

## Indicator P1.1 Standards-based Units

Designs and/or uses instructional units that align to the CCRSAE, and the program's scope and sequence. Academically rigorous units define clear evidence of outcomes and include differentiated learning experiences that enable all students to learn the knowledge and skills defined in state standards.

What Effective Math Teachers Know	What Effective Math Teachers Do	✓ Focus
<p>a. Effective units are planned backward, beginning by considering the result of student understanding and transferable skills.</p>	<ul style="list-style-type: none"> <li>• Write clear goals for student learning.</li> <li>• Create essential questions to guide deep thinking and transfer ideas.</li> <li>• Identify the knowledge and skills students will acquire that reflect the CCRSAE for Math and are aligned with the program's scope and sequence.</li> <li>• Determine what evidence of success looks like and how it will be assessed.</li> <li>• Plan learning experiences that take into consideration the range of learners.</li> <li>• Plan to monitor progress.</li> </ul>	
<p>b. Knowledge is built upon other knowledge. Core mathematical concepts are connected in a coherent manner.</p>	<ul style="list-style-type: none"> <li>• Begin with a hook and move into a genuine problem or challenge.</li> <li>• Consider the concepts that come before the lesson and anticipate the standards that will come afterwards; plan a path that will connect ideas and build coherence.</li> <li>• Create a concrete experience before addressing abstract concepts.</li> <li>• Draw connections between 'the basics' and other math topics typically only taught once students have 'mastered' the fundamentals.</li> <li>• Plan to differentiate instruction, as needed, offering students choices of simpler to more challenging problems.</li> </ul>	
<p>c. Students learn best when ideas are connected to other learning.</p>	<ul style="list-style-type: none"> <li>• Create learning activities and lessons that connect the math (across domains and subjects) and build coherence.</li> </ul>	
<p>d. Students are more willing to learn math when it is connected to their own lives and communities.</p>	<ul style="list-style-type: none"> <li>• Ask students often how they use math (or wish they could) in their lives.</li> <li>• Build lessons and units on issues and concerns that are important to students</li> </ul>	
<p>e. A math unit includes more than computation and procedures.</p>	<ul style="list-style-type: none"> <li>• Embed computation in context and rigorous problem solving.</li> <li>• Use different models and representations to connect conceptual understanding to procedures.</li> </ul>	
<p>f. Lessons and units follow coherent progressions based on the CCRSAE for Math.</p>	<ul style="list-style-type: none"> <li>• Refer to the CCRSAE for Mathematics when developing lessons and units.</li> <li>• Keep the CCRSAE Standards for Mathematical Practices in mind when designing lessons to ensure that students are becoming proficient math problem-solvers.</li> </ul>	
<p>g. Learning experiences allow for exploration of essential questions.</p>	<ul style="list-style-type: none"> <li>• Serve as the facilitator and support students through exploration of the core concepts.</li> <li>• Provide opportunity for genuine application of the core concepts.</li> <li>• Make a choice of relevant resources available to students.</li> </ul>	

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h. Assessment tasks must align to the standards and goals of the unit.	<ul style="list-style-type: none"> <li>• Clarify expectations for assessment with students' support.</li> <li>• Create performance tasks that require students to apply their knowledge and skills in varied contexts.</li> <li>• Provide on-going and descriptive feedback.</li> </ul>	

**Notes to self**