

Linear Measurement

Unit 2 Summary

From Here to There

In this lesson students will develop big ideas of measurement while measuring a space.

You will need:

- A large space to measure- outside on playground is good. Inside is okay, just avoid tiled spaces.
- Flags, cones or some other marker to mark off the space to be measured
- Tools for students to measure. Suggestions: notebooks, their bodies or feet, pencils, clipboards, base 10 block
- Post-it notes
- Chart paper to record students ideas about measurement
- Optional- iPad to record students' ways of measuring.

Experience:

- Put students into pairs and tell students you are going to go outside and measure a space and give a context for why it needs to be measured (i.e. basketball court because there are going to paint it and need to know how long it is). Tell them to work together to choose a tool to measure with. Give each pair a post-it and have them use it to record their measurement when then finish. Make sure to tell them that they need to label their count with the name of the unit they used.
- Set up flags, cones, or other markers to indicate where you want students to measure.
- Students work with their partner to measure the space. Look for students making measurement mistakes and ones who are measuring correctly. Either write down the names of students who you would want to demonstrate their strategy for measuring for the class, or record the students measuring with the iPad to show to the class later.
- Once all groups have measured, have them record their measurement on their post-it note and bring it back inside. When back inside, have each group put their measurement on the board. Ask: "Why did we get different measures?"
- Discuss how the groups measured. Either show the videos or have groups reenact the way in which they measured. Look for pairs whose measurement strategy helps you discuss the following big ideas.
 - Big Ideas to bring out:
 - Measuring straight- Do you get the same answer if you measure straight vs. not straight?
 - Gaps and overlaps- Why can't we measure using gaps and overlaps? Why is that wrong?
 - Do I need to use the same size unit or can I alternate units of different sizes?
 - What if I run out of stuff to measure with? Can I reuse my unit (iteration- new idea for 2nd grade)? If I reuse it, how do I do it?
 - Why are some measures large numbers, while others are small numbers (the bigger the unit, the less it will take of the unit, the smaller, the more it will take)?
 - Starting and end point- where do I start measuring? Where do I stop?

Linear Measurement

Unit 2 Summary

From Here to There

- When sharing the ways in which they measured- ask the students to share what each did well and what could they do better next time (Glow and a Grow). Come and contrast the ways in which each group measured.
- During discussion, create an anchor chart for the Rules of Measurement- when class comes to consensus- add the idea to the chart.
 - Ideas for chart:
 - No gaps or overlaps
 - Measure straight
 - Use the same size unit
 - Start at one end and measure to the other end
 - You can reuse a unit over and over again
 - Bigger units cover more space and it takes less than smaller units
- Note: You may want to break the discussion down into multiple discussions and focus on one or two big ideas of measurement at a time. If you record the videos, you could use the video over a few class period.