

STUDENT ACHIEVEMENT PARTNERS

Questions within the Instructional Practice Guide: Lesson Planning Tool (organized by planning module, in the order the questions appear in the tool):

Module	Navigation Item	Question	Core Action & Indicator
Planning a Standards-Aligned Lesson	Clusters & Standards	What standard(s) and/or cluster(s) am I targeting in this lesson?	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator A: The enacted lesson focuses on the grade-level (K-8)/course-level (HS) cluster(s), grade-level/course-level content standard(s), or part(s) thereof.</p>
Planning a Standards-Aligned Lesson	Coherence	How does this work connect to previous or future work in the grade and what will I do to make that connection?	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator B: The enacted lesson appropriately relates new content to math content within or across grades.</p>
Planning a Standards-Aligned Lesson	Coherence	If applicable, why am I covering content from a different grade level and how does it connect to on-grade-level work?	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards.</p> <p>Indicator B: The enacted lesson appropriately relates new content to math content within or across grades.</p>

Planning a Standards-Aligned Lesson	Learning Goal	What is the mathematical learning goal of the lesson?	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator A: The enacted lesson focuses on the grade-level (K-8)/course-level (HS) cluster(s), grade-level/course-level content standard(s), or part(s) thereof.</p>
Planning a Standards-Aligned Lesson	Rigor	Which aspect(s) of Rigor do the targeted standards require?	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator C: The enacted lesson intentionally targets the aspect(s) of Rigor (conceptual understanding, procedural skill and fluency, application) called for by the standard(s) being addressed.</p>
Planning a Standards-Aligned Lesson	Mathematical Explanations	What explanations, representations, tasks, and/or examples will I share to make the mathematics of this lesson clear?	<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator A: The teacher makes the mathematics of the lesson explicit through the use of explanations, representations, tasks, and/or examples.</p>
Planning a Standards-Aligned Lesson	(Grade-/Course-) Level Problems	What grade-/course-level problem(s) will I ask the whole class to solve?	<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator A: The teacher provides opportunities for all students to work with and practice grade-level problems and exercises. Students work with and practice grade-level problems and exercises.</p>

Planning a Standards-Aligned Lesson	Checks for Understanding	What strategies and opportunities will I use to check for understanding throughout the lesson? What questions or problems will I ask?	Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson. Indicator C: The teacher deliberately checks for understanding throughout the lesson to surface misconceptions and opportunities for growth, and adapts the lesson according to student understanding.
Planning a Standards-Aligned Lesson	Discussion Questions	What questions will I ask to prompt students to share their thinking about the content of the lesson and when will that happen?	Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson. Indicator C: The teacher poses questions and problems that prompt students to explain their thinking about the content of the lesson. Students share their thinking about the content of the lesson beyond just stating answers.
Mathematics of the Lesson	Selected Standards	Will the lesson address a part of the standard(s) or the entire standard(s)? Explain.	Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics. Indicator A: The enacted lesson focuses on the grade-level (K-8)/course-level (HS) cluster(s), grade-level/course-level content standard(s), or part(s) thereof.
Mathematics of the Lesson	Key Mathematics	What is the key mathematical idea or concept from the standard(s) I am targeting? How will I ensure the lesson will meet the expectations of the standard(s) targeted?	Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics. Indicator A: The enacted lesson focuses on the grade-level (K-8)/course-level (HS) cluster(s), grade-level/course-level content standard(s), or part(s) thereof.

Mathematics of the Lesson	Mathematical Explanations	<p>What common misconceptions and opportunities for growth do I anticipate will arise?</p> <p>How am I going to address these misconceptions to strengthen students' understanding of the content?</p>	<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator C: The teacher deliberately checks for understanding throughout the lesson to surface misconceptions and opportunities for growth, and adapts the lesson according to student understanding.</p>
Mathematics of the Lesson	Mathematical Language	<p>What mathematical language should students use in this lesson?</p> <p>What informal mathematical language do I expect to hear?</p> <p>How will I connect students' informal language to the precise mathematical language of this lesson?</p>	<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator E: The teacher connects and develops students' informal language and mathematical ideas to precise mathematical language and ideas. Students use increasingly precise mathematical language and ideas.</p>

Coherent Connections	Coherence: Prior Knowledge	<p>What prior skills and knowledge might students bring to this lesson?</p> <p>What unfinished learning from earlier grades might I need to address within the context of this lesson?</p> <p>How will the lesson explicitly connect to and build on students' prior skills and knowledge? What will I say or show my students to make this connection clear?</p>	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator B: The enacted lesson appropriately relates new content to math content within or across grades.</p>
Coherent Connections	Coherence: Future Work	<p>How do the mathematics of this lesson lay the foundation for future work?</p>	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator B: The enacted lesson appropriately relates new content to math content within or across grades.</p>
Problems & Exercises	Adapting the Lesson	<p>What scaffolding will I use to support students?</p> <p>How will I address remediation or unfinished learning in the context of the on-grade-level work?</p> <p>What extension work will I prepare for students who are ready for deeper engagement with grade-level content?</p>	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator A: The enacted lesson focuses on the grade-level (K-8)/course-level (HS) cluster(s), grade-level/course-level content standard(s), or part(s) thereof.</p> <p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator A: The teacher provides opportunities for</p>

			<p>all students to work with and practice grade-level problems and exercises.</p> <p>Students work with and practice grade-level problems and exercises.</p>
Problems & Exercises	Student Thinking	<p>Which problem(s) will prompt students to share their thinking and apply their mathematical language?</p>	<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator C: The teacher poses questions and problems that prompt students to explain their thinking about the content of the lesson. Students share their thinking about the content of the lesson beyond just stating answers.</p> <p>Indicator E: The teacher connects and develops students' informal language and mathematical ideas to precise mathematical language and ideas. Students use increasingly precise mathematical language and ideas.</p>
Problems & Exercises	Perseverance	<p>Which problem(s), if any, will require students to persevere?</p> <p>How will I encourage students to persist with this problem even in the face of difficulty?</p>	<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator B: The teacher cultivates reasoning and problem solving by allowing students to productively struggle. Students persevere in solving problems in the face of difficulty.</p>

Problems & Exercises	Justifications	Which problem(s) will require students to explain and justify their work?	<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator C: The teacher poses questions and problems that prompt students to explain their thinking about the content of the lesson. Students share their thinking about the content of the lesson beyond just stating answers.</p>
Problems & Exercises	Solution Methods	<p>What solution methods or representations do I anticipate seeing from students?</p> <p>How will I connect these solution methods or representations to each other to strengthen all students' understanding?</p>	<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator B: The teacher strengthens all students' understanding of the content by strategically sharing students' representations and/or solution methods.</p>
Problems & Exercises	Tools	<p>Select the tools that may be useful as students solve the problems posed in this lesson. (See Lesson Planning tool for a list.)</p> <p>How will I encourage them to independently choose appropriate tools?</p>	See Beyond the Lesson Discussion Guide.
Problems & Exercises	Addressing Rigor	Describe how the problems in this lesson address the aspect(s) of Rigor called for by the standard(s) being addressed?	<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator C: The enacted lesson intentionally targets the aspect(s) of Rigor (conceptual understanding, procedural skill and fluency, application) called for by the standard(s) being addressed.</p>

Formative Assessment Strategies	Checks for Understanding	<p>How will I use the information gained from these checks for understanding?</p> <p>In what ways may I need to adapt the lesson as a result of this data?</p>	<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator C: The teacher deliberately checks for understanding throughout the lesson to surface misconceptions and opportunities for growth, and adapts the lesson according to student understanding.</p>
Formative Assessment Strategies	Feedback & Revision	<p>How will I provide feedback to students?</p> <p>Will there be an opportunity in this lesson for students to revise their work? If so, when?</p>	See Beyond the Lesson Discussion Guide.
Classroom Discussion	Structuring Discussions	<p>What ideas/concepts from the selected standard(s) will I focus on during discussions?</p> <p>What criteria will I use to determine which students will be chosen to share their mathematical work? How will I sequence this sharing of student representations and/or solution methods to connect and strengthen all students' understanding of the content?</p>	<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator A: The teacher makes the mathematics of the lesson explicit through the use of explanations, representations, tasks, and/or examples.</p> <p>Indicator B: The teacher strengthens all students' understanding of the content by strategically sharing students' representations and/or solution methods.</p>

