Simple Keys and Nutrition
Grade 3
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References:

- Kelly Krupa, Categories and Dichotomous Keys
  *Frog and Toad are Friends*, Lobel.

Benchmarks:

SLC 4: Students will use a simple key to distinguish between objects.

Objectives:

Students will identify descriptive questions as a method for distinguishing objects and for finding labels for objects of unknown identity. Students will learn to group objects into different categories, and see that they can be sorted in different ways. Students will use a simple key to reinforce their learning of the food pyramid by classifying foods into one of the 6 food groups.

Materials:

- Pictures of food from each of the food groups.
- Chalkboard space or large sheets of paper and markers.
- Stickers
- Toy phone
- Food key worksheet
- Food key transparency

Initial Demonstration:

Select 5 or 6 students from the class and have them stand up front. Tell the class, “We are going to pretend that this morning the class had a visitor: Mrs. Marbles. She worked with these students, and she was going to give one of them a sticker. She called the school to tell your teacher which one, but she can’t remember the student’s name. How can your teacher figure out which student should get the sticker?”

Accept all the ideas, and make a list on the board. Lead the students toward asking Mrs. Marbles descriptive questions. Make a list of each question asked, and then separate the students at the front into groups based on the questions. (Pretend to relay the questions to Mrs. Marbles and to get her answers). This will help the students to see what follow-up questions would be logical. For example, if the first question is, “was the
student a boy or a girl?” Separate the group into boys and girls. If the student was a boy, then the next question should not be, “Was she wearing a skirt?”

When the student is identified, ask the class how the students were grouped. What was used to distinguish between different students? What kind of label do people have? If time permits, use the list of questions to identify a second student for a different sticker. Show the students that they have developed a key.

**Target Observations:**

- Students can be put into groups and identified based on their physical characteristics.
- There is more than one way to sort and identify people.
- Unique objects (for example people) have unique labels (their names).

**Target Model:**

- Physical characteristics can help distinguish unique objects.
- A key is a systematic way to sort by physical characteristics.
- There are many ways to sort people.

**Procedure:**

Remind the students of the food pyramid. Pass out pictures of food from the different food groups (one set for each group). Ask the students what the pictures have in common (they are all foods). Have the students put the pictures into two groups of their choosing. (For example, things that come from animals, things that come from plants). Ask the students how they decided to group the foods. Accept all answers. Point out that there is more than one way to sort the foods. Have the students write this distinction on the graphic organizer on the attached worksheet. The students should then take one of the groups and divide it into two groups. They should continue this until they have 6 food groups, with each picture in its own group. (The names of the food groups will go in the bold boxes. Depending on how they sort the foods, one of the boxes will be empty).

If time permits, ask each group to present their dichotomous key and explain why it is a good way to organize the food. Have the class discuss which group has the best organization for various purposes. For example: which chart is a good way to organize food in a grocery store? Which is good for picking foods that you like to eat? Which one is good if you want a nutritionally balanced meal?

**Target Revised Model:**

- Physical characteristics as well as origins, and preferences can be used to sort people and food.
- There are many ways to sort both people and food.
- Which one is “best” depends on what your grouping is used for.
Procedure:

Pass out a picture of a food whose food group is not obvious (butter, green beans, cherry pie, etc.) Have the students use their key to decide what group the food belongs in.

How many food groups are there? Is this the only way to group the foods we eat? Why don’t we all use our own groups of food when we decide what to eat; why do doctors all try to use the same groups when they tell us what to eat? How is having a key helpful in deciding what group a food belongs to? What is a disadvantage of a flow chart key or graphic organizer (it takes up a lot of room).

Target Revised Model:

- A key is a system to help sort objects.
- All characteristics (physical, origin, preference, etc.) can be used to sort objects.
- There are many ways to sort foods.
- The best way to sort things depends on the purpose of sorting.

Procedure:

Put the food pyramid key on the board (attached). Tell the students you have a favorite food, and you don’t know what group it belongs to. (A good example is something like “Kheer”, which is like rice pudding) Ask them to help you decide by using the key. When you get to the answer, tell them what the food is and ask them if they put your favorite food in the right group. Alternatively, play a “Guess the food group” game. Have one student look at a picture of food. The class will ask the students the questions on the dichotomous key to try and figure out what group it belongs in. When they choose a group, the picture is revealed and the class decides if they were right.

Which is easier to use, a picture key or a list key? What is an advantage of a list key?

Target Revised Model:

- Even unfamiliar foods can be sorted with the help of a key.

Extension: In the book *Frog and Toad are Friends*, there is a story about a lost button. This story can be used to create a key to determine which button belongs to Toad.

Summary:
Keys are useful tools for sorting objects. Even unknown or unfamiliar objects can be grouped with the use of a key. There are also many different ways to sort things (by color, by shape, by size, etc.)
Simple Key for Foods

1). Does the food come from an animal?
   If yes, go to #2
   If no, go to #3

2). Is the food made from milk?
   If yes, go to #6
   If no, the food belongs in the MEAT, FISH, EGGS, DRY BEANS and NUTS GROUP

3). Does the food have seeds on the inside?
   If yes, the food belongs to the FRUIT GROUP
   If no, go to #4

4) Is the food made from a grain (like rice, wheat, or oats)?
   If yes, go to #5
   If no, go to #6

5) Does the food have a lot of sugar, fat, or oil added to it?
   If yes, the food belongs to the FATS, OILS, AND SWEETS GROUP
   If no, the food belongs to the BREAD, CEREAL, RICE, AND PASTA GROUP

6) Is the food made from nuts or dry beans?
   If yes, go to #2
   If no, the food belongs to the VEGETABLE GROUP

7) Does the food have a lot of sugar, fat, or oil added to it?
   If yes, the food belongs to the FATS, OILS, AND SWEETS GROUP
   If no, the food belongs to the MILK, CHEESE, AND YOGURT GROUP
All Foods

Group 1:

Group 2:

Group 3:

Group 4:

Group 5:

Group 6:

Group 7:

Group 8:

Group 9:

Group 10:

Group 11:

Group 12: