

## Introduction to Measurement

**Grade Level(s):** 3

**Subject(s):** Mathematics/Measurement

**Description:** In this lesson, students will understand the attribute of length, develop a process of measuring, understand concepts related to units of measure, use estimating to measure, and learn how to use these processes in everyday life. This lesson also allows the educator to integrate literature into the mathematics curriculum.

**Goal:** To introduce students to measurement by integrating literature.

**Objectives:** Students will experience a variety of activities that will allow them to focus on:

comparing objects directly  
recognizing the various units of measurements  
comparing lengths of objects in the classroom  
use estimating to measure  
apply this measuring process to everyday life

**Materials:**

- Inch by Inch by Leo Lionni
- inchworm manipulatives (teacher-made or see **Internet** sites below)
- paper
- pencils
- string
- scissors

**Procedures:**

### *Teacher's Directions*

(If necessary, prepare the inchworm manipulatives ahead of time. Teachers can create inchworms out of construction paper and laminate them for durability. As an alternative, teachers can also purchase "inchworm manipulatives.")

Read the story Inch by Inch to the class. Stimulate questions as the story is read to the students:

1. *Why would he be able to measure the different birds?*
2. *How does he measure?*
3. *What are some things you would like to measure?*
4. *What do you think the worm will do when the nightingale asks the worm to measure her song?*
5. *Can you measure a song?*
6. *How can you measure a song?*

### ***Student's Directions***

1. Discuss with the students how the inchworm measured the birds in the story.
2. Have students find at least one object in the classroom that is the same length as their worm.
3. Have the students divide into three groups. (Cut different sizes of string and give one to each student. Students must find their groups by matching string sizes.)
4. Have the students use their inchworms to measure one of the strings in their group. (Explain to the students to lay their worms end to end and then count the number of worms used. Ask the students how long their strings are. Have them explain how they came up with their answers.)
5. As individual groups, have the students measure ten items in the room with their inchworms.
6. Give each group extra inchworms so they can measure larger things.
7. Students should record their measurements.

**Assessment:** As a class each of the groups will share their recorded measurements for objects in the classroom. Write each object's name on the board and its measurement. After each group presents, compare the measurements they recorded.