This (drug) is probably ineffective in the dose provided.” A tolerance can also develop with this drug.
The significant feature about appetite-suppressant drugs is that an initial weight loss may be noted, but a change in eating patterns doesn’t develop and the weight is usually regained after cessation of the pills.

4. Topical Anesthetics. The theory behind this is that if you anesthetize the lining of the mouth and stomach, your appetite will decrease. This is not true. There is no conclusive evidence that these drugs are effective in suppressing appetite.
A note of caution—if your mouth or throat are anesthetized, there is a possibility of choking or aspirating food into your lungs.

5. Sweat it off. For PERMANENT weight loss, which most people desire, you must
empty FAT cells, rather than water cells. Products that cause you to perspire such as plastic suits, plastic shorts, plastic wraps, and pills cause temporary water loss that is replaced with your next glass of water.
If used incorrectly, water pills (diuretics) can be dangerous. A physician should be consulted and his orders followed. Don't make the mistake of thinking that if one pill will help you lose two pounds, then five will help you lose ten. This can be hazardous to your entire body, especially your heart and kidneys.

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**Weight Balance**

Two common nutritional problems that affect teens are under-nutrition (anorexia nervosa) and over-nutrition (obesity).

They are quite different in occurrence and cause, but both are difficult for teens who experience these problems.

Boys. One characteristic of teens who develop this problem is that they demand outstanding performance from themselves in everything they do.

The most outstanding characteristic is severe weight loss with no signs of organic disease present. A classic description is "a skeleton clad only with skin."

These teens can recall a time or event that made them feel "fat" and unacceptable. At that point, these teens begin a starvation program and take pride in every pound of fat lost. Their fear of becoming fat causes them to lose touch with reality, and they no longer imagine their body as their own but rather as something separate.

Sometimes it's hard to tell whether a teenager has anorexia nervosa. The teen may eat normally with friends or family and right afterward go to the bathroom and induce vomiting.

Characteristically, they go on eating binges and devour huge quantities of food, and then because of guilt feelings, they induce vomiting. They also abuse laxatives to hasten the weight loss process.

These teens don't rely on dieting alone but also engage in frantic exercise programs to the point of exhaustion. Their hyperactivity extends to achieving excellent grades and sleep disturbances.

Treatment of this condition is complex so it's necessary for the victim to get help from a psychotherapist or psychiatrist.

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**Anorexia Nervosa**

Anorexia Nervosa (under-nutrition) is a state of self-imposed starvation and is most often found in adolescent girls. It is rarely seen in
Activity 10.

Using the resources in this book and others related to your community, list three ways you could help a person with anorexia nervosa:

a. 

b. 

c. 

Obesity (over-nutrition) is the other common problem. Criteria for obesity vary, but most authorities use the following parameters:

• 10 percent above the mean weight for one's height, age and sex = OVERWEIGHT.
• 20 percent above the mean weight for one's height, age and sex = OBESE.

Some authorities estimate that 10 to 40 percent of high school students are obese. Other criteria for judging obesity are:

• Mirror test (if you look fat)
• Uncomfortable clothes
• Pinch test (see Project 3)

It is also estimated that 50 percent of adults are obese and that 80 percent of obese teens become obese adults. This clearly indicates the necessity for obese teens to permanently change their eating patterns.

Because our society is geared toward thinness, the obese teen is often ridiculed and shunned by his peers. This adds to his already low self-esteem and can cause the teen to isolate himself from friends and social events and to eat out of sheer loneliness and boredom.

How can the obese adolescent be helped to control his weight? The most important factor in any adolescent's life are family, school, and peer group.

Include obese teens in school or church activities. Encourage them to join clubs, craft class, service committees, and recreational activities. These activities may allow obese teens to achieve success and boost their low self-esteem.

Even though diets are always stressed for the obese, studies have indicated that obese adolescents' average daily calorie intake is less than or equal to that of his peers. Also, surveys have shown that obese teens lead relatively sedentary lives.

Since an obese teen's intakes aren't necessarily high, he could concentrate on increasing his physical activity. This requires encouragement from family, friends, and all peers. The obese teen is often intimidated by others in sports participation, so groups of obese teens should form a cohesive group for exercising, which can provide an accepting atmosphere without fear of ridicule.

The problem of teenage obesity is serious. Those needing help must realize that a change is easier now than when they become adults.

For more on weight control, refer to Health Units II and III, Project 3, Chart Your Course Toward Fitness.
Activity 11.

Below are some tips on how to control your eating patterns (behavioral modification). List 2 others for “f” and “g” below.

a. Don’t skip meals.
b. Eat slowly.
c. Exercise at least every other day.
d. Choose sensible snacks.
e. Include all the essential nutrients in your food plan.

f. __________________________

g. __________________________

Weight Control. A word to the wise and those who want to be thin: follow the suggestions of your doctor and lose weight permanently.

People gain weight because they overeat although many blame their relatives, big bones, or glands. A small majority of overweight people have glandular trouble.

People overeat because they are tired, bored, frustrated, nervous, or unhappy. After they have gained weight, they are more unhappy and the vicious cycle continues.

There are three key elements in solving the problem. 1) People must change their eating patterns for a lifetime, not two or three weeks of starving except for eggs and spinach or cottage cheese and grapefruit. These fad diets cause temporary weight loss, but people become bored with them, go on a binge and gain back all their weight loss in one or two pizzas or a double fudge chocolate cake. 2) To lose one pound of fat, you must burn 3,500 calories.

Regular exercise is a second factor in weight reduction. 3) Learn why YOU overeat. Try to make a chart of when you overeat:

Are you

• nervous?
• unhappy?
• bored?

If you can determine when and why you overeat, you are on the way to learning how to deal with these situations in a different manner.

Don’t be swayed by diets that claim to be the answer for fatigue, depression, and that profess to add super energy to your daily life. A well balanced diet is what you need.

The most important point to remember is that you can achieve weight control best by changing your exercises and eating patterns permanently and not by going on a crash diet two weeks before summer vacation, the Prom, or after Thanksgiving.
Activity 12.

You may be amazed at the number of calories you burn during an average day. How many calories did you burn up yesterday during your daily activities based on the rates listed below?

<table>
<thead>
<tr>
<th>Type of activity</th>
<th>Calories used in one hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycling (5 mph)</td>
<td>150-250</td>
</tr>
<tr>
<td>Bowling</td>
<td>200-250</td>
</tr>
<tr>
<td>Cleaning windows; making beds</td>
<td>200-250</td>
</tr>
<tr>
<td>Dancing (disco)</td>
<td>400-450</td>
</tr>
<tr>
<td>Doing calisthenics</td>
<td>250-450</td>
</tr>
<tr>
<td>Driving a car</td>
<td>75-125</td>
</tr>
<tr>
<td>Hand-sewing: knitting</td>
<td>75-125</td>
</tr>
<tr>
<td>Hand-washing small items; washing dishes</td>
<td>125-200</td>
</tr>
<tr>
<td>Hanging wash; stripping beds</td>
<td>250-325</td>
</tr>
<tr>
<td>Ironing; sweeping; polishing furniture</td>
<td>125-200</td>
</tr>
<tr>
<td>Jogging (5 mph)</td>
<td>450-500</td>
</tr>
<tr>
<td>Playing a musical instrument</td>
<td>125-200</td>
</tr>
<tr>
<td>Playing cards; watching television</td>
<td>75-125</td>
</tr>
<tr>
<td>Preparing and cooking food</td>
<td>125-200</td>
</tr>
<tr>
<td>Raking leaves; gardening (weeding)</td>
<td>250-325</td>
</tr>
<tr>
<td>Scrubbing floors; mopping</td>
<td>200-250</td>
</tr>
<tr>
<td>Skiing (downhill and cross-country)</td>
<td>350-550</td>
</tr>
<tr>
<td>Strolling (1 mph)</td>
<td>75-125</td>
</tr>
<tr>
<td>Swimming (breaststroke, 20 yards per minute)</td>
<td>250-325</td>
</tr>
<tr>
<td>Tennis (recreational doubles)</td>
<td>250-325</td>
</tr>
<tr>
<td>Typing; desk work; talking on the telephone</td>
<td>75-125</td>
</tr>
<tr>
<td>Walking (3 mph)</td>
<td>200-250</td>
</tr>
<tr>
<td>Writing; reading</td>
<td>75-125</td>
</tr>
</tbody>
</table>

List how you could expend an additional 100 calories a day through exercise:

Activity 13.

