A Healthy “Serving” of Service for my Club and Community
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The fourth H in 4-H is “Health.” But how often do we devote 25% of our total programming efforts as volunteers and 4-H members to health? Through Health related programming and project work members develop physically, socially, emotionally, mentally and morally.

The 2006 National Conference Delegates know how important service is to our clubs and members. We saw a means to combine so many things our members like to do with a meaningful service learning project which helps put the Health back into 4-H.

This project allows members to identify an audience in need of service, learn about their physical, social, emotional, and mental needs and then to tailor a packaged product unique to these needs. How does it promote Health?

**Physical Health**—Members learn to select, test, and modify a recipe so it is appropriate and healthy for the intended audience.

**Social and Emotional Health**—Members design and prepare packaging which is visually and mentally appropriate for the audience. Most importantly members feel good about the finished product.

**Mental Health**—Members use their cognitive abilities “to think, to plan and to reason.”

**Possible audiences for this service:** Food Banks, Churches, Area Shelters, Shut-ins, Elderly or Disabled, Families in crisis, etc.

We see endless possibilities for this program. 4-H’ers learn about Food Science, Consumer Education, Personal Development, Arts and Crafts, Visual Design, as well as Citizenship, and Leadership. Every member of the club can apply their “unique” talents in carrying out the service project.

**What does it mean for a Club Leader?**

Endless months of programming! This is a service learning project which should take months if the membership focuses and spend quality time on learning about their audiences unique needs, selecting and testing recipes, designing and selecting packaging and labels, and finally preparing the product for delivery.
Before Getting Started

Before starting this project in your local club there are three components you need to become familiar with and to use in implementing the project.

Service Learning - Have a firm understanding of what it is and what makes it different from citizenship activities.

Experiential Learning - This is what 4-H is all about. Too often we “Do” an activity and think “okay, they had fun and surely learned something.” The most important part of what we do in 4-H is teach young people why the knowledge is useful or important (reflecting) and how it applies to other aspects of their lives (applying). More learning can take place in the “Reflect” and “Apply” steps than in the actual “doing.”

Life Skills - Life skills are tools that both youth and adults use to cope with daily circumstances, make important decisions, and enhance the quality of their every day lives. Life skills are developed as a member learns a “skill.”

Nutrition and Health - For this program to accomplish its objective the youth should have an opportunity to learn about their intended audience and to select and/or modify recipes appropriate for the audience. Prior to assembling the food item, youth should take time to prepare and taste the product.

Service Learning

Service-Learning is a teaching/learning method that connects meaningful community service experiences with academic learning, personal growth, and civic responsibility.

*Service-learning* provides students with the opportunity to use newly acquired skills and knowledge in real life situations in their own communities. In addition, these experiences assist in the development of a sense of caring for others and empower youth with the belief that they can make a difference in their communities and world. So what is the difference in community service and service-learning?
Community Service is the act of volunteering in your community.

Service-Learning is more than volunteerism. It is the blending of both service and learning in such a way that both occur and are enriched by each other. Service-learning projects emphasize the process of learning and planning, as well as the actual service itself.

There are four stages of Service-Learning:

Preparation consists of the learning activities that take place prior to the service itself. Prior to their service experience, students must understand what is expected of them as well as what they can expect from the service project. Preparation components include the following:

- identifying and analyzing the problem
- selecting and planning the project
- training and orientation

Action is the service itself and needs to meet certain criteria. It must:

- be meaningful
- have academic integrity
- have adequate supervision
- provide for student ownership
- be developmentally appropriate

Reflection enables students to critically think about their service experience. When students reflect on their experiences, they think about them, write about them, share them with others, and learn from them. Reflection time is a structured opportunity

Applying Service-Learning Framework to 4-H

I. Preparation
   A. Selecting Project
   B. Defining the Situation
   C. Preparing a Plan
   D. Training and Orientation
      1. Guest Speakers
      2. Project Work
      3. Field Trips
      4. Programs

II. Action - Youth applying information to the plan.
   A. Making - displays, posters, handouts, window painting
   B. Doing

III. Reflection
   A. Includes discussion, pictures, reading, writing, art, etc.
   B. Recording in Record Book, medal form or club scrapbook

IV. Celebration

Ways that make this program a service-learning project:
- Research local food banks and pantries to see what type of foods are needed.
- Talk with local organizations helping families or individuals with meals or comfort items.
- Select recipes based on the audience and their nutritional needs.
- Research the cost and nutritional value of selected recipe and compare to similarly pre-packaged food.
- Evaluate how the product fits into food guide pyramid and encourages a healthy lifestyle.
- Testing and tasting the finished product.
- Health and safety issues with the production of recipes and food products.
- Correct measurement of ingredients to insure quality.
- Figuring quantities for packaged product.
- The aesthetic and practical design of commercially packaging a product.

Health and safety issues with the production of recipes and food products.

Correct measurement of ingredients to insure quality.

Figuring quantities for packaged product.

The aesthetic and practical design of commercially packaging a product.
for students to learn from their experiences. They can reflect through:
- discussion
- reading
- writing
- projects
- the arts

Celebration is the component of service-learning which recognizes students for their contributions. It also provides closure to an ongoing activity. Society needs to let young people know that their contributions are valued. There are many ways that this final component of service-learning can be implemented:
- local club banquets
- end of the year celebrations
- certificates
- pizza parties
- joint celebration with service recipients

Experiential Learning

The 4-H Program allows youth to "learn by doing." The experiential learning model developed by Kolb (1984), and modified by 4-H, includes five steps in the learning process:
1. Participants **experience** the activity - perform or do it.
2. Participants **share** the experience by describing what happened to them.
3. Participants **process** the experience to determine what was most important and identify common themes and experiences.
4. Participants **generalize** from the experience and relate it to their daily lives.
5. Participants **apply** what they learned to a new situation.

When this model is used, youth both experience and process the activity. They learn from thoughts and ideas about the experience. Each step contributes to their learning.

Providing an experience alone does not create experiential learning. Experiences lead to learning if the participant understands what happened, sees patterns of observations, generalizes from those observations, and understands how to use the generalization again in a new situation. 4-H curriculum and materials for both youth and volunteers includes experientially based activities. Advantages of using the experiential learning process in group settings include:

1. The helper quickly assesses the youth’s knowledge of the subject.
2. The helper builds on the experience or knowledge.
3. The youths learn from each other by sharing knowledge and skills.
4. The helper is a coach rather than an up front teacher.
5. The youth relate the experience to their own lives and experiences.
6. Helpers may use a variety of methods to involve the youth in the experience and processing of it.
7. Youth with many different learning styles can be successful.
8. Discussions move from the concrete to the abstract and analytical.
9. Stimulates youth to learn through discovery and draw meaning from the experience.
11. Youth work together, share information, provide explanations, and evaluate themselves and others.
12. Youth take responsibility for their own learning.
Life Skills Development

One of the primary goals of the 4-H program is to help youth use experiential learning to develop and apply important life skills that they can use everyday. Life skills are tools that both youth and adults use to cope with daily circumstances, make important decisions, and enhance the quality of their every day lives. Life skills help youth become competent, capable, and contributing individuals.

When the 4-H program began, the purpose was primarily to teach youth project skills such as how to raise corn, livestock, and vegetables as well as how to cook a meal. Today the primary goal of 4-H is youth development. Projects are used as a way for youth to practice and learn life skills. Strong project experiences are essential. Today a variety of methods are used to involve the youth in the experience so they practice important life skills as they explore the project. For example, to teach decision-making skills youth actually practice decision-making skills and discuss how they used them.

A well-designed activity will provide opportunities to practice several of the life skills shown on the clover. However, in order to help youth process what they have practiced, one life skill should be targeted and emphasized.

4-H programs concentrate on helping young people acquire life skills. Life skills are developed as a member learns a “skill.” There is a difference in a skill and a life skill. A “skill” is a learned ability to do something. “Life skills” are the ways we apply the information learned to real life situations.

The Targeting Life Skills Model developed by Iowa State University Extension (1996) targets life skills in a bull’s-eye – aiming 4-H youth toward life skills development using the four H’s of the Clover. A well-balanced 4-H experience for the individual, club, activity or event will focus equally on all four quadrants of the model.

In designing an educational experience, it is suggested that the parent, volunteer, or educator select and focus on one skill from each quadrant and integrate it into the subject matter content. The key to “life skills” development is the individual having an opportunity to talk about (reflect) and apply an experience to other
aspects of their life. Example – How is following directions for a recipe and measuring ingredients applicable to other experiences in life?
Nutrition and Health

USDA has released the MyPyramid food guidance system. Along with the new MyPyramid symbol, the system provides many options to help Americans make healthy food choices and to be active every day.

Resources and information for use in developing education materials and to assist in understanding Federal food guidance are located at www.mypyramid.gov.

One’s food and physical activity choices each day affect one’s health—how you feel today, tomorrow, and in the future. The Dietary Guidelines for Americans, 2005, gives science-based advice on food and physical activity choices for health.

What is a "Healthy Diet"?
The Dietary Guidelines describe a healthy diet as one that:

- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- A source of complete protein or a combination of proteins that provide adequate amino acids such as lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.

The recommendations in the Dietary Guidelines and in MyPyramid are for the general public over 2 years of age. MyPyramid is not a therapeutic diet for any specific health condition. Individuals with a chronic health condition should consult with a health care provider to determine what dietary pattern is appropriate for them.

These tips and ideas are a starting point.

- Make half your grains whole
- Vary your veggies
- Focus on fruit
- Get your calcium rich foods
- Go lean with protein
- Find your balance between food and physical activity
The MyPyramid guide emphasizes six criteria for a healthy lifestyle:

1. **Activity** – daily physical activity is important to your health.
2. **Proportion** – eat the correct number of servings and an appropriate amount of each food group.
3. **Variety** – Foods from all 5 food groups are important to good health.
4. **Gradual Improvement** – Everyone can benefit from taking small steps to improve their diet and lifestyle each day.
5. **Moderation** – Limit proportions from food groups containing fats and sugars.
6. **Personalization** – Each person needs to determine a healthy plan of exercise and diet based on factors such as age and health.

**4-H Health** supports the MyPyramid criteria through project work and life skills development.

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<th>EXAMPLES</th>
<th>Project Area</th>
<th>Life Skills</th>
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<td><strong>Activity</strong></td>
<td>Recreation; Animal Science; Child Care; Wildlife &amp; Fisheries; Gardening; Horticulture; Horse; Health &amp; Fitness; Bicycle; Camping</td>
<td>Responsibility; Self-discipline; Healthy Lifestyle Choices</td>
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<td><strong>Proportions</strong></td>
<td>Food Science; Meat Science; Personal Development</td>
<td>Disease Prevention; Self-motivation; Planning/Organization</td>
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<td><strong>Variety</strong></td>
<td>Food Science; Gardening; Horticulture; Meat Science; Fishing</td>
<td>Decision Making</td>
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<td><strong>Gradual Improvement</strong></td>
<td>Personal Development; Health &amp; Fitness</td>
<td>Learning to Learn; Self-esteem</td>
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<td><strong>Moderation</strong></td>
<td>Food Science; Meat Science; Personal Development; Food Preparation</td>
<td>Problem Solving; Managing Feelings</td>
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<td><strong>Personalization</strong></td>
<td>Health &amp; Fitness; Safety</td>
<td>Stress Management; Resiliency; Goal Setting; Personal Safety; Character</td>
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Putting All the Ingredients Together

Suggested outline for organizing a “Treat” project using the Service Learning, Life Skills and Experiential Learning Models. Text in the table highlighted in **bold** are suggested committees for developing this project.

Committees should be composed of youth and adults. Youth should take the primary lead with guidance, supervision, and mentoring by the adults. Adults should help the youth develop skills necessary to make decisions and communicate with outside sources/resources and club members.

4-H committees are important. They are a way to share responsibility, get everyone actively involved and develop potential leaders. It is important to remember a committee is made up of several people—not just one. The success of a committee depends on the contributions every member makes.

Committees are an excellent training ground for developing, refining, and demonstrating individual leadership characteristics. Through these small teams’, members practice and even master “quality” leadership skills while learning how committees function and providing a meaningful service. To learn more about committees refer 4-H Lit. 30, *4-H Leadership Development Guide*.

