

## COOKING MERIT BADGE

Boy Scouts of America

## REQUIREMENT 1.A.

- Review with your counselor the injuries that might arise from cooking, including burns and scalds, and the proper treatment.



## COOKING: A SIMPLEE DEFINITTION

Putting together three items-uncooked food, utensils and heat to create edible nourishment.


COOK SAFELY

Meats and dairy foods must be kept cold before use. Once removed from protective wrapper, meat must be kept separate from other food items. Because bacteria can grown in meat, the meat must be cooked as soon as it is no longer cold.
Likewise, any uneaten cooked meat must be properly stored and kept cold to eliminate the risk of growing bacteria.


COOK SAFELY

- Cooks use many types of equipment to prepare food. Sharp knives must be used properly to prevent serious cuts and injuries.
- Pots on a stove or campfire get extremely hot and always must be handled with hot-pot tongs or hot pads to prevent burns.


COOK SAFELY

- Cook under adult supervision when you are using a stove or grilling outside.
- Understand the fuel your cooking appliance uses.
- Keep your stove and oven clean and neat.
- Do not place pot holders or dish towels on the stove.
- Dress appropriately while cooking, no loose clothing or dangling jewelry.



## BURNS AND SCALDS

- Burns: caused by flame, hot objects, chemicals, electrical sources, radiated heat, frozen surfaces, friction, or radiation.
- Scalds: caused by boiling water, steam.
- Step 1 Stop the Burn
- Put out the flames
- Step 2 Cool the Burn

- Use large amounts of cool water
- Never use ice (except on small superficial burns, because it causes body heat loss)
- Step 3 Cover the Burn
- Use dry, sterile dressings or a clean cloth to help prevent infection.
- Bandage loosely so that air can flow around the wound.
- Apply antibiotic ointment only to minor burns
- NO HOME REMEDIES
- Do not break blisters


## PREVENTING BURN INJURIES

- Take time to prepare meals without rushing.
- Always use pot holders that are in good repair.
- Keep pot handles turned toward the back of the stove.
- Cook on rear burners whenever possible, but avoid reaching over an open flame or hot burner.
- Use caution when moving heavy pots or hot liquids from the stove.
- Keep all heated liquid and food out of children's reach and never hold anything while carrying a child.
- While cooking, try to keep younger children out of the kitchen.
- Remove tablecloths when toddlers are present (they can pull the table's contents on top of themselves).
- Purchase and use small appliances with short electrical cords.


## MINOR CUTS

- Step 1 Stop the bleeding
- Apply pressure with clean absorbent cloth
- Step 2 If the blood soaks through, apply a second bandage on top.
- Leave the first bandage
- Step 3 Raise the wound
- If the bleeding continues, raise above heart level
- Step 4 Clean the wound
- Once bleeding stops, clean gently with soap and water, or just flush with water to remove all debris or dirt
- Step 5 Apply an antibiotic ointment
- Some people are allergic, ask first
- Cover cut with clean bandage


## SMOKE INHALATION

- Inhaling smoke can seriously damage the lungs and smoke sometimes contains noxious fumes. To treat a smoke inhalation victim:
- Step 1 Remove the victim from the smoke filled area.
- Step 2 Have the victim take long, deep breaths of fresh air to clear the lungs.
- Step 3 If coughing or choking continues, or if there is pain, irritation, or raspy breathing, see a doctor as soon as possible.



## REQUIREMENT 1.B.

- Describe how meat, fish, chicken, eggs, dairy products, and fresh vegetables should be stored, transported, and properly prepared for cooking.



## CLEAN AS YOU GO

- Develop good habits in the kitchen.
- Clean pans, pots, utensils and working surfaces as you go.
- Dishes are easier to wash when you clean them soon after you use them.
- Use an antibacterial cleaner to wipe up spills from meat packaging or from raw meat.
- Do NOT clean meat on the
 same surface you use to cut up vegetables or other foods.