Classroom Discussion	Student-driven Discussions	How will I encourage students to engage in mathematical discourse? How can I facilitate student discussions that prompt students to critique the reasoning of others, justify solutions, ask questions, and learn from other students' thinking?	<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson</p> <p>Indicator C: The teacher poses questions and problems that prompt students to explain their thinking about the content of the lesson. Students share their thinking about the content of the lesson beyond just stating answers.</p> <p>Indicator D: The teacher creates the conditions for student conversations where students are encouraged to talk about each other's thinking. Students talk and ask questions about each other's thinking, in order to clarify or improve their own mathematical understanding.</p>
Classroom Discussion	Lesson Summary	<p>What will the summary of the lesson look or sound like?</p> <p>What student work and discussion will I highlight to reinforce the mathematical learning goal(s) of the lesson?</p>	<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator D: The teacher facilitates the summary of the mathematics with references to student work and discussion in order to reinforce the purpose of the lesson.</p>

Questions within the Instructional Practice Guide: Lesson Planning Tool (organized by Core Action and Indicator from the Instructional Practice Guide):

Core Action & Indicator	Module	Navigation Item	Question
<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator A: The enacted lesson focuses on the grade-level (K-8)/course-level (HS) cluster(s), grade-level/course-level content standard(s), or part(s) thereof.</p>	Planning a Standards-Aligned Lesson	Clusters & Standards	What standard(s) and/or cluster(s) am I targeting in this lesson?
	Mathematics of the Lesson	Selected Standards	Will the lesson address a part of the standard(s) or the entire standard(s)?
	Mathematics of the Lesson	Key Mathematics	<p>What is the key mathematical idea or concept from the standard(s) I am targeting?</p> <p>How will I ensure the lesson will meet the expectations of the standard(s) targeted?</p>
	Planning a Standards-Aligned Lesson	Learning Goal	What is the mathematical learning goal of the lesson?
	Planning a Standards-Aligned Lesson	Coherence	If applicable, why am I covering content from a different grade level and how does it connect to on-grade level work?
	Problems & Exercises	Adapting the Lesson	<p>What scaffolding will I use to support students?</p> <p>How will I address remediation or unfinished learning in the context of the on-grade-level (K-8)/course-level (HS) work?</p> <p>What extension work will I prepare for students</p>

			who are ready for deeper engagement with grade-level content?
<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator B: The enacted lesson appropriately relates new content to math content within or across grades.</p>	Planning a Standards-Aligned Lesson	Coherence	How does this work connect to work in previous or future grades and what will I do to make that connection?
	Coherent Connections	Coherence: Prior Knowledge	<p>What prior knowledge or skills might students bring to this lesson?</p> <p>What unfinished learning from earlier grades might I need to address within the context of this lesson?</p> <p>How will the lesson explicitly connect to and build on students' prior skills and knowledge? What will I say or show my students to make this connection clear?</p>
	Planning a Standards-Aligned Lesson	Coherence	If applicable, why am I covering content from a different grade level and how does it connect to on-grade-level work?

	Coherent Connections	Coherence: Future Work	How do the mathematics of this lesson lay the foundation for future work?
<p>Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics.</p> <p>Indicator C: The enacted lesson intentionally targets the aspect(s) of Rigor (conceptual understanding, procedural skill and fluency, application) called for by the standard(s) being addressed.</p>	Planning a Standards-Aligned Lesson	Rigor	Which aspect(s) of Rigor do the targeted standards require?
	Problems & Exercises	Addressing Rigor	Describe how the problems in this lesson address the aspect(s) of Rigor called for by the standard(s) being addressed
<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator A: The teacher makes the mathematics of the lesson explicit through the use of explanations, representations, tasks, and/or examples.</p>	Planning a Standards-Aligned Lesson	Mathematical Explanations	What explanations, representations, tasks, and/or examples will I share to make the mathematics of this lesson clear?
	Classroom Discussion	Structuring Discussions	<p>What ideas/concepts from the selected standard(s) will I focus on during discussions?</p> <p>What criteria will I use to determine which students will be chosen to share their mathematical work? How will I sequence this sharing of student representations and/or solution methods to connect and strengthen all students' understanding of the content?</p>

