

Reading a Tape Measure

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2017

Overview:

A specific need that was shared during the teacher externship experience was new hires' inability to read a tape measure and measure accurately. In this lesson, students will gain experience in problem solving and teamwork as they practice using a tape measure by measuring a variety of objects.

Featured Externship Business:

FWD Seagrave Fire Apparatus

Subject:

Math

Grade Level(s):

6-8 grades

Learning objectives:

After doing this activity, students should be able to:

- read a standard tape measure
- work in a group
- be able to solve simple problems involving measuring
- be able to write a coherent paragraph

Workplace Readiness Skill:

- | | |
|--|--|
| <input type="checkbox"/> Social Skills | x Communication |
| x Teamwork | x Critical Thinking |
| <input type="checkbox"/> Attitude and Initiative | <input type="checkbox"/> Planning and Organization |
| <input type="checkbox"/> Professionalism | <input type="checkbox"/> Media Etiquette |

Type of Activity:

- x Individual
- x Small Group
- x Whole class

Common Core State Standards in Mathematics:

CCSS.Math.Content.3.NF.2-Understand a fraction as a number on a number line

CCSS.Math.Content.3.NF.3-Explain equivalence of fractions

Common Core State Standards for Literacy in History/Social Studies, Science, and Technical Subjects:

CCSS.ELA-LITERACY.WHST.6-8.2

Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

CCSS.ELA-LITERACY.WHST.6-8.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Time: 40-45 minutes

Materials:

- Tape measures
- Various sized objects
- Worksheet

Directions:

1. Warm-up: there will be several diagrams (linear, pie-shaped, rectangular) with shaded portions on the smart-board. Students will be asked to describe what fraction of each shape is shaded.
2. Discussion: As a class, we will discuss the various fractions that could describe the different shaded regions. This will include equivalent fractions such as $\frac{1}{2}$, $\frac{2}{4}$, $\frac{6}{8}$, $\frac{3}{4}$, etc.
3. As a class, we will “build an inch” on the smartboard
 - Teacher will draw a random length line on the smartboard and call it an inch
 - Split it in half and as a class decide what to call each part and how to label it (half)
 - Split each of these parts in half and decide what to call them and how to label them (fourths)
 - Split each of these in half and decide what to call them and how to label them (eighths)
 - Do this one more time (sixteenths)
4. I will share some of the processes that I observed and discuss the need for being able to be accurate when reading a tape measure (or measuring in general).

5. Activity: After discussing fractions and their equivalents, the students will be asked to measure several preselected objects and write their measurements on the board.
6. Discussion: Now, the class will discuss the measurements that they arrived at and demonstrate, either using the measuring app on the smartboard or a doc cam, how to get the measurements. The teacher will guide and correct any misconceptions
7. Activity: In pairs, one partner will draw several lines at a teacher-given length and then the other will check it. Switch.

Wrap-up:

Students will write a short paragraph (as a foreman) giving instructions to a potential employee on how to read and use a tape measure.

Extension Activity:

Complete worksheet as homework (Free shareable worksheet from Math-Aids.Com)

<https://drive.google.com/open?id=0B32BnbPTPFZDeHhCOW5uemJoNDZaLUk5YU5VcmNHTDZNbl9z>



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