

Unit Theme: Nutrition

Lesson Title: Classifying with Venn Diagrams
Lesson Number: 3

Subject: Health/Math/Language Arts
Grade: 3

NYS Standard(s):

Health, Physical Education, and Family and Consumer Sciences

Standard 1—Personal Health and Fitness

Students will have the necessary knowledge and skills to establish and maintain physical fitness, participate in physical activity, and maintain personal health.

English Language Arts

Standard 1—Language for Information and Understanding

Students will listen, speak, read, and write for information and understanding.

Mathematics

Standard 3—Operations

Students will use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

NYS Performance Indicator(s):

Students will possess basic knowledge and skills which support positive health choices and behaviors.

Students will understand the importance of nutritious food and how it contributes to good health, make simple nutritious food choices, and assist with basic food preparation.

Students will construct tables, charts, and graphs to display and analyze real-world data.

Students will use physical materials, pictures, and diagrams to explain mathematical ideas and processes and to demonstrate geometric concepts.

Essential Question: How do we use Venn diagrams?

Lesson Objectives:

1. Students will understand and be able to explain the use of Venn diagrams.
2. Students will be able to organize objects (manipulative shapes, foods) into Venn diagrams.
3. Students will know and be able to apply “similarity” and “difference” in reading literature, making mathematical connections, and analyzing components of a healthy diet.

Anticipatory Set:

I will begin the lesson by showing students two large circles made of colored rope. I will lay both circles on the floor, forming a Venn diagram. I will then select a student wearing jeans and place him/her in one circle, a student wearing sneakers in the other circle, and a student wearing both in the area made up by the intersection of both circles. I will ask students to share their ideas about why I placed the students in their positions.

Communicate Purpose:

“We’re going to learn about two new words today: ‘compare’ and ‘contrast.’ We’ll look at shapes, books, and foods to find out how they are alike and how they are different.

Description/Method(s)/Assessment(s):

Method(s):

I will use active learning and cooperative groups to show students how Venn diagrams can be used to compare and contrast different things. Literature, math, and health will be integrated into this lesson.

Description:

1. After defining “compare” and “contrast,” we will place the words on our word wall.
2. I will begin by giving each group of students a piece of easel paper with two large intersecting circles drawn on it.
3. I will then give each group a box of colored manipulative shapes (squares, rectangles, triangles, and circles) of different sizes.
4. I will ask each group to organize the shapes into as many groups as they want, as long as they can explain why they grouped their shapes the way they did.
5. Next, I will ask the students to reorganize their groups of shapes into just two groups, again, making sure they are able to explain why they organized them in a certain way.
6. Finally, I will ask students to put their shapes onto their Venn diagrams, being careful to keep the two distinct groups separate, except for any shapes from either group that might share certain characteristics (color, shape, size).
7. Each group will then present their Venn diagram to the class, explaining how they classified their manipulatives.
8. Later in the day, we will read two versions of a story. First we will read The Three Little Pigs by Paul Galdone. We will then read The True Story of the Three Little Pigs by Jon Scieszka.
9. Using easel paper, we will create (as a class) a giant Venn diagram comparing the two stories (characters, events, author, narrator, etc).

Closure:

Explain to students that they can use their comparing and contrasting skills in many different situations, like when grocery shopping, picking out a movie to watch, or choosing the perfect gift for someone. Also, be sure they know that they can organize things into groups in many different ways. As long as their grouping makes sense and can be explained, they’re right on target.

Assessment(s):

Students will be given large copies of a Venn diagram. They will select (blindly) six different foods from a box. Students will place their foods on the Venn diagram. They may place their foods anywhere they wish on the diagram, as long as they can explain why they placed them in a particular way. This will be done independently, and one at a time, students will come up and show me their Venn diagrams and explain the placement of their foods.

Student-Teacher Resources:

Materials:

- Word Wall cards
- Venn diagrams
- Chart paper
- Colored manipulative shapes
- Hula hoops
- Artificial foods

Student Resources:

Galdone, Paul. (1998). *The three little pigs*. New York: Clarion Books.
Scieszka, Jon. (1996). *The true story of the three little pigs*. New York: Puffin Books.
Venn diagrams

Teacher Resources:

DeTemple, Duane W., and Loug, Calvin T. (2000). *Mathematical reasoning for elementary teachers*. New York: Addison-Wesley.

Galdone, Paul. (1998). *The three little pigs*. New York: Clarion Books.

Scieszka, Jon. (1996). *The true story of the three little pigs*. New York: Puffin Books.

Weisglass, Julian. *Exploring elementary mathematics: A small group approach for teaching*. (1990). Dubuque, Iowa: Kendall/Hunt Publishing Company.

Venn Diagram:

