

# Measurement with Ollie Otter

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

## Standards

1. **SPI 0306.1.8** Express answers clearly in graphical (bar and picture) form, using units when appropriate.
2. **SPI 0306.4.7** Solve problems requiring the addition and subtraction of lengths.
3. **SPI 0306.5.1** Interpret a frequency table, bar graph, pictograph, or line plot.
4. **SPI 0306.5.2** Solve problems in which data is represented in tables or graphs.
5. **SPI 0306.1.5** Represent problems mathematically using diagrams, numbers, and symbolic expressions.

## Objectives

1. Students will construct a graph of students to display heights of classmates.
2. Students will uncover how many students need to be restrained in a booster seat out of the class total.
3. Students will discuss their findings based on the graphs they have made.
4. Students will create a new chart based on the findings of the first, whole-group chart.
5. Students will summarize calculations in bar graphs and equations.

## 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 Ollie measurement practice sheets and rulers.
- Allow each student to measure their height using the Ollie measuring poster or measuring tape. If they are under the arrow, tell them to write "<4'9"" and if they are over, ">4'9"" and "=" if they are right at the line on the bottom right hand corner of their paper.
- "Measure these three pictures of Ollie using your ruler. Write the number of inches each Ollie is on the line below him."
- Guide students through a quick drawing of a bar graph to demonstrate each Ollie and his height on the board so they will be prepared to create their own.
- Have each student in the class count off as you tally the number of students in the classroom on the board at the front of the room.
- Ask students how many of them are under less than 9 years old, and tally the number.
- Ask students how many of them are less than 4'9" tall, based on their measurement from the beginning of the lesson.
- On the back of the sheet, have students draw a horizontal line through the center. Above the line, tell them to use what you taught them about bar graphs to create their own. Each graph should have a bar for number of students in the class, another bar for the number of students under 9 years old, and another bar for the number students under 4'9". Students should use the tallies you've marked on the board for data.
- Once students have completed the chart, discuss what the Tennessee law says about booster seat requirements (under 4'9" or 9 years old, they need to be in a booster seat).
- Discuss how to determine the number of students in the class who need to ride in a booster seat and how many need to ride in a seat belt, based on the specifications of the law and by looking at the first graph.
- Have students draw a new graph under the horizontal line on the back of the sheet to demonstrate how many students are in the class, how many need to be in a booster seat, and how many only need a seat belt.

## 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>.