# 1st Grade

## GRADE LEVEL OVERVIEW

### Sample Mathematics Learning Plan

<table>
<thead>
<tr>
<th>Big Idea/ Topic</th>
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<tbody>
<tr>
<td>● Develop an understanding of linear measurement and measuring lengths as iterating length units</td>
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<table>
<thead>
<tr>
<th>Standard Alignment</th>
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<tr>
<td>MGSE1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. (Iteration)</td>
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<table>
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<tr>
<th>Diagnostic Assessment</th>
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<tbody>
<tr>
<td>In the attached diagnostic assessment, students will be given real world items to measure. For face to face students they can be given unifix cubes or paper clips. For asynchronous students they can use anything they have multiple copies of at home (cereal pieces, lego blocks, paper clips, etc.) The focus here is to see if students lay multiple copies of the object end to end without gaps or overlaps.</td>
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Georgia Department of Education
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Page 1 of 7
Instructional Design

Desmos Activity link: Shark Bait

Engage

2. Act 1: Watch the Video

Teacher Tips:
Show Act 1 video to students.
Ask students what they noticed in the photo, what they wonder about, and what questions they have about what they saw in the video. Consider doing a think-pair-share so that students have an opportunity to talk with each other before sharing questions with the whole group.
Share and record students' questions. The teacher may need to guide students so that the questions generated are math-related.

3. What do you notice...

We want to find out how many cubes long do you think the worm is?

Use the table below to enter:
• A brave answer that is too low.
• A brave answer that is too high.
• Your true estimate.

Press "Submit" when done.

Teacher Tips:
If done synchronously, consider using "Pacing" to restrict students to this screen. Teacher may want to explain how to come up with "too low" and "too high" estimates.
Check your teacher dashboard to:
• ensure every student has submitted a too low, too high, and estimate.
• take snapshots of students' estimates to engage in a class discussion.

- Synchronous Complete during a classroom discussion while pausing the activity to highlight student responses.
- Asynchronous Introduce the problem to students in a virtual platform; this can be done via e-document or video. Use the teacher dashboard to restrict slides 4 through 8. Allow students to share responses within the Desmos platform and
provide feedback via the teacher dashboard. Additionally, students could use an audio/video to share. Provide feedback to individual student responses and highlight multiple strategies used by students.

- **Unplugged/Offline** Provide the opening image/video for students to engage in the task. Have students share ideas through email/text/phone. Provide feedback to students and share other students’ ideas before engaging in the remaining sections.

**Explore**

**Teacher Tips:**

During Act 2, students review the main question(s) from Act 1 and decide on the facts, tools, and other information needed to answer the question(s). When students decide what they need to solve the problem, they should ask for those things. It is pivotal to the problem solving process that students decide what is needed without being given the information up front.

- **Synchronous**: Complete Desmos activity during synchronous learning, either face to face, virtual, or blended.
- **Asynchronous**: Using the teacher dashboard, unrestrict screen 4, give students time to complete the screens and provide feedback. Ensure that enough time is provided for students to participate and respond to your feedback and edit responses as needed.
- **Unplugged/Offline**: Provide paper/electronic versions of the image presented on screen 4. Allow students time to complete the work and submit through email/text or other means. Provide feedback and share with other students and provide access to other students’ thinking.

**Apply**

**Teacher Tips:**

During Act 2, students review the main question(s) from Act 1 and decide on the facts, tools, and other information needed to answer the question(s). When students decide what they need to solve the problem, they should ask for those things. It is pivotal to the problem solving process that students decide what is needed without being given the information up front.
8 Act 3: How many cub...

- **Synchronous** Complete Desmos activity during synchronous learning, either face to face, virtual, or blended.
- **Asynchronous** Using the teacher dashboard, unrestrict screens 5 through 8. Give students time to complete the screens and provide feedback. Ensure that enough time is provided for students to participate and respond to your feedback and edit responses as needed.
- **Unplugged/ Offline** Provide students with access to activity and allow students to engage in the questions presented on screens 5-8. Ask students to complete the questions and have them submit responses via email/text/phone. Provide feedback, share these responses with other students, and share other students’ responses with them.

**Reflect**

**The Sequel:** Teachers may choose to reference other student-generated questions that could be used for additional classwork or projects.

**Journal Writing:** Have students reflect on the task and write (or blog) about what they perceived to be challenging about the task and enjoyable about the task.

- **Synchronous** Complete activity during synchronous learning, either face to face, virtual, or blended.
- **Asynchronous** Give students time to complete the screens and provide feedback. Ensure that enough time is provided for students to participate and respond to your feedback and edit responses as needed.
- **Unplugged/ Offline** Provide students with access to and allow students to engage in the questions. Ask students to complete the questions and have them submit responses via email/text/phone. Provide feedback, share these responses with other students, and share other students’ responses with them.

**Evidence of Student Success**
Formative Assessment Questions:

- What strategies did you use to determine how long the worm is?
- Which strategies worked most efficiently for you?
- What strategies did you notice other students using that you might want to try?
- Can you think of another method that might have worked?
- What might you do differently next time?

Student Learning Supports

Establish mathematics goals to focus learning.
- Make instructions and expectations clear for the activities.
- Make explicit connections between current and prior lessons or units.

Facilitate meaningful mathematical discourse.
- Explicitly model and teach good “discussion board” etiquette.

Pose purposeful questions.
- Predetermine when you will call on the student or use the pause feature within the activities.
- Break class into small discussion groups to work collaboratively and then have groups report back to the whole group.

Support productive struggle in learning mathematics.
- Offer outlines and other scaffolding tools and share tips that might help students learn.
- Provide feedback using the feedback feature within activities and offer corrective opportunities.
- Consider the pacing of the lesson.

Elicit and use evidence of student thinking.
- Anticipate any misconceptions or questions students might have about the task, materials or technology. Proactively address them with readily available and accessible resources.

Additional Supports:
The big idea for measurement in 1st grade is that students are able to iterate multiple copies of an object to measure a larger object. This idea is built through practice and lays the foundation for measurement of lengths in standard units (beginning in 2nd grade) as well as other types of measurement. Purposeful practice with measuring using this iteration is very important to develop an understanding of the role units play in measuring lengths of objects.

Engaging Families

Episode 212 – Blossom and Snappy Go Gardening
● Linear Measurement/Time – Plant a garden (or create a container garden) with your child. Research different plants that would grow well together and make sure to space them properly so that they have enough room to grow.

● Families could have students measure the length of a room using different sized items. Concluding with generalizing what has been learned about measuring.
Appendix

Diagnostic Assessment

Measure these items using multiple copies of the same size non-standard unit.

These non-standard units can be cereal pieces, tiles, paper clips, etc.