## SAFE FOOD STORAGE

 AND TRANSPORTATION- Keep cold foods cold and hot foods hot. For camp, keep cold food on ice in a cooler.
- When you buy food in jars, make sure the safety seal on the lid is intact.
- Freeze any fresh poultry or meat that will not be used within two days.
- Refrigerate any leftovers as soon as
 the meal is over.
- Keep the refrigerator clean and discard uneaten leftovers after three days.


## PREVENTION GUIDELINES

- Wash your hands with soap and warm water before cooking, after cooking, as needed while you cook, and before eating.
- Keep your work area clean, wipe up spills quickly and thoroughly using soap and water or kitchen cleaner.
- Cook all meat and poultry products, including eggs, thoroughly before eating.
$\odot$ Never eat raw cookie dough or cake batter.
$\odot$ Never use foods from cans that bulge.


## REQUIREMENT 1.C.

- Describe the following food-related illnesses and tell what you can do to help prevent each from happening:
- 1. Salmonella enteritis
- 2. Staphylococcal enteritis
- 3. Escherichia Coli enteritis
- 4. Botulism
- 5. Trishinosis
- 6. Hepatitis



## SALMONELLA ENTERITIS

- This bacteria is linked to raw, uncooked eggs and poultry, and unwashed, raw vegetables and fruits. Salmonella poisoning symptoms include nausea, vomiting, fever, abdominal pain, diarrhea, dehydration, weakness, and loss of appetite.



## PREVENT SALMONELLA POISONING

- Do not buy leaking packages, isolate meat packages in plastic bags to prevent contaminating other foods.
- Prepare foods using clean utensils and clean work surfaces.
- Quickly wipe up all raw meat or poultry juices from counters, and wash utensils, hands, cutting boards, and serving plates that are exposed to such juices.
- Thoroughly cook all foods derived from animals (including eggs).
- Do not eat raw eggs, cookie dough, or cake batter. Consume only pasteurized milk products.
- Thoroughly wash all fruits and vegetables.
- Refrigerate leftovers promptly.


## STAPHYLOCOCCAL ENTERITIS

- This bacteria multiples in warm temperatures and thrives on protein. Symptoms of infection include nausea, vomiting, diarrhea, headache, fever, chills, weakness, and dizziness.
- To prevent: wash hands and utensils before serving food. Thoroughly cook all meats, and refrigerate leftovers promptly in shallow, covered containers.



## ESCHERICHIA COLI ENTERITIS (E.COLll)



- This is a bacteria that attacks the intestinal tract. It can be transmitted person to person and grows at temperatures of 44 degrees and above. In extreme cases, it can cause serious complications in children and elderly people.
- Symptoms include abdominal cramps, diarrhea, nausea, vomiting and fever.
○ Preventions:
- Prepare and store food in a sanitary environment.
- Thoroughly cook all food.
- Refrigerate food at 40 degrees or below.
$\odot$ This deadly disease is caused by ingesting bacteria that can be found in many kinds of food.
- Symptoms include dry mouth, double vision, nausea, diarrhea, vomiting, abdominal cramps, sore throat, dizziness, constipation, weakness, muscle paralysis, and difficulty swallowing or breathing.
- Prevention
- Never use food from damaged or bulging containers or foods that have a strange odor or appearance.
- Cool leftovers quickly by storing them in shallow, small containers.
- Reheat all refrigerated foods.


## TRICHINOSIS



- Trichinosis is caused by the parasite Trichinella Spiralis.
- Its larvae can remain alive in human tissue for years.
- People contract trichinosis by eating uncooked or raw meat, especially pork infected with parasite.
- Infection usually occurs without symptoms, which can include stomachache, nausea, vomiting, and diarrhea.
- When there are symptoms, they occur during the first week after swallowing the organism.
- Prevention
- Thoroughly cook meats, especially pork


## HEPATITIS A

- Hepatitis A is one of five viruses known to cause inflammation of the liver, the others being hepatitis $\mathrm{B}, \mathrm{C}, \mathrm{D}$ and E .
- Hepatitis $A$ is usually a mild illness characterized by sudden onset of fever, malaise, nausea, and abdominal discomfort, followed by several days by jaundice.
- Patients with anorexia often may have hepatitis A.



