



MEASUREMENT CONVERSIONS

Overview, Objectives, Inquiry Questions, and Planning

THINGS TO CONSIDER FOR MILESTONE #4

- For this lesson, your students will need measuring tools, including a ruler, a scale, and a balance.

LEARNING OBJECTIVES FOR MILESTONE #4

At the conclusion of this milestone, students will be able to:

- Convert measurements using the U.S. customary system and the metric system.
- Use measurement tools to determine the length, width, height, and weight of a fidget spinner.
- Determine the average length of time their fidget spinner spins.
- Explain which system of measurement they prefer using and why.

EXTENSIONS AND ENHANCEMENTS FOR MILESTONE #4

- Could you have the students learn more about the metric and U.S. customary systems of measurement? They could watch the [Study Jams video](#) to learn more about the differences between the two systems and take the quiz. Then, they could write a persuasive paragraph to the president to explain whether the United States should continue using the U.S. customary system or switch over to using the metric system. Give them the “Systems of Measurement” printable on page 18 of the Student Pack to do their writing.

STUDENT INQUIRY QUESTIONS FOR MILESTONE #4

- How can I convert measurements in the U.S. customary system and the metric system?
- How can I use a ruler, a scale, and a balance to measure the length, width, height, and weight of my fidget spinner?
- Which system of measurement (the U.S. customary or the metric) is easier to use? Why?

ASSESSMENT FOR MILESTONE #4

- **Formative Assessment for Individual Activity:** Check each student’s “Measurements” printable on page 20 of the Student Pack.

- **Formative Assessment for Group Activity:** Have each group share what they will call their spinner and how they will advertise it.
- **Summative Assessment:** Have the students complete the response printable on page 21 of the Student Pack for the Inquiry Question, “Which system of measurement (the U.S. customary or the metric) is easier to use? Why?”

Student Pack

- Page 19
- Page 20
- Page 21

Teacher Pack

- Page 9

Project Activities for Milestone #4: Measurement Conversions

PREPARE (Bell-ringer/opener activity)

Show the students the video “[Bill Nye’s Introduction to the Metric System](#)”. Have the students turn and talk about reasons other countries use the metric system.

PRESENT (Lecture/model)

Give the students the “Table of Measurements” printable on page 19 of the Student Pack. Have the students use a whiteboard or a piece of paper to practice converting measurements. Use the sample problems on the “Converting Measurements” printable on page 9 of the Teaching Guide. Go over the answers together.

PARTICIPATE (Student/group share, group activity)

Have the students meet with their groups. Give each group a ruler and the “Measurements” printable from page 20 of the Student Pack. Call groups over one at a time to weigh their fidget spinners on a scale and a balance.

Give each group a stopwatch. They should test their spinner 5 times, record their data in the “Spin Time” chart, and then take the average.

Have them answer the two questions at the bottom of the page.

Formative Assessment: Have each group share what they will call their spinner and how they will advertise it.

PRACTICE (Homework/independent work/extensions)

Give each student the writing response template on page 21 of the Student Pack and ask them to write an answer to the inquiry question for this Milestone: “Which system of measurement (the U.S. customary or the metric) is easier to use? Why?”

ASSESSMENT

Formative Assessment for Individual Activity: Check each student's "Measurements" printable on page 20 of the Student Pack.

Formative Assessment for Group Activity: Have each group share what they will call their spinner and how they will advertise it.

Summative Assessment: Have the students complete the response printable on page 21 of the Student Pack for the Inquiry Question, "Which system of measurement (the U.S. customary or the metric) is easier to use? Why?"