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<th>HEALTH</th>
<th>SERVICE LEARNING FRAMEWORK</th>
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<th>RELATED 4-H PROJECT AREA</th>
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| Stage I I. Preparation Committees | ▪ Learning to Learn
▪ Contribution to Group Effort | | | |
| Mental                  | A. **Select and Define Project** | ▪ Concern for Others
▪ Problem Solving | Citizenship | Do |
| Mental                  | B. **Master plan for the group.**
Subcommittee assignments noted under Training and Orientation. | ▪ Planning/Organizing | Leadership | Do |
| C. Training and orientation | | | | |
| Physical and Mental     | **Recipe Selection and Modification** (Subcommittee)
  1. Select recipe based on the defined project and audience
  2. Research nutrition and health benefits
  3. Figure cost and quantity for the number of finished products/recipient
  4. Learn about measuring products
  5. Test recipe
  6. Make a shopping list
  7. Go shopping | ▪ Healthy/Lifestyle Choices
▪ Critical Thinking
▪ Marketable Skills | Food Science – Nutrition; Food Preparation; Consumer Education | Do |
<p>| Mental                  | <strong>Donors/Partners and Budget</strong> (Subcommittee) | ▪ Wise Use of Resources | Consumer Education; Money Management | Do |</p>
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<tr>
<th>HEALTH</th>
<th>SERVICE LEARNING FRAMEWORK -continued-</th>
<th>LIFE SKILLS DEVELOPED</th>
<th>RELATED 4-H PROJECT AREA</th>
<th>EXPERIENTIAL LEARNING</th>
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| Social and Emotional | **Product Packaging**  
(Subtitle Committee)  
1. Design recipe cards/instructions  
2. Design labels and/or packaging  
3. News Release (before and after) |  | Arts and Crafts; Visual Arts | **Do** |
| Social and Emotional | **Stage 2**  
II. Action Committees |  |  |  |
|  | **A. Assembly of the food product**  
(*Recipe and Selection Committee provides leadership*) | Critical Thinking |  |  |
|  | **B. Product packaging/decorating**  
(*Product Packaging Committee provides leadership*) | Marketable Skills |  |  |
|  | **C. Delivery** | Social Skills |  |  |
|  | **D. Carry on project**  
(Establish a standing committee to see that work continues or expands to other groups.) |  | Leadership/Citizenship |  |
| Mental | **Stage 3**  
III. Reflections – Reflection time is a structured opportunity for students to learn from their experience. |  |  |  |
| Social and Emotional | **A. Reflection occurs through:**  
- Discussion  
- Reading  
- Writing  
- Projects  
- The arts | Learning to Learn |  |  |
|  | **B. During the reflection process ask open ended questions such as:**  
- What did you enjoy?  
- What did you learn?  
- What would you do different?  
- How can you apply this experience to other parts of your life? | Marketable Skills |  |  |
| Social and Emotional | **Stage 4**  
IV. Celebration – recognize youth, partners, and donors for their contribution and provide closure. | Social Skills | Recreation |  |
**Hot Chocolate**

**Ingredients**
- 1 pound Chocolate Drink Mix
- 1 pound Non-Dairy Creamer
- 1 pound Powdered Sugar
- 8 quarts Nonfat Dry Milk

Mix all ingredients together & store in an air tight container and attach instructions.

**Preparation Instructions:**
Use ½ cup of mix in 8 ounces of hot water, stir, & enjoy.

**Nutritional information:**
147 calories, 0 g. of protein, 0 g. of fat, 4 mg. of sodium, 5 g. of carbohydrates

![4-H “Treat” with Service](image)

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**Cappuccino Mix**

**Ingredients**
- 1 cup Non-Dairy Creamer
- 1 cup Chocolate Drink Mix
- ½ cup Instant Coffee
- ½ cup Sugar
- ½ teaspoon Ground Cinnamon
- ¼ teaspoon Ground Nutmeg

Mix all ingredients together & store in an air tight container and attach instructions.

**Preparation Instructions:**
Use 3 tablespoons of mix in 6 ounces of hot water, stir & enjoy.

**Nutritional information:**
33 calories, 0 g. of protein, 0 g. of fat, 1 mg. of sodium, 8 g. of carbohydrates

★ Be sure the instant milk you purchase has been fortified with vitamins A and D to ensure you are getting the nutrients you need for good health.
★ Instant Milk is an excellent way to add calcium to your diet especially if you don’t like to drink milk.

![4-H “Treat” with Service](image)
**Orange Spice Cappuccino**

**Ingredients**
- ½ cup Non-Dairy Creamer
- 2 teaspoons Dried Orange Zest
- 1 teaspoon Cinnamon
- ¼ cup Instant Coffee Granules
- ½ cup Sugar

Combine all ingredients in a blender or food processor; blend until well mixed. Store in an airtight container and attach instructions. Makes 2 ¼ cups.

**Preparation Instructions:**
Place 2 teaspoons mix and ¾ cup boiling water in mug, stir well. Makes one serving.

**Nutritional information:**
37 calories, 0 g. of protein, 0 g. of fat, 1 mg. of sodium, 9 g. of carbohydrates

**Spicy Citrus Tea**

**Ingredients**
- 1 ½ cups Orange Drink Powder
- 2 teaspoons Ground Cinnamon
- 1 cup Instant Tea Mix
- 1 teaspoon Ground Cloves
- ½ cup Sugar

In one bowl, sift together all the ingredients. Mix well; then repeat sifting into a second bowl. Store in an airtight container at room temperature for up to 2 months. Attach instructions. Makes about 2 cups of mix.

**Preparation Instructions:**
To make tea, place 1 to 2 Tablespoons of mix in a mug add boiling water, stir, and enjoy.

**Nutritional information:**
85 calories, 0 g. of protein, 0 g. of fat, 4 mg. of sodium, 22 g. of carbohydrates

*Tea Gardens* were the first social environment that allowed for mixed-company of both the sexes and the classes. It was in these open-air gardens, that men and women, upper and lower class, were allowed to mingle without censure.
Southern Peach Tea Mix

Ingredients
1 cup Instant Tea Mix
1 – 3 ounce box of Peach Gelatin
2 cups Sugar

Combine all ingredients, mix well. Store in an airtight container and attach instructions. Makes 3 ½ cups of mix.

Preparation Instructions:
Combine 2 teaspoons of tea mix with one cup of hot water in a mug. Stir and enjoy.

Nutritional information:
129 calories, 0 g. of protein, 0 g. of fat, 0 mg. of sodium, 33 g. of carbohydrates

Friendship Sip Mix

Ingredients
2 cups Orange Drink Mix
1 ½ cups Sugar
½ teaspoon Ground Cloves
1 cup Lemonade Drink Mix
1 ½ teaspoons Ground Cinnamon

Combine all ingredients, mix well. Store in an airtight container and attach instructions. Makes about 4 cups of mix.

Preparation Instructions:
Combine 2 Tablespoons of mix with one cup of hot water in a mug. Stir and enjoy.

Nutritional information:
21 calories, 0 g. of protein, 0 g. of fat, 6 mg. of sodium, 54 g. of carbohydrates

Weights and Measures
3 teaspoons = 1 Tablespoon
4 Tablespoons = ¼ cup
8 Tablespoons = ½ cup
12 Tablespoons = ¾ cup
16 Tablespoons = 1 cup
1 cup = 8 fluid ounces
1 cup = ½ pint
2 cups = 1 pint
4 cups = 1 quart
4 quarts = 1 gallon
**Home-style Chicken Soup**

**Ingredients**
- ¾ cup long cooking Long Grain Rice, uncooked
- ¼ cup Dried Minced Onion
- ½ cup Shell Macaroni, uncooked
- ¾ cup Pearled Barley, uncooked
- 1 Tablespoon Garlic Powder
- 1 Tablespoon Pepper
- 1 Tablespoon Dried Oregano
- ½ cup Spinach Pasta, uncooked and broken into small pieces

In a one quart wide mouth jar, layer bouillon, onion, macaroni, barley, spinach pasta, and rice. Combine remaining ingredients in a small plastic bag and place on top of layers. Seal lid and attach instructions. **Additional Ingredients necessary**: 1 cup cooked cubed chicken

**Preparation Instructions:**
Pour all jar contents into a large pot filled with 12 cups boiling water; bring to a boil. Reduce heat and simmer for 45 minutes. Add one cup cooked cubed chicken; simmer 15 minutes. Serves 4-6 people.

- *Chicken is a significant source of daily requirements of protein, niacin, B-6, B-12, vitamin D, iron, and zinc.*
- *Ounce for ounce, 1 cup skinless chicken is one of the lowest-fat meats around.*

**Nutritional information:**
281 calories, 6 g. of protein, 2 g. of fat, 1103 mg. of sodium, 57 g. of carbohydrates

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**White Christmas Soup**

**Ingredients**
- 1—2.75 oz. Country Gravy Mix
- 2 Tablespoons Chicken Bouillon Granules
- 2 Tablespoons Dried Minced Onions
- 2 Tablespoons Dried Celery Flakes
- 2 teaspoons Dried Parsley Flakes
- 2 to 3 cups Uncooked Pasta

Put all ingredients into an air tight jar or container.

**Additional Ingredients necessary**
10 oz. can of chicken or equivalent of cooked chunk chicken

**Preparation Instructions:**
Put above ingredients in a 4 quart saucepan with 8 cups of water and bring to a boil. Reduce heat and add a 10 oz. can of chicken or equivalent of cooked chunked chicken. Cover and simmer for 5 to 8 minutes or until the pasta is tender.

**Nutritional information:**
307 calories, 11 g. of protein, 2 g. of fat, 564 mg. of sodium, 61 g. of carbohydrates
Ingredients
1/4 cup each of the following dried beans:
- Lima
- Pinto
- Kidney
- White Northern
- Split Pea
- Black
- Lentils
1/4 cup Dried Minced Onion
1/4 teaspoon Ground Cumin
1/4 teaspoon Garlic Powder

Put ingredients into an air tight jar or container.

Additional Ingredients necessary
1 cup chopped Carrot
1 cup chopped Celery
1 Ham Hock or Ham Bone

Preparation Instructions:
Put soup mix in a large stock pot with 8 cups of water. Bring to boil and boil for 2 minutes. Remove from heat and let stand for 1 hour.
Then add 1 cup chopped carrot and 1 cup chopped celery and 1 ham hock or ham bone. Bring soup to a boil then reduce and simmer for 2 to 3 hours.

- Broth is a liquid resulting from cooking meat, fish and vegetables in water. Stock, on the other hand, is made primarily with bones but still contains vegetables and aromatic ingredients like spices and herbs. Broth has a richer, meatier flavor, whereas stock is a neutral base for soups, to which other flavorings will be added. However, in many recipes broth and stock are interchangeable.

- Beans contain no cholesterol, and they can help lower your cholesterol level because they are one of the richest sources of fiber! Most beans contain at least 20% protein and are high in carbohydrates which provide long lasting energy.

Nutritional information:
198 calories, 13 g. of protein, 1 g. of fat, 8 mg. of sodium, 36 g. of carbohydrates

4-H “Treat” with Service

Tips for soups & stews
- Never use dark colored bones in soups; they are too old.
- To make soups or stews thicker, try adding a Tablespoon or more of instant potatoes or one-half cup rolled oats.
- When making a cream soup, try adding a little flour to the milk; it will make it smoother and will work with low fat milk.

Dry Beans and Peas in the Food Guide - USDA
Dry beans and peas are the mature forms of legumes such as kidney beans, pinto beans, lima beans, black-eyed peas, and lentils. These foods are excellent sources of plant protein, and also provide other nutrients such as iron and zinc. They are similar to meats, poultry, and fish in their contribution of these nutrients. Many people consider dry beans and peas as vegetarian alternatives for meat. However, they are also excellent sources of dietary fiber and nutrients such as folate that are low in diets of many Americans. These nutrients are found in plant foods like vegetables.