## HEPATITIS A PREVENTION



- A vaccine can prevent Hepatitis A in many cases.
- To help prevent Hepatitis A
- Wash hands with soap and warm water before preparing and eating food.
- Make sure to use a nailbrush to scrub under your fingernails, where bacteria hides.
- Cook shellfish thoroughly before eating.
- Drink water from approved sources only.
- Keep bathrooms clean and disinfected.


## REQUIREMENT 2.A-E

- A. Illustrate for your counselor the food pyramid that fits you. Label the following food groups in the pyramid and how much of each you should eat each day. (Grains, Vegetables, Fruits, Milk/Yogurt/Cheese, Meats/Poultry/Fish/Beans/Eggs/Nuts, Oils/Sugars)
- B. Explain why you should limit your intake of oils and sugars.
- C. Explain the number of servings recommended per day from each group.
- D. Give your counselor examples from each food group.
- E. Describe for your counselor the measurements of servings for each food group.


## FOOD PYRAMID



## GRAINS



- $50 \%$ of the grains should be whole grain.
- Eat at least 3 ounces of whole grain breads, crackers, cereals, crackers, rice or pasta everyday.
- For Example: 1 ounce $=1$ slice of bread, or 1 cup of breakfast cereal 1 ounce $=1 / 2$ cup of cooked rice, or cereal, or pasta.
- There are two types of grains: whole grains and refined grains. Refined grains have been milled to gain finer texture and improve their shelf life. The problem with this process is that all fiber, iron and most of the vitamin $B$, have been removed. After this process the iron and vitamin B are often added back (enriched). The fiber is not added back though, and fiber is very important for the health of the digestive system and for lowering cholesterol.


## VEGETABLES

- You should vary you veggies.

- Eat more of the dark green and orange veggies and more of the dry beans and peas.
- The amount of vegetables you need to eat depends on your age, sex and level of physical activity. For adults 2 1/2 cups of vegetables and 2 cups of fruit per day is recommended for a reference of 2000 calorie intake, with higher or lower amounts depending on the calorie level.
- 1 cup=1 cup of raw/cooked vegetables, or vegetable juice. 1 cup=2 cups of raw leafy greens.
- Your body has the capability to store some vitamins, but this is not the case with vitamin B and C. Vitamin B and C can not be stored in your body. Therefore, it is very important to get these vitamins everyday from food. The best source for vitamin $B$ and $C$ is vegetables. This is why you need to eat vegetables everyday.


## FRUITS



- You should eat a variety of fruits, but go easy on the fruit juice. Chose fresh, frozen, canned or dried fruit.
- The amount of fruits you need to eat depends on you age, sex and level of physical activity. For adults 2 cups of fruit and $21 / 2$ cups of vegetables per day is recommended for a reference of 2000 calorie intake, with higher or lower amounts depending on the calorie level.
- 1 cup $=1$ cup of fruit, or $100 \%$ fruit juice, or $1 / 2$ cup of dried fruit
- Fruit contains many important vitamins and minerals that most people don't generally get in their regular diet. Fruit is a good source of fiber and contains very little fat. Eat at least two-three fruits a day, and don't forget the vegetables. Fewer than 15 percent of the two million American elementary school-aged children, eat the recommended five or more daily servings of fruits and vegetables.
- Fruit juice contains many vitamins and nutrients that are good for you, but it's healthier if you eat fresh fruit instead of drinking juice, since you get more of the fibers and less of the sugar. When you drink $1 / 2$ cup of apple juice, it's the same as eating an entire apple but the difference is that the apple has all the fiber that fills you up. This means that we drink more and intake more sugar than is healthy. The sugar intake of one glass of juice can equal that of a soft drink and sometimes the calories can be even higher. One glass of juice every morning is OK, just don't over do it.


## MILK, YOGURT AND CHEESE

- Recommended 3 cups per day of fat-free or low-fat milk, or milk products for adults.
- Children 2-8 years old should consume 2 cups per day of fat-free or low-fat milk.
- Milk, yogurt and cheese are all rich in calcium.
- Choose lactose-free product or other calcium sources if you can't consume milk.
- Calcium is important for developing bones, especially when you grow. Milk, yogurt and cheese are all rich in calcium. Be aware though that cream cheese, cream and butter are not rich in calcium. You should also be aware of the extra calories that contains in the sweetened milk products that you choose. If you can't drink milk, try lactose free products or other calcium sources.


