

How Heavy Is It?

Unit 4

Grade Level

Kindergarten

Overview

Students will weigh objects and investigate which item is heavier and lighter.

Key Standards

MKM1. Students will group objects according to common properties such as longer/shorter, more/less, taller/shorter, and heavier/lighter.

d. Compare and order objects on the basis of weight.

MKN1. Students will connect numerals to the quantities they represent.

a. Count a number of objects up to 30.

c. Write numerals through 20 to label sets.

e. Compare two or more sets of objects (1-10) and identify which set is equal to, more than, or less than the other.

Possible Materials

- Balance scales
- bags with 2 items in each bag to weigh
- student task sheet,
- pencils
- 3 items for ordering heaviest to lightest

Task

- Listen to the book about weighing objects. Using a book such as Hershey's Weights and Measures by Jerry Pallota or One-Eyed Jake by Pat Hutchins, introduce this task to the students.
- Discuss prior lessons on measurement. Ask questions such as, *What kinds of things can we measure? How did we measure those items?*
- Share two objects, such as a large sponge and a bottle of glue, and ask students *Which is heavier?*
- Allow students to feel objects and make observations about the weight of the two items. Ask the question, *How can we prove which item is heavier?*
- Show students the balance scale.
- Ask the question, *Where have you seen other scales used?* Discuss where they have seen these scales in the real world (the grocery store, the doctor's office, the bathroom.)The teacher should show real examples or pictures of scales.
- Discuss the following questions with students, *Have you ever seen or played on a seesaw? What happens when you play on a seesaw?* Demonstrate how a scale shows a measure of weight on the dial. Explain that the balance scale is like a seesaw, comparing the weight of two objects. You may choose to help students develop the

concept of weight by holding two objects such as a tennis ball and golf ball or marble (both are spheres) in their hands, one in each hand at the same time. Compare the weights when they are placed in the scale. Focus on the vocabulary terms heavier and lighter.

- Model for students how to weigh an object, using the number of teddy bear counters to balance or equal the weight of the object.
- Students should first weigh the two objects using the balance scale. Next, students should compare and discuss with their groups the weights of different items in the center and discuss which is heavier and which is lighter. Students should use a balance scale and weigh objects. After they have compared the weight of two objects, have them weigh each object individually by balancing the object with the correct number of teddy bear counters. Then students should record the weights on the student task sheet. Students will draw the object and indicate the number of teddy bears needed to balance the scale.
- Share answers with others in your group.
- Teacher will facilitate discussion about weight and students will share their results with the class.

Sample Questions

- Which object do you think is heavier? How do you know?
- Can you hold the objects in your hands and tell which is heavier?
- How can you know for sure which one is heavier and which one is lighter?
- How can we prove which item is heavier and lighter?
- Can you always look at an object and tell which is heavier?
- How can you remember which one is heavier and lighter and let other people know?
- How can you find out how many teddy bear counters it takes to balance the scale?
- How will you know the number of teddy bear counters it took to balance the object?
- How can you be sure you counted correctly?

Sample Question Solutions

- Students will guess depending on size of object. If an object is bigger, young children typically think the object will be heavier.
- Usually, students can hold an object and tell which one is heavier.
- It is important to discuss that we can prove which one is heavier by weighing the objects. Students will use balance scales to prove which is heavier.
- By weighing the objects, students will discover that you cannot always look at an object and tell which is heavier or lighter.
- Students should explain that it is important to use the teddy bear counters in the balance scales to check the weight. After the students count the teddy bears, they will double check to make sure they counted correctly.

Assessment Ideas

- A student task sheet is included for students to record their findings.
- Anecdotal notes