Because of their high nutrient content, consuming dry beans and peas is recommended for everyone, including people who also eat meat, poultry, and fish regularly. The Food Guide includes dry beans and peas as a subgroup of the vegetable group, and encourages their frequent consumption—several cups a week—as a vegetable selection. But the Guide also indicates that dry beans and peas may be counted as part of the “meat, poultry, fish, dry beans, eggs, and nuts group.”

Source: http://www.mypyramid.gov/pyramid/dry_beans_peas_table.html
Layered Soup Mix

**Ingredients**
- ½ cup Split Peas
- ½ cup Lentils
- ½ cup Pearl Barley
- ½ cup Macaroni
- 2 Tablespoons Parsley Flakes
- 1 teaspoon Dried Thyme
- 2 Tablespoons Dried Chopped Onion
- ½ teaspoon White Pepper

Place half the split peas in the bottom of the jar. Use a spoon to carefully layer half the barley, then half the lentils and half the macaroni. Put all the parsley around the edge of the jar. Repeat the layers then top with the chopped onion and sprinkle the thyme and pepper on top.

Store in an airtight container at room temperature for up to 2 months and attach instructions.

Makes 2 cups of soup mix.

**Preparation Instructions:**
Combine soup mix with 8 cups water or seasoned stock in a large, heavy saucepan. Bring to a boil. Reduce heat to low and cover. Simmer gently for 45 to 50 minutes or until split peas are tender.

- Regular consumption of whole-grain foods is associated with a reduction in the risk of coronary heart disease. Diets high in fibers found in oats, fruit, and beans are linked to a reduction of cholesterol.

**Tips for soups & stews**
- Never use dark colored bones in soups; they are too old.
- To make soups or stews thicker, try adding a tablespoon or more of instant potatoes or one-half cup rolled oats.
- When making a cream soup, try adding a little flour to the milk; it will make it smoother and will work with low fat milk.

**Nutritional information:**
203 calories, 11 g. of protein, 1 g. of fat, 6 mg. of sodium, 39 g. of carbohydrates

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**Measuring Ingredients**
Use the correct measuring utensil when cooking. There are measuring cups for liquid and dry ingredients. To insure the correct amount of any single ingredient, use the correct utensil.

- Liquid measuring cups hold up to 1, 2, or 4 cups and have incremental markings printed on the outside.
- Dry measuring cups are stackable and come in increments of ¼, ½, ⅓, and 1 cup. Some sets of cups include additional sizes of measuring cups.
- Measuring spoons can be used for dry and liquid ingredients.

**Liquid Ingredients** - use a glass or clear plastic liquid measuring cup placed on a level surface. Bend down so your eye is level with the marking on the cup. For small amounts (teaspoon and Tablespoon) of liquid use measuring spoons. Fill to the top of the spoon without letting it spill over.

**Dry Ingredients** – spoon the ingredients into the appropriate dry measuring cup or spoon and level off the excess with the flat side of a knife or spatula. Do not use the curved side or it will decrease the amount of ingredient.

Cowboy Cornbread

Ingredients
1 cup All-purpose Flour  
1 cup Cornmeal  
¼ cup Sugar  
1 teaspoon Baking Soda  
1 Tablespoon Baking Powder  
½ teaspoon Salt

Combine ingredients together; store in an airtight container.  
Attach instructions.  
Makes 2 ½ cups mix.

Additional Ingredients necessary
3 Tablespoons Butter/Margarine  
1 ½ cups Buttermilk  
1 Egg

Preparation Instructions:
Place cornbread mix in a large mixing bowl; set aside.  Whisk 3 Tablespoons melted and cooled butter and 1 ½ cup buttermilk together in a separate bowl; add one egg.  Pour into cornbread mix; stir until just combined.  Spread into a greased 8"x8" baking pan; bake at 425 degrees for 30 minutes.  Makes 6 servings.

★ When mixing batter for cornbread or muffins, put away your electric mixer. Mixing by hand helps eliminate overmixing. It is desirable to have a few lumps in the batter. They will hydrate during baking and the lumps will help give a craggy appearance to your breads.

★ Consider substituting whole wheat flour for white flour. With the grainy nature of cornmeal, it is hard to tell that you slipped whole wheat in. The extra fiber of whole wheat flour is great for your diet.

Nutritional information:
193 calories, 4 g. of protein, 1 g. of fat, 499 mg. of sodium, 43 g. of carbohydrates

4-H “Treat” with Service

Get on the Grain Train - USDA
There are two main types of grain products: whole and refined.

Whole grains contain the entire grain kernel—the bran, germ, and endosperm. (See the whole grain kernel graphic.) Examples include whole-wheat flour, bulgur, oatmeal, rye bread, whole cornmeal, and brown rice.

Refined grains have been milled—the bran and germ are removed. This process also removes much of the B vitamins, iron, and dietary fiber. Some examples of refined grains are wheat flour, enriched bread, and white rice. Some refined grains are enriched. This means certain B vitamins (thiamin, riboflavin, niacin, folic acid) and iron are added back after processing. Fiber is not added back to most enriched grains.

Source: USDA Grain Train Brochure,  
### Chocolate Cake in a Cup

**Mix Ingredients**
1 Chocolate Cake Mix (18.25 oz.), without pudding  
1 Small Pkg. Instant Chocolate Pudding (1.48 oz.)

Combine ingredients together; store in an airtight container or package in ½ cup individual servings. Attach instructions.

**Additional Ingredients necessary**

| 1 Egg | 1 Tablespoon Vegetable Oil | Cooking Spray |

**Preparation Instructions:**

Spray 1 ½ cup Microwaveable Mug with cooking spray. Add ½ cup of mix, 1 egg, and 1 Tablespoon vegetable oil. Mix in mug. Cook in microwave on high for 2 minutes or until the top springs back when touched. Enjoy warm or allow cake to cool.  
Great topped with prepared frosting or ice cream  
★ Other good combinations: spice cake mix and butterscotch pudding, cherry chip cake mix and vanilla pudding, lemon cake mix and lemon pudding, yellow cake mix and vanilla pudding.  
★ Have fun experimenting with new flavor combinations.

**Nutritional information:**

154 calories, 3 g. of protein, 7 g. of fat, 120 mg. of sodium, 36 g. of carbohydrates

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**4-H “Treat” with Service 🌟**

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**Birthday Treat for a Community Shelter**

Sometimes children and adults celebrate birthdays in a shelter. Wouldn’t it be nice if the shelter could have on hand a prepackaged gift! Consider packaging “cake in a cup” (individual serving of cake mix and a microwaveable mug), a small gift, candles, and a card for their enjoyment. Take in to consideration the age and interest of residents in the shelter when selecting gifts.
**Super Fudge Brownies**

**Ingredients**
- 2 cups Sugar
- 1 cup chopped Pecans
- 1 cup Baking Cocoa
- 6-ounce package Semi-sweet Chocolate Chips
- 1 cup All-purpose Flour

In a quart, wide mouth jar, layer sugar and cocoa and pack down; wipe the inside of jar with a paper towel to remove any excess from the sides. Layer flour, pecans, and chocolate chips, packing down tightly after each addition. Secure lid and attach a gift tag and instructions.

**Additional Ingredients necessary**
- 1 cup Margarine/Butter
- 4 Eggs

**Preparation Instructions:**
In a large bowl, cream 1 cup softened butter. Add 4 eggs, one at a time, beating well after each addition. Add brownie mix and beat until smooth. Spread in a greased 13”x9” baking pan; bake at 325 degrees for 40-50 minutes until an inserted toothpick comes out clean. Makes 18 servings.

**Nutritional information:**
197 calories, 2 g. of protein, 7 g. of fat, 141 mg. of sodium, 35 g. of carbohydrates

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**Quick & Easy Pancakes**

**Ingredients**
- 10 cups All-purpose Flour
- 2 ½ cups Powdered Milk
- ½ cup Sugar
- ¼ cup Baking Powder
- 1 ½ Tablespoon Salt

Combine all ingredients; blend well. Place in a large container or divide by 2 cup amounts and store in plastic zipping bags. Store in a cool, dry place for up to 8 months and attach instructions. Makes 12 cups.

**Additional Ingredients necessary**
- 1 ¼ cups Water or Milk
- 1 Egg

**Preparation Instructions:**
Combine 2 cups of mix, one beaten egg, and 1 ¼ cups of water or milk until just moistened; drop by ¼ cupfuls onto hot, greased griddle or skillet. Turn when bubbles form on the surface; grill until golden brown. Makes 12 to 14 pancakes.

* Serve with fresh fruit and yogurt to make a healthy breakfast treat.

**Nutritional information:**
468 calories, 15 g. of protein, 7 g. of fat, 1190 mg. of sodium, 85 g. of carbohydrates
**Ingredients**
5 cups All-purpose Flour; 1 cup Whole Wheat Flour; 1 ½ cup Sugar; 1 cup Instant Powder Milk; ¼ cup Baking Powder; 1 teaspoon Salt; 1 Tablespoon Ground Cinnamon; ½ teaspoon Ground Cloves

In one bowl, mix all dry ingredients together with a fork. Using a sifter, sift into a 2nd bowl, repeat the process and sift a second time. Store in airtight containers at room temperature for up to 4 weeks and attach instructions.

**Additional Ingredients necessary**
Cupcake/paper liners ½ cup Water 1 Egg ¼ cup Vegetable Oil
Optional - ½ cup Raisins, Dates, chopped Nuts, Chocolate chips, Craisins, etc.

**Preparation Instructions:**
Preheat oven to 400 degrees. Line 12 muffin cups with paper liners. Put 2 cups of muffin mix in a mixing bowl. Add ¼ cup of water, 1 lightly beaten egg, and ¼ cup of vegetable oil. Stir until dry ingredients are just moistened. If you like, add ½ cup of raisins, dates, chopped nuts, or chocolate chips. Fill muffin papers about half full. Bake 10 to 15 minutes, until done. Cool for 10 minutes, then remove muffins from pan and cool completely on cooling rack. Makes 12 muffins.

★ Substitute apple sauce or a fruit puree in place of the vegetable oil for a healthier muffin.

**Nutritional information:**
324 calories, 7 g. of protein, 1 g. of fat, 667 mg. of sodium, 74 g. of carbohydrates

![Baked Good Mixes: Marvelous Muffin Mix]

**4-H “Treat” with Service**

<table>
<thead>
<tr>
<th><strong>Amount = 1 ounce equivalent of grains</strong></th>
<th><strong>Common portions and ounce equivalents</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagels 1 “mini” bagel</td>
<td>1 large bagel = 4 ounce equivalents</td>
</tr>
<tr>
<td>Biscuits 1 small (2” diameter)</td>
<td>1 large (3” diameter) = 2 ounce equivalents</td>
</tr>
<tr>
<td>Breads 1 regular slice, 1 small slice French 4 snack-size slices rye bread</td>
<td>2 regular slices = 2 ounce equivalents</td>
</tr>
<tr>
<td>Cornbread 1 small piece (2 ½” x 1 ¼” x 1 ¼”)</td>
<td>1 medium piece (2 ½” x 2 ½” x 1 ¼”) = 2 ounce equivalents</td>
</tr>
<tr>
<td>Crackers 5 whole wheat crackers, 7 square or round crackers</td>
<td></td>
</tr>
<tr>
<td>Muffins 1 small (2 ½” diameter)</td>
<td>1 large (3½” diameter) = 3 ounce equivalents</td>
</tr>
<tr>
<td>Oatmeal ½ cup cooked, 1 packet instant, 1 ounce dry (regular or quick)</td>
<td></td>
</tr>
<tr>
<td>Pancakes 1 pancake (4 ½” diameter) 2 small pancakes (3” diameter)</td>
<td>3 pancakes (4½” diameter) = 3 ounce equivalents</td>
</tr>
<tr>
<td>Popcorn 3 cups, popped</td>
<td>1 microwave bag, popped = 4 ounce equivalents</td>
</tr>
<tr>
<td>Rice ½ cup cooked 1 ounce dry</td>
<td>1 cup cooked = 2 ounce equivalents</td>
</tr>
<tr>
<td>Pasta--spaghetti, macaroni, noodles ½ cup cooked 1 ounce dry</td>
<td>1 cup cooked = 2 ounce equivalents</td>
</tr>
<tr>
<td>Tortillas 1 small flour tortilla (6” diameter) 1 corn tortilla (6” diameter)</td>
<td>1 large tortilla (12” diameter) = 4 ounce equivalents</td>
</tr>
</tbody>
</table>

Source: [http://www.mypyramid.gov/pyramid/grains_counts_table.html](http://www.mypyramid.gov/pyramid/grains_counts_table.html)
Ingredients
4 cups All-purpose Flour 4 cups Sugar 1 teaspoon Salt
1 ½ cup Instant Milk 1 ½ Tablespoons Baking Powder

In one bowl, use the fork to mix all dry ingredients together well. Using the sifter and the other bowl, sift the mixture twice. Store in air tight containers at room temperature for up to 4 weeks. Attach instructions. Makes 8 cups of mix.

