

## Lesson Plan Template

### Learning Segment Focus: Length Measurement

Lesson 1 of 1 Topic: Math Date: 05/04/2021 Grade: 2<sup>nd</sup>

#### Student Outcomes

Specific learning <b>objectives</b> for this lesson.	Given a Rocketbook, a regular ruler, and the Smart Ruler app on their iPad, students will measure the length of objects around the room and record them in inches and centimeters.
Justify how learning tasks are appropriate using examples of <b>students' prior academic learning</b> .	Students have learned the foundations of measurement and are ready to expound on the different types, starting with length.
Justify how learning tasks are appropriate using examples of <b>students' personal, cultural, linguistic, or community assets</b> .	Regardless of background, measurement helps us to develop special concepts and relates to later mathematics. It helps us relate to the world around us and can be useful in clothing, housing, driving, eating, and just about every aspect of our lives.

#### State Academic Content Standards

List the <b>state academic content standards</b> with which this lesson is aligned. Include abbreviation, number & text of the standard(s).	AR.Math.Content.2.MD.A.2 – Measure the length of an object twice with two different length units. Describe how the two measurements relate to the size of the unit chosen. For example: A desktop is measured in both centimeters and inches. Student compares the size of the unit of measure and the number of those units.
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#### Key Vocabulary

What <b>vocabulary terms/content specific terminology</b> must be addressed for students to master the content?	Measurement, length, inch, centimeter
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#### Academic Language Support

What are the <b>Academic Language Function(s)</b> (the content and language focus of the learning task represented by the active verbs within the learning objectives/outcomes) and explain how they are utilized in the lesson plan? What planned <b>Academic Language Supports</b> will you use to assist students in their understanding of key academic language to express and develop their content learning and to provide varying supports for students at different levels of Academic Language development? How do these supports address all three <b>Academic Language Demands (vocabulary, syntax, and discourse)</b> ?	Students will measure objects in inches and centimeters using their standard ruler and Smart Ruler app on the iPad and record their answers in the Rocketbook. They will see how inches compare to centimeters and if the Smart Ruler app is accurate. Before we begin, I will review how to measure with both the ruler and Smart Ruler, as well as the difference between inches and centimeters. I will explain that different countries use different measurement systems, and that students may even encounter different systems in their immediate environment. I will walk around the room during the activity to help students if they need it.
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#### Materials

Materials needed by the teacher for this lesson. (such as books, writing materials, computers, models, colored paper, etc.)	iPad with Smart Ruler app standard ruler
Materials needed by <b>students</b> for this lesson. (computers, journals, textbook, etc.)	iPad with Smart Ruler app, standard ruler, and 1 Rocketbook with compatible pens for each pair of students

### Lesson Timeline with Instructional Strategies & Learning Tasks

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
5 minutes	<p><b><u>Introduction:</u></b></p> <ul style="list-style-type: none"> <li>• Brief overview of entire activity</li> <li>• Pass out materials</li> </ul>	<p>First, I will describe the entire activity to the students while they are sitting at their desks. I will then pair students up and tell them to start.</p>
20 minutes	<p><b><u>Instruction:</u></b></p> <ul style="list-style-type: none"> <li>• Measuring</li> </ul>	<p>Students will walk around in pairs looking for objects to measure. They must measure at least 5 objects that they find in the classroom that can be measured with a standard ruler. They will measure each object with both the ruler and Smart Ruler and record their measurements in inches and centimeters, so there will be four measurements for each object. When they have measured their 5 things, they will scan their Rocketbook page with their iPad and turn it in to Google Classroom. Then they will wait for the rest of the class to finish.</p>
10 minutes	<p><b><u>Closure:</u></b></p> <ul style="list-style-type: none"> <li>• Compare ruler to Smart Ruler app</li> </ul>	<p>When everyone has finished, I will start a discussion about how the Smart Ruler compares to the standard ruler. If used correctly, the Smart Ruler should measure the same as the standard ruler. We will talk about user error and that we may need to measure more than once to get the most accurate number.</p>

