

Building Mathematical Thinkers

Silly Metric Units

Objective: Measurement – Choosing the appropriate unit

Theoretical Foundation: This activity is both fun and challenging. Third graders are motivated by the silliness of the proposed units and challenged to correctly choose the proper units for the situations. Provide students with room to really talk about these situations and units with their partner. Ask probing questions. Having measurement tools and benchmarks available will be helpful as well.

Estimated Time: 20-30 minutes

Materials: Copies of “**Silly Metric Units**” for each student or pair of students

Directions:

1. Read aloud the following sample silly unit situation:
Lucy brought a small apple to school for snack. It was only 10 kilograms tall.
2. Students should automatically notice that this doesn't make any sense.
3. Ask, “Why doesn't it make sense?”
4. And, “What unit would make sense instead of kilograms?”
5. Explain to students your expectations and allow them time to work.
6. Students should work in pairs to match each silly situation with the unit that would make the situation make sense.
7. One way to ensure the most student learning is to require correct answers. To do this simply circulate around the room. When a pair feels that they have finished they raise their hands. Upon checking their work ask some probing questions.
8. If all of the cards are matched correctly students may glue the pairs to construction paper.
9. Otherwise say something like, “3 of your pairs are incorrect” so that they are challenged to find and correct the inaccuracies before gluing.
10. When everyone has finished debrief the activity by posing some probing questions.

Differentiation Suggestions:

- Pair students with someone on a similar ability level so that they have the best opportunity to engage in open discussion.
- Struggling students may benefit from having measurement tools and/or benchmarks available to use for comparison.
- Challenge advanced students and early finishers to create their own silly unit situations. They might even create several sets and then trade with another group.

Probing Questions:

- What makes the unit in this situation silly?
- Why did you choose this unit for fixing it?
- Why wouldn't this unit work instead?

Assessment:

- How well do students understand why each situation is silly?
- How do they reason about which unit is most appropriate for the situation?
- How independently and accurately do they choose the correct unit?

Silly Metric Units – Match each unit card with the correct situation

Marcus's new bicycle is very heavy. It has a mass of 61 kilometers!	kilograms (kg)
Kristen put up a basketball goal in her driveway. The height of the goal was 3 centimeters.	liters (L)
Jonah got a new water bottle. It holds about 600 kilograms.	centimeters (cm)
A bug crawled across your desk. It traveled 52 meters.	grams (g)
Olivia went for a long walk in the park. She walked for 6 grams!	kilometers (km)
Daniel bought 3 large bottles of juice for his birthday party. Each bottle contains 4 milliliters.	milliliters (mL)
Jen let Amanda borrow a brand new pencil. It had a mass of 4 liters.	meters (m)