<p>Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson.</p> <p>Indicator B: The teacher strengthens all students' understanding of the content by strategically sharing students' representations and/or solution methods.</p>	Problems & Exercises	Solution Methods	<p>What solution methods or representations do I anticipate seeing from students?</p> <p>In what ways do I want to connect these solution methods or representations to each other to strengthen all students' understanding?</p>
	Planning a Standards-Aligned Lesson	Checks for Understanding	<p>What strategies and opportunities will I use to check for understanding throughout the lesson?</p> <p>What questions or problems will I ask?</p>
	Mathematics of the Lesson	Mathematical Explanations	<p>What common misconceptions and opportunities for growth do I anticipate will arise?</p> <p>How am I going to address these misconceptions to strengthen students' understanding of the content?</p>
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<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator A: The teacher provides opportunities for all students to work with and practice grade-level problems and exercises.</p> <p>Students work with and practice grade-level problems and exercises.</p>	Planning a Standards-Aligned Lesson	(Grade-/Course-)Level Problems	What grade-/course-level problem(s) will I ask the whole class to solve?
	Coherent Connections	Adapting the Lesson	<p>What scaffolding will I use to support students?</p> <p>How will I address remediation or unfinished learning in the context of the on-grade-level work?</p> <p>What extension work will I prepare for students who are ready for deeper engagement with grade-level content?</p>
<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator B: The teacher cultivates reasoning and problem solving by allowing students to productively struggle.</p> <p>Students persevere in solving problems in the face of difficulty.</p>	Problems & Exercises	Perseverance	<p>Which problem(s), if any, will require students to persevere?</p> <p>How will I encourage students to persist with this problem even in the face of difficulty?</p>
<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the</p>	Planning a Standards-Aligned Lesson	Discussion Questions	What questions will I ask to prompt students to share their thinking about the content of the lesson and when will that happen?

<p>content of the lesson</p> <p>Indicator C: The teacher poses questions and problems that prompt students to explain their thinking about the content of the lesson. Students share their thinking about the content of the lesson beyond just stating answers.</p>	Problems & Exercises	Student Thinking	Which problem(s) will prompt students to share their thinking and apply their mathematical language?
	Problems & Exercises	Justifications	Which problem(s) will require students to explain and justify their work?
	Classroom Discussion	Student-driven Discussions	<p>How will I encourage students to engage in mathematical discourse?</p> <p>How can I facilitate student discussions that prompt students to critique the reasoning of others, justify solutions, ask questions, and learn from other students' thinking?</p>
<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator D: The teacher creates the conditions for student conversations where students are encouraged to talk about each other's thinking. Students talk and ask questions about each other's thinking, in order to clarify or improve their own mathematical understanding.</p>	Classroom Discussion	Student-driven Discussions	<p>How will I encourage students to engage in mathematical discourse? How can I facilitate student discussions that prompt students to critique the reasoning of others, justify solutions, ask questions, and learn from other students' thinking?</p>

<p>Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson.</p> <p>Indicator E: The teacher connects and develops students' informal language and mathematical ideas to precise mathematical language and ideas. Students use increasingly precise mathematical language and ideas.</p>	Mathematics of the Lesson	Mathematical Language	<p>What mathematical language should students use in this lesson?</p> <p>What informal mathematical language do I expect to hear?</p> <p>How will I connect students' informal language to the precise mathematical language of this lesson?</p>
	Problems & Exercises	Student Thinking	<p>Which problem(s) will prompt students to share their thinking and apply their mathematical language?</p>
See Beyond the Lesson Discussion Guide	Problems & Exercises	Tools	<p>Select the tools that may be useful as students solve the problems posed in this lesson.</p> <p>How will I encourage them to independently choose appropriate tools?</p>
See Beyond the Lesson Discussion Guide	Formative Assessment Strategies	Feedback & Revision	<p>How will I provide feedback to students?</p> <p>Will there be an opportunity in this lesson for students to revise their work? If so, when?</p>