### Technology Integration

<p>Provide your <b>rationale</b> for your technology choices that accurately reflects those choices within your teaching context. <b>Identify</b> what technology(s) you are using as part of your lesson plan. <b>Describe</b> how the use of technology aligns to your learning objectives, content standards, and central focus. <b>Explain</b> how technology-based instructional strategies are essential to students accomplishing the learning objectives (beyond what could be accomplished without using the technology). <b>Specify</b> how the technology selections meet or exceed the needs/strengths of all students. <b>Justify the “fit”</b> of chosen technologies, showing how the content, instructional strategies, and technology “fit” together.</p>	<p>The Smart Ruler app is a great tool to use when measuring things big or small. It acts as a tape measure, and in theory can measure an unlimited length. It would be a great resource for students to use in their future classes as well as out in the real world. It also acts as an additional ruler to double check their standard ruler measurements. The Rocketbooks’ pages can be scanned via QR code and turned in digitally before being erased and reused, making it much easier to keep up with the students’ work than physical copies.</p>
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**Accommodations/Modifications**

<p>How might I <b>modify</b> instruction for:  <i>Remediation?</i>  <i>Intervention?</i>  <i>IEP/504?</i>  <i>LEP/ESL?</i>                  (All students who have plans mandated by federal and state law.)</p>	<p>Accommodations and modifications will depend on the students in my classroom. I can partner students up so that those who may need extra help will have someone that can help them. I will also be walking around to help however necessary. Students who need to sit can have objects brought to them. Many other strategies could be implemented depending on the students present.</p>
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**Differentiation**

<p>How might you provide a variety of techniques (enhanced scaffolding, explicit instruction, contextualized materials, highlighters/color coding, etc.) <b>to ensure all student needs are met?</b>                  (All students who are not on specific plans mandated by federal and state law.)</p>	<p>Students will have a partner that can help them during the activity. They can also choose whatever objects they wish to measure if they can be measured with a standard ruler. Those students who need extra time may be given fewer objects to measure and those that need more of a challenge may measure more objects or figure out how to measure something with a standard ruler that is longer than the ruler.</p>
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**Assessments: Formative and/or Summative**

<p>Describe the <b>tools/procedures</b> that will be used in this lesson to monitor students' learning of the lesson objective(s) (include type of assessment &amp; what is assessed).</p>	<p><input checked="" type="checkbox"/> <b>Formative</b> / <input type="checkbox"/> <del>Summative</del></p>	<p>As I walk around the room during the activity, I will be able to see if students are using their ruler and Smart Ruler correctly to get accurate measurements.</p>
	<p><input type="checkbox"/> <del>Formative</del> / <input checked="" type="checkbox"/> <b>Summative</b></p>	<p>Students will turn in a digital copy of their measurements from their Rocketbooks on Google Classroom. I will use these to compare their measurements with other students as well as what I may have measured the object to be. This will help me determine how well my students understand measurement of length.</p>

**Research/Theory**

<p>Explain <b>connections to theories and/or research</b> (as well as experts in the field or national organization positions) that support the approach you chose and justify your choices using <b>principles of the connected theories and/or research</b>.</p>	<p>This lesson correlates well with Skinner's transfer of learning theory which explains that students can absorb information in one setting and apply it to something else. Students will have already been introduced to the use of rulers for measurement and will apply this knowledge to a practical activity.</p> <p>Vygotsky proposed that learning has a unique social aspect. By working with others, they can help each other and may learn from one another.</p> <p>This activity also allows for multisensory instruction. They will be up and moving about the classroom measuring various objects. They are engaging with the material instead of just passively listening to a teacher lecture to them.</p>
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**Lesson Reflection/Evaluation**

<p>What went <b>well</b>?                  What <b>changes</b> should be made?                  How will I <b>use assessment data</b> for next steps?</p>	<p><i>TO BE FILLED IN AFTER TEACHING</i></p>
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Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

Updated 12-12-20 NLC

\*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1ZoJ:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&gl=us>; <http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx>;  
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