Additional Ingredients necessary
½ – ¾ cup Margarine/Butter ½ - ¾ cup Chocolate Chips
1 Egg ½ teaspoon Ground Cinnamon
½ cup Chopped Pecans/Walnuts 1 ½ cup Quick Cooking Oatmeal (not instant)
½ cup Cocoa s2 teaspoons Vanilla extract
¼ - ⅓ cup cold Water

Preparation Instructions:
Brownies (makes 16 squares)
Preheat oven to 375°F. Mix 2 cups of cookie mix with 1 lightly beaten egg. Stir in ¼ cups melted butter or margarine. Mix in ½ cup chocolate chips, ½ cup chopped pecans or walnuts, ½ cup cocoa, ¼ cup cold water, and 2 teaspoons vanilla. Pour the batter into a foil-lined 8 inch square cake pan. Bake 25 minutes, until top springs back when touched and sides have shrunk away from pan. Remove from oven and place on cooling rack. When completely cool, cut into squares.

Chocolate Chip Cookies (makes about 30)
Preheat oven to 350°F. Mix 2 cups of cookie mix with ½ cup melted butter or margarine. Add 1 lightly beaten egg and 2 teaspoons vanilla, and stir. Add ½ cup chocolate chips. Mix well. With lightly floured hands, shape into 1 inch balls and place on a lightly greased baking sheet. Bake 8 to 10 minutes, until golden. Immediately remove from baking sheet to cooling rack. Raisins, chopped nuts, or coconut can be substituted for chocolate chips.

Oatmeal Bars (makes about 2 dozen)
Preheat oven to 350°F. Mix 2 cups of cookie mix with 1 ½ cups quick cooking oatmeal (not instant) and ¼ teaspoon ground cinnamon. Add 1 lightly beaten egg, stir in ¾ cup melted butter or margarine, ¼ cup cold water and 2 teaspoons vanilla, and stir. (Fold in ½ cup raisons, cranraisins, or chocolate chips for a special treat.) Pat mixture into a 9 inch square cake pan lined with aluminum foil. Bake for 30 to 35 minutes, until golden. Remove from oven and place on cooling rack. When completely cool, cut into bars.

★ Substitute apple sauce or a fruit puree in place of the vegetable oil for a healthier brownie or oatmeal bar.

Nutritional information:
616 calories, 6 g. of protein, 1 g. of fat, 543 mg. of sodium, 148 g. of carbohydrates

4-H “Treat” with Service

Any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed.

Vegetables are organized into 5 subgroups, based on their nutrient content. Some commonly eaten vegetables in each subgroup are:

<table>
<thead>
<tr>
<th>Dark green vegetables</th>
<th>Dry beans and peas</th>
<th>Starchy vegetables</th>
<th>Starchy vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>broccoli</td>
<td>black beans</td>
<td>corn</td>
<td>green peas</td>
</tr>
<tr>
<td>collard greens</td>
<td>black-eyed peas</td>
<td>green peas</td>
<td>lima beans (green)</td>
</tr>
<tr>
<td>dark green leafy lettuce</td>
<td>garbanzo beans</td>
<td>potatoes</td>
<td></td>
</tr>
<tr>
<td>mustard greens</td>
<td>kidney beans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>romaine lettuce</td>
<td>lentils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>spinach</td>
<td>lima beans (mature)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>turnip greens</td>
<td>navy beans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange vegetables</td>
<td>pinto beans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>acorn squash</td>
<td>soy beans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>butternut squash</td>
<td>split peas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>carrots</td>
<td>tofu (bean curd made from soybeans)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pumpkin</td>
<td>white beans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sweetpotatoes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starchy vegetables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>artichokes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>asparagus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bean sprouts</td>
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</tr>
<tr>
<td>beets</td>
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<td></td>
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<tr>
<td>brussels sprouts</td>
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<tr>
<td>cabbage</td>
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<tr>
<td>cauliflower</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>celery</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References and Resources:

- Oklahoma 4-H Food Science Lit. No. 185, 186, 187, and 188.
- Oklahoma 4-H Volunteer Development Series #865 Experiential Learning
- Oklahoma 4-H Volunteer Development Series #866 Service Learning

Each kernel of popcorn does contain a small drop of water stored inside a circle of soft starch. (That's why popcorn needs to contain 13.5 percent to 14 percent moisture.) The soft starch is surrounded by the kernel's hard outer surface.

As the kernel heats up, the water begins to expand, and pressure builds against the hard outer surface. Eventually, this hard surface gives way, causing the popcorn to explode.

As it explodes, the soft starch inside the popcorn becomes inflated and bursts, turning the kernel inside out. The steam inside the kernel is released, and the popcorn is popped!

History of Popcorn

- It is believed that the first use of wild and early cultivated corn was popping.
- The oldest ears of popcorn ever found were discovered in the Bat Cave of west central New Mexico in 1948 and 1950. Ranging from smaller than a penny to about 2 inches, the oldest Bat Cave ears are about 4,000 years old.
- In 1519, Cortes got his first sight of popcorn when he invaded Mexico and came into contact with the Aztecs. Popcorn was an important food for the Aztec Indians, who also used popcorn as decoration for ceremonial headdresses, necklaces and ornaments on statues of their gods, including Tlaloc, the god of rain and fertility.
Product Packaging
Consider the consumer when marketing and selecting product packaging.