## MEAT, POULTRY, FISH, DRY BEANS, EGGS, AND NUTS

- Recommended that you should choose low-fat or lean meats and poultry.
- Bake it, broil it or grill it.
- Eat more fish, beans, peas, nuts and seeds. They contain healthier unsaturated fats.
- Instead of just eating red meat, vary your choices with more fish, beans, peas, nuts and seeds. They all contain good, healthier unsaturated fats. Salmon, trout and herring
 are high in omega- 3 fatty acids, which are good for your health. Flax and walnuts are excellent sources of essential fatty acids. Sunflower seeds, almonds, hazelnuts are good sources of vitamin E. 2 servings or fish per week ( 8 ounces total) may reduce the risk of mortality from coronary heart disease, according to studies.

- Most of your fat should come from fish, nuts and vegetable oils.
- Keep total fat intake between 20-35\% of calories with most fats from polyunsaturated and monounsaturated fatty acids.
- Oils from plant sources (vegetable and nut oils) are better for your health since they do not contain any cholesterol. You should limit solid fats like butter and margarine. Solid fats come from animals and are solid at room temperature. Solid fats are considered a contributor to cardiovascular disease, a leading cause of death in the U.S.
- Common Oils

- Most oils are high in monounsaturated or polyunsaturated fats and low in saturated fats.
- Oils from plant sources, such as vegetable and nut oils, contain no cholesterol.
- Coconut Oil is high in saturated fat.
- Butter, Margarine, Shortening, Beef fat, Chicken fat, and pork fat (lard) are solid fats.


## SUGARS



- Sweets are included in the same food group as oils because they are often high in fats and oils.
- Consuming too many sweets and fried food can cause weight increase while your energy and health may decline.
- This can lead to heart disease, obesity and diabetes.



## THE AVERAGE 12 YEAR OLD SCOUT

- Who exercises 30 to 60 minutes per day should consume about 2,200 calories a day.
- His diet should include:
- 7 ounces of grains
- 3 cups of vegetables
- 2 cups of fruit
- 3 cups of milk
- 6 ounces of meat, fish, nuts beans



## PHYSICAL ACTIVITY

- The figure on the stairs is there to remind you of the importance of physical activity.
- Recommended that adults should engage in physical activity (above usual activity) for at least 30 minutes every day, or most days.
- Children and teenagers should be physically active for at least 60 minutes every day, or most days.



## REQUIREMENT 2.F.

- Describe to your counselor food preparation techniques that result in more healthful and nutritious meals.



## SOME HEALTHFUL THPS

- Fresh is best, then frozen, then canned
- A good substitute for sweets is fruit. It can curb the craving for sugar, without adding fat.
- Don't add salt. Our foods contain too much.
- Stay away from Soda or Sugary Drinks, don't "drink your calories". Don’t drink "energy drinks". DO Drink lots of water
- Bake, steam, or boil rather than frying
- Avoid high fatty foods and trim meat fat
- Think about the entire health of the Troop


## REQUIREMENT 3.A.-D.

$\odot$ Plan a menu for two straight days (six meals) of camping and Include the following:

- A. A camp dinner with soup; meat, fish, poultry, or an appropriate substitute; two fresh vegetables; drink; and dessert. All are to be properly prepared. When preparing your menu, follow the nutritional guidelines set by the food pyramid.
- B. A one-pot dinner. Use foods other than canned.
- C. Using the menu planned for requirement 3, make a food list showing cost and amount needed to feed three or more boys.
- D. List the utensils needed to cook and serve these meals.


## SAMPLE CAMP BREAKFAST

- Option 1: Oatmeal with chopped apple or raisins/nuts, French Toast, milk or orange juice
- Option 2: Egg and cheese quesadilla, apple juice or milk
- Cost:
- Quantity:
$\odot$ Utensils:



## SAMPLE CAMP LUNCH

-Option 1: tomato soup, grilled ham and cheese sandwich with pickle on the side, corn chips, apple juice

- Option 2: meatball sub with cheese, side salad, sliced pears, milk
- Cost:
- Quantity:

๑ Utensils:


## SAMPLE CAMP DINNER

- Option 1: black bean soup, Texas hash, fruit salad, bananas, milk
- Option 2: Camp kabobs, camp-style potatoes, biscuits, peach cobbler, milk

○ Cost:

- Quantity:
- Utensils:



## SAMPLE ONE-POT DINNERS

$\odot$ Option 1: one-pot chicken and rice, sourdough rolls, peach cobbler, milk

- Option 2: Summer pasta, Italian loaf bread, fresh sliced melon, instant lemon pudding, pineapple-orange juice

○ Cost:

- Quantity:

- Utensils:


## PLAN A CAMPING MENU

- Camp Breakfast:
- Camp Lunch:
- Camp Dinner:
- One-Pot Dinners:
- Cost:
- Quantity:

$\odot$ Utensils:
- Food Pyramid Standards?


## REQUIREMENT 4.A.-C.

- Using the menu planned for requirement 3, do the following and discuss the process with your merit badge counselor:
- A. Prepare and serve for yourself and two others, the two dinners, one lunch, and one breakfast. Time your cooking so that each course will be ready to serve at the proper time.
- B. For meals prepared in requirement 4.A. for which a fire is needed, use a lightweight stove or build a low-impact fire. Include support for your cooking utensils from rocks, logs, or like material. The same fireplace may be used for more than one meal. Use a backpacking stove to cook at least one meal. (Where local regulations do not allow you to do this, the counselor may change the requirement to meet the law.)
- C. For each meal prepared in requirement 4.A., use safe food-handling practices. Dispose of garbage, cans, foil, paper, and other rubbish by packing them out and depositing them ina proper container. After each meal, clean up the site thoroughly.


## REQUREMENT 5.A.-D MASNSS

Plan a menu for one day (three meals) or for four meals over a two-day period of trail hiking or backpacking. Include the following:

- A. A breakfast, lunch and dinner for a trail or backpacking trip where light weight is important. You should be able to store all foods used for several days without refrigeration. When preparing your menu, follow the nutritional guidelines set by the food pyramid.
- B. Using the menu planned for requirement 5, make a food list showing cost and amount needed to feed three or more boys.
- C. List the utensils needed to cook and serve these meals.
- D. Figure the weight of food in requirement 5.A.


## TRAIL BREAKFAST

- Option 1: peanut butter and jelly on crackers, banana, hot cocoa
- Option 2: instant dried cereal, mixed dried fruit, hot cocoa
- Cost:
- Quantity:
$\odot$ Utensils:
๑ Weight:



## TRAIL LUNCH

- Option 1: peanut butter and jelly sandwich, carrot sticks, chocolate pudding or applesauce, juice
- Option 2: canned meat or tuna fish with assorted crackers, energy bars or hard-boiled eggs, canned peaches, juice
- Cost:
- Quantity:
- Utensils:
- Weight:


## TRAIL DINNER

- Option 1: instant vegetable-barley soup, canned chicken or tuna with sliced cheese on sourdough rolls, oatmeal raisin, cookies, milk
- Option 2: instant chicken and rice soup, heated sliced beef on wheat rolls, carrot sticks, milk
- Cost:
- Quantity:
$\odot$ Utensils:
- Weight:



## PLAN A TRAIL MENU

- Breakfast:
- Lunch:
- Dinner:

○ Cost:

- Quantity:
- Utensils:
- Weight:

○ Food Pyramid Standards?

## REQUIREMENT 6.A.=C.


$\odot$ Using the menu planned for requirement 5, do the following:

- A. Prepare and serve for yourself and two others the trail breakfast and dinner. Time your cooking so the each course will be ready to serve at the proper time.
- B. Use an approved trail stove (with proper supervision) or charcoal to prepare your meals.
- C. For each meal prepared in requirement 6.A., use safe food-handling practices. Dispose of garbage, cans, foil, paper, and other rubbish by packing them out and depositing them in a proper container. After each meal, clean up site thoroughly.


