

Activity 4:

Classifying Space Food

Objective

To classify the space food manifested on the Space Shuttle or International Space Station food lists into the major food groups found in the Food Pyramid Guide.

Science Standards

- **Science as Inquiry:** Abilities necessary to do scientific inquiry
- **Science in Personal and Social Perspectives:** Personal health

Materials Needed

Baseline Space Shuttle Food and Beverage List
(Appendix A)

International Space Station Daily Menu Food List
(Appendix B)

USDA Food Guide Pyramid
(Appendix G)

Background

The Food Guide Pyramid has been established to help people maintain a diet that is adequate in nutritional value. Maintaining good health in space is important, and to help do this, a good diet is imperative. Balanced meals of good nutritional food will help ensure that the astronauts will be able to perform their jobs in space.

The U.S. Department of Agriculture (USDA) has made recommendations for a healthy diet. Foods are grouped according to the nutrients they provide. Many foods, such as corn, are hard to place into a specific group. Sweet corn can be counted as a starchy vegetable, but corn tortillas are in the grain group. Dry beans and peas (legumes) can be counted as either a starchy vegetable or a meat.

The following is a web site that can be used to obtain more indepth information about the Food Guide Pyramid and nutrition:

<http://www.usda.gov/fcs/cnpp/using.htm>

Food Groups and Suggested Daily Servings Chart

Food Groups	Suggested Daily Servings
Grain (Bread, Cereal, Rice, and Pasta)	6 to 11 servings
Fruit	2 to 4 servings
Vegetable	3 to 5 servings
Meat (Meats, Poultry, Fish, Eggs, and Nuts)	2 to 3 servings
Dairy (Milk, Yogurt, and Cheese)	2 to 3 servings
Oil (Fats and Sweets)	Use sparingly

Procedure

Using the Baseline Space Shuttle Food and Beverage List or the International Space Station Daily Menu Food List, classify the foods into the major groups as shown above.

Discussion

1. Which foods did you find that can fit into more than one food group?
2. In your opinion, which food group had the better selection of foods?
3. Why is it important to maintain good health in space?
4. How does a balanced diet maintain good health?



Extensions

1. Have the class design their own ISS food menu for a 30-day crew rotation or Space Shuttle food menu for a 7-day rotation. Have them analyze how many times a particular food or drink item was served and if some items were served in combination with another (such as fish always served with french fries). Avoid monotonous or repetitive selection by increasing the variety of food choices.
2. Using a computer, create a data base file. Design a data base template that includes fields such as day (1,

2, 3, etc.), meal (breakfast, lunch, dinner, and a possible snack), and the six major food groups (grain, vegetable, fruit, dairy, meat, and oil). Enter the information from the menus and determine which meals are balanced ones by searching for any empty fields in the food groups.

Assessment

The students will compare and contrast their findings.

