

Measurement with Ollie Otter

Grade Level: **3rd Grade** Subject: **Mathematics**

Standards

1. **SPI 0306.2.14** Add and subtract fractions with like denominators.
2. **SPI 0306.2.10** Identify equivalent fractions given by various representations.
3. **SPI 0306.4.5** Choose reasonable units of measure, estimate common measurements using benchmarks, and use appropriate tools to make measurements.
4. **SPI 0306.4.6** Measure length to the nearest centimeter or half inch.
5. **SPI 0306.1.7** Select appropriate units and tools to solve problems involving measures.

Objectives

1. Students will express the height of objects in inches and half inches to determine how short they fall of a foot using 12 or 24 to represent inches or half inches for the denominators.
2. Students will convert feet to inches, inches to half inches, and feet to half inches.
3. Students will evaluate heights of objects in a room and determine whether to measure to the half or whole inch.
4. Students will determine how many half inches are in each object measured.
5. Students will solve problems concerning height to reach a foot and height to reach 4'9" using various tools of measurement and calculations through conversions.

Materials

Ollie measurement practice sheet, measuring poster or tape measurer, rulers, pencils

Introduction

Engage the students in a discussion to review the safety concepts presented in the Ollie Otter presentation. The three points to focus on are road construction (slow down), seat belt safety (always buckle up), and booster seat requirements (under 4'9" or nine years old). Discover what the students recall and reiterate the importance of being safe when riding in a vehicle.

Remind the students the importance Ollie place on height and “Belts to Bones.” Show them a measuring poster similar to the poster used to measure a select few of students during the presentation. (This can be replaced by any type of measurement tool available.) Emphasize that the 4’9” mark is the height you need to be for a seat belt to fit correctly when using it in the car (Belts to Bones).

Procedure

- Give students the Ollie measurement practice sheet.
- “Measure these three pictures of Ollie using your ruler. Write the number of inch lines you count on the line below him.”
- Show students how to measure to the nearest inch on their rulers. Explain that halfway between the inch is a line that splits it in two, leaving two half inches within an inch.
- Discuss how many inches are in a foot, and show students that the equivalent of 1 foot is 12 inches. Take it a step further by asking how many half inches are in a foot.
- Allow students to take their rulers and measure at least three objects within the classroom, all less than 12 inches. Tell them to measure to the nearest half inch, and label the objects A, B, and C.
- For each measurement, have students write the number of half inches in each object over 24, representing the number of 24 half-inches in a foot.
- Discuss how 24 over 24 in a fraction equals 1, meaning that 24 half inches equals 1 foot. Ask students to write “(24/24) - (A/24)” for A, B, and C objects.
- Tell students to subtract the 24 from the number they have written on top of the fractions, and write it all over 24 since it remains the same. Repeat for all three objects measured.
- Take it one step further by discussing how many inches are in 4’9” tall, the requirement for not riding in a booster seat. Measure each student, and have them write their inches over 57, and then subtract “(57/57) - (their height in inches/57) to determine how many inches until they reach 4’9” or reverse the equation to see how much taller they are than 4’9”.

Closing

Discuss with the class what they have learned from the activity and how it applies to measurement and being safe in the vehicle. Lead the students in discussing how many of them do/do not need to be in a booster seat to remain safe while riding in the vehicle. **Remember: Under 4’9” - It’s Booster Time!**

Assessment and Follow-Up

Collect the Ollie measurement practice sheets to check for comprehension. On future days in the classroom, ask students how many of them ride in a booster seat, and see if they remember the height requirement for a booster seat.

Ask them to tell their parents what they learned, and if they haven't already, allow them to draw a picture or write a story about Ollie and how to be safe in a car. Send their artwork to:

TTU BusinessMedia Center
C/O Ollie Otter
P.O. Box 5103 JH 425
1105 N. Peachtree Avenue
Cookeville, TN 38505

and we will mail you a set of coloring books. Students can view their art on our website at <http://www.seatbeltvolunteer.org/inbox>.