## REQUIREMENT 7.



- Plan a menu for three full days of meals (breakfast, lunch, and dinner) to be cooked at home.
- A. When preparing your menu, follow the nutritional guidelines set by the food pyramid. All meals are to be cooked or properly prepared.
- B. Using the menu planned for requirement 7, make a food list showing cost and amount needed to feed yourself and at least one adult (parent, family member, guardian, or other responsible adult).
- C. Tell what utensils were needed to cook and serve these meals.
- D. Prepare and serve a breakfast, lunch, and dinner from the menu you planned for requirement 7. Time your cooking to have each course ready to serve at the proper time. Have an adult verify the preparation of the meal to your counselor.

BREAKFAST AT HOME

- Option 1:bagel, banana and apples served with yogurt and honey
- Option 2: raisin bran with strawberry, and $1 / 2$ grapefruit, milk
- Option 3: oatmeal topped with raisins and walnuts, one orange and milk
- Cost:
- Quantity:
- Utensils:



## LUNCH AT HOME

- Option 1: 1 cup Carrot sticks 1 serving Turkey Pita Ranch Pita Pocket, 1 Banana, 1 cup milk
- Option 2: Chicken Sandwich on 2 slices Whole Wheat Bread, 2 oz . Chicken, lettuce, Tomato, 1 cup Milk, 1 apple
- Option 3: 15 Grapes, 1 serving of chili with tortilla triangles, 1 cup milk
- Cost:
- Quantity:
- Utensils:



## DINNER AT HOME

- Option 1: 1 cup Green Salad, 2 Tbs. Buttermilk Dressing, 4 oz . Roast Beef (lean only), 1 Medium Baked Potato, 6 tbs lite sour cream, 1 Tbs. Chives, 1/2 cup Green Beans with Mushrooms, 1/2 cup Melon
- Option 2:1 serving salad, 4 oz. Turkey Breast 1 serving stir fried zucchini and carrots, 1 cup Mashed Potatoes, 2 tsp. Margarine
- Option 2: 2 cups Tossed Green Salad 2 Tbs. Low Calorie Dressing, 1 serving grilled chicken nuggets, $1 / 2$ cup roast potatoes, $1 / 2$ cup spinach, 1/2 cup canned (or 3/4 cup fresh) Pineapple
- Cost:
- Quantity:
- Utensils:



## PLAN A HOME MENU

- Breakfast:

○ Lunch:

- Dinner:

○ Cost:

- Quantity:
- Utensils:

๑ Food Pyramid Standards?


## REQUIREMENT 8

- Find out about three career opportunities in cooking. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.



## FOOD SERVICE AS A CAREER

- The food service industry is wide open with a variety of careers.
- Dietician/Nutritionist
- Chef, Cooks
- Cafeteria Manager, Produce Manager, Caterer, Food Critics, Instructor
- Two-year and four-year colleges that offer programs in food service and culinary arts. Specialized Culinary Schools are based around the world. They also offer certified food service professionals degrees.
- Employment can range from schools, restaurants, hotels, universities, cruise ships, military, resorts, theme parks, sports venues, convention centers, magazines, grocery stores, hospitals, food manufacturers illnesses


2A-F Food Pyramid, oils/sugars, servings, healthful meals cost, utensils


4A-C Camping Trip: Prepare and safely serve a timely meal for self and others, with stove or fire, using requirement 3 menu5A-D Plan a menu for: 3 meals for 1 day OR 4 meals for 2 days, of hiking or backpacking, storage, weight, cost, utensils


6A-C Hiking or Backpacking Trip: Prepare and safely serve a timely meal breakfast/dinner for self and others, with stove, using requirement 5 menu

- 7A-C Plan a menu for: 9 meals for 3 days to be cooked at home, cost, nutritional, utensils.
7D At Home: Prepare and serve 3 meals for 1 day using the menu you planned.
8 Career opportunities in cooking


Complete with Scouts via practicals/powerpoint Completion required via camping, hiking/backpacking trip Completion required at home

## RESOURCES

- Cooking Merit Badge Series Boy Scouts of America, 2009


Don't Forget:


