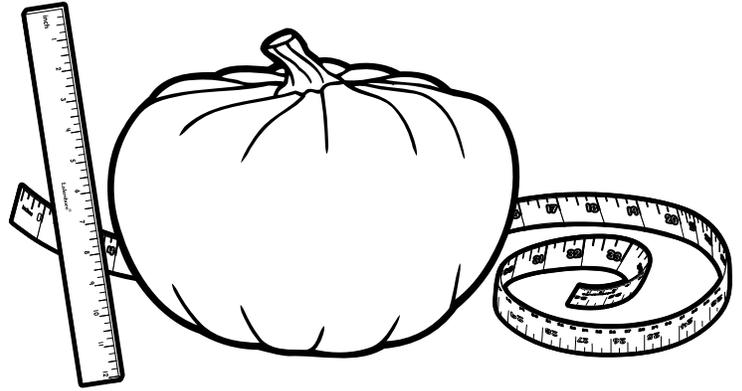


Pumpkin Measurement

3rd–5th Grade

Objectives

- Students will listen to a story about pumpkins and learn more about them.
- Students will learn and understand measurement vocabulary words.
- Students will estimate—and then measure—the weight, height, circumference, radius and diameter of a pumpkin.



Materials Needed

- *Pumpkins* by Ken Robbins
- Small- to medium-sized pumpkins (one for each small group of three to four students and one medium pumpkin for the class) *Pumpkins should vary in size as much as possible.*
- Scale
- Sharp knife (for teacher or adult use only)
- Rulers
- String or yarn [FG639]
- Pencils [SU28]
- Pumpkin Measurement Record Sheet

Products with item numbers are available at LakeshoreLearning.com.

Introduction

1. Read aloud *Pumpkins* by Ken Robbins.
2. Hold up a medium-sized pumpkin and ask students to estimate, or guess, how much the pumpkin weighs. (Students' estimates will probably vary widely.)
3. Explain to students that having a starting point of knowledge before estimating will help estimates be more accurate. For example, if students know how much the pumpkin in your hands weighs, this knowledge will help them estimate the weight of smaller or larger pumpkins.
4. Weigh your pumpkin on a scale and tell students the weight. Explain that you'll be using this measurement in the next activity.

Procedure

1. Point out that, in addition to measuring weight, we can use pumpkins to calculate other measurements as well! Make an illustration of your pumpkin on the chalkboard and write its weight below. You can also use an interactive whiteboard, chart paper or a document camera. Write the following measurement vocabulary words below your illustration: weight, height, circumference, diameter and radius.
2. Explain the definitions of each measurement term below. Write the definitions next to each word as a reference for the lesson.

weight: the measurement of how heavy something is

height: the measurement of how tall something is

circumference: the distance around a circle or sphere

diameter: the length of a line through the center of a circle or sphere

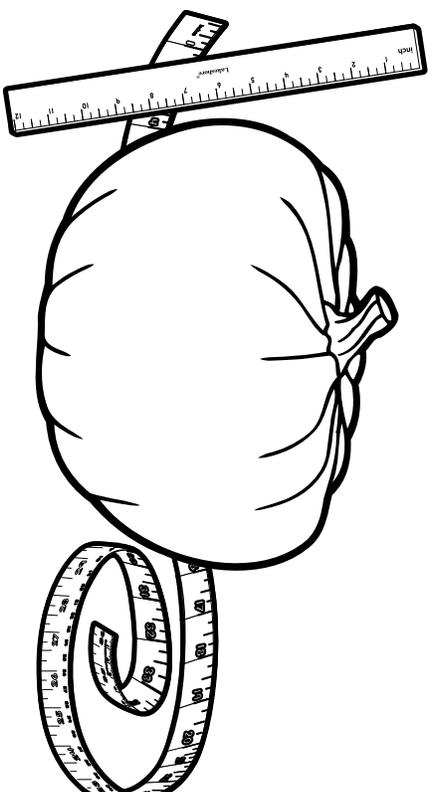
radius: the length of a line from the center of a circle or sphere to its edge

3. Next, call on student volunteers to help you find the height, circumference, diameter and radius of the pumpkin you showed to the class. (For the circumference, you can use string or yarn to measure the widest spot around the pumpkin, and then measure the length of the string or yarn. For the diameter and radius, you will need to slice the pumpkin in half crosswise before measuring.)
4. Record the measurements on your pumpkin illustration.
5. Tell students that they can use these measurements as a reference point for making their own estimates in the activity that follows.

Guided Practice

1. Make several copies of the Pumpkin Measurement Record Sheet. Divide the class into small groups of three to four students and give each group a pumpkin, some string or yarn, rulers, pencils and the recording sheet. (The sizes of the pumpkins should be different.)
2. Explain to students that they are going to work together to estimate the weight, height, circumference, diameter and radius of their pumpkin. Remind them to think about the class pumpkin's measurements and then make estimates for their pumpkin, recording them on the sheet.
3. Prompt students to use the tools provided to calculate and record their pumpkin's actual measurements. After students have measured the weight, height and circumference, an adult will need to cut the pumpkins in half crosswise for each group to measure the diameter and radius. (You may want to pre-cut the pumpkins and keep the pieces together until the diameter and radius are measured.)
4. When the groups have completed and recorded their measurements, invite them to share what they found with the class. Ask students the following questions: *Were their estimates accurate or close to the actual measurements? Why or why not? Were students surprised by any of the measurements? Did they observe anything about the diameter and radius?* (The radius should be half the diameter.)

Pumpkin Measurement Record Sheet



Estimate

Actual

	Estimate	Actual
Weight		
Height		
Circumference		
Diameter		
Radius		