- Age – age appropriate
- Gender – male and female
- Abilities/Disabilities – youth, adults, or mature adults
- Facilities and Equipment – for preparing product being supplied

Font
Keep it simple and easy to read. No more than two font types. Limit use of ALL caps. Keep the audience in mind – can they read the style and size of font.

Graphics
Use appropriate art which has meaning and purpose. Do not use graphics to fill space or just because it is “cute.”

Text
Do not overburden the reader with too much information. Select words carefully for the audience. Watch grammar and spelling.

Color
Select color carefully, colors have meaning. Using more than three color combinations can be distracting. Remember the audience when choosing colors.

Consistency
All promotional materials produced should feel like they belong to a set. Do not change your fonts, colors and graphics every time you put together a new design. Consumers should be able to associate 4-H with the product. Do not reinvent your company’s image every time you go to the printer or change committees.

Accuracy
Make sure that the information on your label is accurate. Include ingredients so those with allergies can know whether it is safe to eat. If you claim your product is a good or excellent source of a nutrient make sure that is true.

Image
Your product is only as good as its image. Depending on your audience and purpose, you must form your image accordingly. If your target audience is retired adults, do not make the mistake of designing your image to attract children.

Audience
Know your audience. You cannot market a product, persuade consumers or target donors until you know them. The intended audience/donor is not likely to trust an organization that does not understand its target audience. A family crisis shelter is not going to buy into the program/project that does not understand the challenges they face each day.

* Recommend to the subcommittee to download the OSU Fact sheet FAPC 124 before they begin the planning process.

# Common Substitutions

Table modified from [http://allrecipes.com/HowTo/Common-Substitutions/](http://allrecipes.com/HowTo/Common-Substitutions/)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
<th>Substitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baking powder</td>
<td>1 teaspoon</td>
<td>1/4 teaspoon baking soda plus 1/2 teaspoon cream of tartar OR 1/4 teaspoon baking soda plus 1/2 teaspoon buttermilk (decrease liquid in recipe by 1/2 cup)</td>
</tr>
<tr>
<td>Broth: beef or chicken</td>
<td>1 cup</td>
<td>1 bouillon cube plus 1 cup boiling water OR 1 Tablespoon soy sauce plus enough water to make 1 cup OR 1 cup vegetable broth</td>
</tr>
<tr>
<td>Brown sugar</td>
<td>1 cup, packed</td>
<td>1 cup white sugar plus 1/4 cup molasses and decrease the liquid in recipe by 1/4 cup OR 1 cup white sugar OR 1 1/4 cups confectioners’ sugar</td>
</tr>
<tr>
<td>Butter (salted)</td>
<td>1 cup</td>
<td>1 cup margarine OR 1 cup shortening plus 1/2 teaspoon salt OR 7/8 cup vegetable oil plus 1/2 teaspoon salt OR 7/8 cup lard plus 1/2 teaspoon salt</td>
</tr>
<tr>
<td>Butter (unsalted)</td>
<td>1 cup</td>
<td>1 cup shortening OR 7/8 cup vegetable oil OR 7/8 cup lard</td>
</tr>
<tr>
<td>Buttermilk</td>
<td>1 cup</td>
<td>1 cup yogurt OR 1 Tablespoon lemon juice or vinegar plus enough milk to make 1 cup</td>
</tr>
<tr>
<td>Corn syrup</td>
<td>1 cup</td>
<td>1 1/4 cup white sugar plus 1/2 cup water OR 1 cup honey OR 1 cup light treacle syrup</td>
</tr>
<tr>
<td>Evaporated milk</td>
<td>1 cup</td>
<td>1 cup light cream</td>
</tr>
<tr>
<td>Fats for baking</td>
<td>1 cup</td>
<td>1 cup applesauce OR 1 cup fruit puree</td>
</tr>
<tr>
<td>Flour--Bread</td>
<td>1 cup</td>
<td>1 cup all-purpose flour plus 1 teaspoon wheat gluten (available at health food stores &amp; some supermarkets)</td>
</tr>
<tr>
<td>Flour--Cake</td>
<td>1 cup</td>
<td>1 cup all-purpose flour minus 2 Tablespoons</td>
</tr>
<tr>
<td>Honey</td>
<td>1 cup</td>
<td>1 1/4 cup white sugar plus 1/2 cup water OR 1 cup corn syrup OR 1 cup light treacle syrup</td>
</tr>
<tr>
<td>Lemon zest</td>
<td>1 teaspoon</td>
<td>1/2 teaspoon lemon extract OR 2 table spoons lemon juice</td>
</tr>
<tr>
<td>Milk--whole</td>
<td>1 cup</td>
<td>1 cup soy milk OR 1 cup rice milk OR 1 cup water or juice OR 1/4 cup dry milk powder plus 1 cup water OR 7/8 cup evaporated milk plus 1/2 cup water</td>
</tr>
<tr>
<td>Rice--white</td>
<td>1 cup, cooked</td>
<td>1 cup cooked barley OR 1 cup cooked bulgur OR 1 cup cooked brown or wild rice</td>
</tr>
<tr>
<td>Shortening</td>
<td>1 cup</td>
<td>1 cup butter OR 1 cup margarine minus 1/2 teaspoon salt from recipe</td>
</tr>
<tr>
<td>Sour cream</td>
<td>1 cup</td>
<td>1 cup plain yogurt OR 1 Tablespoon lemon juice or vinegar plus enough cream to make 1 cup OR 3/4 cup buttermilk mixed with 1/2 cup butter</td>
</tr>
<tr>
<td>Stock--beef or chicken</td>
<td>1 cup</td>
<td>1 cube beef or chicken bouillon dissolved in 1 cup water</td>
</tr>
<tr>
<td>Vegetable oil--for baking</td>
<td>1 cup</td>
<td>1 cup applesauce OR 1 cup fruit puree</td>
</tr>
<tr>
<td>White sugar</td>
<td>1 cup</td>
<td>1 cup brown sugar OR 1 1/4 cups confectioners’ sugar OR 3/4 cup honey OR 3/4 cup corn syrup</td>
</tr>
<tr>
<td>Yogurt</td>
<td>1 cup</td>
<td>1 cup sour cream OR 1 cup buttermilk OR 1 cup sour milk</td>
</tr>
</tbody>
</table>