Fast food chains have changed the way Americans eat. Fast food outlets offer consumers quick and tasty family meals that can provide essential nutrients if planned carefully. If you eat fast foods often, you may begin to put on weight because of the high-calorie content of these foods.

Look at the list of fast foods below. Figure out how many calories you would consume if you ate the following foods for lunch at your favorite place:

- Cheeseburger
- French fries
- Chocolate milkshake

Total

THE FAST-FOOD CALORIE COUNTER*

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef and Cheese</td>
<td>450</td>
</tr>
<tr>
<td>Roast Beef</td>
<td>350</td>
</tr>
<tr>
<td>Super</td>
<td>620</td>
</tr>
<tr>
<td>Junior</td>
<td>220</td>
</tr>
</tbody>
</table>

Arthur Treacher's

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chips (per serving)</td>
<td>274</td>
</tr>
<tr>
<td>Coleslaw</td>
<td>122</td>
</tr>
<tr>
<td>Fish (2 pieces)</td>
<td>344</td>
</tr>
</tbody>
</table>

Baskin—Robbins

<table>
<thead>
<tr>
<th>Ice Cream Flavor</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>One scoop</td>
<td>between 133 and 148</td>
</tr>
<tr>
<td>Ice Creams, all</td>
<td>139</td>
</tr>
<tr>
<td>Flavors</td>
<td>133 and 148</td>
</tr>
<tr>
<td>Sherbets and Ices</td>
<td>139</td>
</tr>
</tbody>
</table>

Burger Chef

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Shef</td>
<td>535</td>
</tr>
<tr>
<td>French Fries</td>
<td>240</td>
</tr>
</tbody>
</table>

Hamburger ........................................... 250
Shake, Chocolate ................................... 310
Super Shef ........................................... 530

Burger King
Cheeseburger ....................................... 305
French Fries ......................................... 220
Hamburger ........................................... 230
Hamburger, Double ................................. 325
Whopper ............................................. 630
Whopper Junior ..................................... 285

Colonel Sanders'
Kentucky Fried Chicken
Dinner (Fried Chicken, Mashed Potatoes, Coleslaw, Rolls):
  2 - Piece Dinner—Original ...................... 595
  Crispy ............................................. 665
  3 - Piece Dinner—Original ...................... 980
  Crispy ............................................. 1,070

Dairy Queen/Brazier
"Bosn’s Mate" Fish Sandwich ..................... 340
"Brazier" ............................................ 250
"Brazier" Barbecue ................................. 280
"Brazier" Cheeseburger ............................ 310

"Brazier" Chili Dog .................................. 330
"Brazier" Dog ........................................ 270
"Brazier" French Fries ............................ 200
"Brazier" Onion Rings ............................. 300
Big "Brazier" ........................................ 510
Big "Brazier" Cheeseburger ....................... 600
Big "Brazier" Deluxe ................................ 540
Super "Brazier" Chili Dog ......................... 570
Super "Brazier" Dog ................................ 500
Super "Brazier" ..................................... 850

Ice Creams
  Banana Split ..................................... 580
  Buster Bar* ...................................... 390
  Dairy Queen Cones*                     
    Small ......................................... 110
    Medium ........................................ 230
    Large .......................................... 340
  Dairy Queen Dipped Cones*               
    Small ......................................... 160
    Medium ........................................ 310
    Large .......................................... 450
  Dairy Queen Malts*                      
    Small ......................................... 400
    Medium ........................................ 580
    Large .......................................... 830

Dairy Queen Sundaes*
  Small ............................................ 190
  Medium .......................................... 300
  Large ............................................ 430
  Dilly Bar* ...................................... 240
  DQ Sandwich* ................................... 190
  Hot Fudge “Brownie
  Delight” Sundae ................................. 580
  Parfait .......................................... 460

*All other flavors have fewer calories than chocolate; figures for chocolate given, since it's the most popular flavor.
Dunkin Donuts

Donuts (including rings, sticks, crullers) 240
Donuts, Yeast—Raised (add 5—10 calories for glaze) 160
Fancies (includes coffee rolls, Danish, etc.) 215
Munchkins, Yeast—Raised 26
Cake, including Chocolate Cake 240
(Add 40-50 calories per Donut for filling and topping combined; add 10-15 calories per Munchkin for filling and topping combined. Figures are approximations.)

Gino's

Apple Pie 198
Cheeseburger 336
Coke (regular) 117
Coke (giant) 181
Dinner Roll 51
Fry (regular) 195
Fry (giant) 274
Hamburger 289
Kentucky Fried Chicken (1 piece) 290
Orange (regular) 140
Orange (giant) 217
Root Beer (regular) 122
Root Beer (giant) 190
Shake, Vanilla (regular) 338
Shake, Vanilla (giant) 524
Sirloiner 514
Sirloiner (cheese) 609

Long John Silver's

Fish & Chips, Coleslaw
2—Piece Dinner 955
3—Piece Dinner 1,190

McDonald's

Apple Pie 265
Big Mac 557
Cheeseburger 309
Egg McMuffin 312
Fillet-O-Fish 406
French Fries 215
Hamburger 249
Hamburger, Double 350
Hot Cakes with Butter 272
Muffin 136
Pork Sausage 235
1/4 Pounder 414
1/4 Pounder with Cheese 521
Scrambled Eggs 175
Shake, Chocolate 317
Shake, Strawberry 315
Shake, Vanilla 322

Pizza Hut

1/2 of 13—Inch Cheese Pizza—
Thick Crust 900
Thin Crust 850
1/2 of 15—Inch Cheese Pizza—
Thick Crust 1,200
Thin Crust 1,150
1/2 of 10—Inch Pizza

<table>
<thead>
<tr>
<th>Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>488</td>
</tr>
<tr>
<td>Cheese</td>
<td>436</td>
</tr>
<tr>
<td>Pepperoni</td>
<td>459</td>
</tr>
<tr>
<td>Pork</td>
<td>466</td>
</tr>
<tr>
<td>Supreme</td>
<td>475</td>
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</tbody>
</table>

Rustler Steak House

<table>
<thead>
<tr>
<th>Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baked Potato</td>
<td>231</td>
</tr>
<tr>
<td>Dressing (Blue Cheese)</td>
<td>151</td>
</tr>
<tr>
<td>Dressing (French)</td>
<td>122</td>
</tr>
<tr>
<td>Dressing (Italian)</td>
<td>166</td>
</tr>
<tr>
<td>Dressing (Thousand Island)</td>
<td>150</td>
</tr>
<tr>
<td>Jell—O, Cherry</td>
<td>75</td>
</tr>
<tr>
<td>Pickle</td>
<td>2</td>
</tr>
<tr>
<td>Potato Chips</td>
<td>82</td>
</tr>
<tr>
<td>Pudding, Chocolate</td>
<td>144</td>
</tr>
<tr>
<td>Roll (butter)</td>
<td>40</td>
</tr>
<tr>
<td>Roll (Rustler)</td>
<td>120</td>
</tr>
<tr>
<td>Roll (Twisted)</td>
<td>182</td>
</tr>
<tr>
<td>Rib Eye</td>
<td>369</td>
</tr>
<tr>
<td>Rustler's (Strip)</td>
<td>1,086</td>
</tr>
<tr>
<td>Salad</td>
<td>13</td>
</tr>
<tr>
<td>Steak (Chopped) 4 oz</td>
<td>327</td>
</tr>
<tr>
<td>Steak (Chopped) 8 oz</td>
<td>653</td>
</tr>
<tr>
<td>T—Bone</td>
<td>1,532</td>
</tr>
</tbody>
</table>

Taco Bell

<table>
<thead>
<tr>
<th>Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans (Whipped) Burito</td>
<td>345</td>
</tr>
<tr>
<td>Bell Burger</td>
<td>243</td>
</tr>
<tr>
<td>Enchirito</td>
<td>391</td>
</tr>
<tr>
<td>Frijoles</td>
<td>231</td>
</tr>
<tr>
<td>Taco</td>
<td>146</td>
</tr>
<tr>
<td>Tostado</td>
<td>206</td>
</tr>
</tbody>
</table>

White Castle

<table>
<thead>
<tr>
<th>Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheeseburger</td>
<td>198</td>
</tr>
<tr>
<td>Fish Sandwich</td>
<td>200</td>
</tr>
<tr>
<td>French Fries</td>
<td>219</td>
</tr>
<tr>
<td>Hamburger</td>
<td>165</td>
</tr>
<tr>
<td>Milk Shake</td>
<td>213</td>
</tr>
<tr>
<td>Onion Rings</td>
<td>341</td>
</tr>
</tbody>
</table>

So if you're weight-watching, be wary when you eat out. Suggestions:
- Order a baked potato (skip the butter and sour cream).
- Take your own dressing or use lemon juice on salads.
- Remove part of the bun and have an open-faced sandwich.
- Reduce 100 calories by not getting a cheeseburger.
- Use mustard instead of catsup or mayonnaise.
- Order water, skim-milk, or fruit juice instead of soda or a milkshake.
- Scrape the batter and skin off the chicken or fish.

Activity 14.

List 2 other ways of reducing calories:

________________________________________

________________________________________

This is the end of Unit II. Complete the summary for Unit II, Project 2, below.
(Advanced 4-H'ers: proceed at your own rate through Unit III, Project 2, and complete the summary for Unit III, Project 2).
1. What was your main objective?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Please describe your progress toward your objective.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. List four new things you learned to do during this project.

a. ________________________________________________________________

b. ________________________________________________________________

c. ________________________________________________________________

d. ________________________________________________________________

4. How many people at home, school or work did you tell about this project or teach some part of it?

   none____  3 or less____  4-8____
   9-12____  13 or more____

5. Which activities did you like best?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

6. Please describe any special projects you did in health as an individual, club or community effort.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Select four of the following activities to complete each year.
1. Go to the drugstore and do a survey of over-the-counter weight loss products.

Find answers to the following questions:

a. How many products are available?

b. Is there any type of warning on the product labels?

c. How many fit into the five categories you learned about?

1).
2).
3).
4).
5).

d. Ask the pharmacist how many types of prescription weight control drugs there are.

e. What are some of the dangers of these drugs?

2. Consult a nutritional or medical text and see if there are additional health problems that are related to poor eating habits of adolescents. Please report these to your 4-H club.

3. Research the topic of food additives more thoroughly. Write to the FDA (5600 Fishers Lane, Rockville, MD. 20852) and ask the agency to send you the most recent information available. Go to the health food store and talk to the manager about the products he sells. Get his opinion on food additives. Review with your mother the usual foods you eat. How many additives do you eat daily? Write a report of all your findings and share it with your 4-H club.

4. Write an article for your school newspaper and local newspaper about the government’s standings on food additives. Stimulate readers by encouraging them to investigate the facts and to explore more exactly what they’re eating.

5. Contact the local health department and find out whether your city water is fluoridated. Ask how the city regulates the level, what the level is, and how it compares with other cities.

6. Ask a local dermatologist to meet with your club and discuss skin care and acne treatment for adolescents.

7. Ask a dietician to speak to your 4-H club on weight control.

8. If you are overweight, make an appointment with your doctor and set up a weight control program that will return you to your optimal weight.
1. What was your main objective?

2. Please describe your progress toward your objective.

3. List four new things you learned to do during this project.
   a. 
   b. 
   c. 
   d. 

4. How many people at home, school or work did you tell about this project or teach some part of it?
   
   none____ 3 or less____ 4-8____ 9-12____ 13 or more____

5. Which activities did you like best?

6. Please describe any special projects you did in health as an individual, club or community effort.
Puzzle and Quiz Answers

Answers to “Are You Puzzled About Nutrition?”

<table>
<thead>
<tr>
<th>Across</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. diet</td>
<td>1. fat</td>
</tr>
<tr>
<td>5. fad</td>
<td>2. niacin</td>
</tr>
<tr>
<td>7. adipose</td>
<td>3. pounds</td>
</tr>
<tr>
<td>9. iodine</td>
<td>6. diabetes</td>
</tr>
<tr>
<td>10. ill</td>
<td>8. glands</td>
</tr>
<tr>
<td>11. fiber</td>
<td>9. iron</td>
</tr>
<tr>
<td>12. intestine</td>
<td>14. energy</td>
</tr>
<tr>
<td>13. obese</td>
<td>16. calcium</td>
</tr>
<tr>
<td>15. scale</td>
<td>17. organic</td>
</tr>
<tr>
<td>18. sugar</td>
<td>18. skinfold</td>
</tr>
<tr>
<td>19. chart</td>
<td></td>
</tr>
<tr>
<td>20. calorie</td>
<td></td>
</tr>
<tr>
<td>21. jaw</td>
<td></td>
</tr>
<tr>
<td>22. caliper</td>
<td></td>
</tr>
</tbody>
</table>

Answers to “The Ingredient Game”

1. (Springfield) Instant Potatoes
2. (Bel-Air) Lemon Cream Pie
3. Cherry Kool-Aid
4. 7-Up
5. Diet 7-Up
6. (Heinz) Ketchup
7. (Kellogg’s) Corn Flakes
8. (Granny Goose) Potato Chips
9. (Grey Poupon) Mustard
REFERENCES


ADDITIONAL RESOURCES

For your local chapters, check your phone book for the following resources:

County Health Department Phone

Immunizations
Blood tests — sickle cell anemia
VD testing
Sexual Counseling and Birth Control Measures

American Cancer Society Phone

Information on prevention and treatment of cancer
Information on how to stop smoking

March of Dimes Phone

Information of prenatal care, nutrition, and prevention of birth defects
Counseling for emotional problems or drug-related problems

American Heart Association Phone

Information on preventing heart and blood vessel disorders
Classes in CPR (Cardiopulmonary resuscitation)

Crisis and Suicide Phone


FOR MORE INFORMATION, consult the following resources:

Nutrition Foundation Inc.
888 17th St. NW
Washington, DC 20006
Pamphlet: “Your, Diet: Health is in the Balance”, single copies free.

American Medical Association
535 N. Dearborn
Chicago, IL 60610

American Heart Association
7320 Greenville Ave.
Dallas, TX 75231

Consumer Information Center
Pueblo, CO 81009
Pamphlets: 679E “Nutrition: Food at Work for You”; 548E “Proteins, Carbohydrates, Fats and Fibers”; 550E “A Primer on Dietary Minerals”, free single copies of each; 030E “Fats in Food and Diet”, 35¢ each; 115E “Facts About Obesity”, 40¢ each; 031E “Food and Your Weight”, 50¢ each; #568F “Cosmetics: The Substances Beneath the Form”, #582F “Sunbathing and Skin Cancer”, free single copy of each; #046F “Poison Ivy, Oak and Sumac”, #048F “Psoriasis”, 35¢ each.

Public Affairs Pamphlets
381 Park Ave. S.
New York, NY 10016

Food and Drug Administration
CH
P. O. Box 4646
Chicago, IL 60680

American Academy of Dermatology
Professional Communications Dept.
820 Davis
Evanston, IL 60201

Schering Corporation
Galloping Hill Rd.
Kenilworth, NJ 07033
Pamphlets: “Your Skin in a World of Technology”, “How Old Is Your Skin?”, free single copy of each.

Consumer Survival Kit
P. O. Box 1977
Owings Mills, MD 21117
Booklet: “Fat Chance”, $1 each.
The 4-H Club Pledge

I pledge:
my HEAD to clearer thinking,
my HEART to greater loyalty,
my HANDS to larger service,
my HEALTH to better living,
for my club, my community, my country
and my world.

Prepared by:

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Extension Health Education Specialist

and

Kimberly Colson, RN, M.Ed.
Assistant in 4-H and Home Economics

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Bolivar, MO

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