

Module 2: Supporting Reasoning and Explanations in Elementary Mathematics Teaching

Scope of the module

Session	Mathematics	Student thinking	Teaching practice	Learning from practice
Session 1	<ul style="list-style-type: none"> making and justifying/refuting conjectures and generalizations recognizing and using multiple approaches to solve mathematics problems identifying foundations of mathematical reasoning 	<ul style="list-style-type: none"> monitoring students' mathematical reasoning 	<ul style="list-style-type: none"> establishing and maintaining an environment that emphasizes reasoning 	
Session 2	<ul style="list-style-type: none"> making and justifying/refuting conjectures and generalizations recognizing and using multiple approaches to solve mathematics problems identifying foundations of mathematical reasoning 	<ul style="list-style-type: none"> monitoring students' mathematical reasoning 	<ul style="list-style-type: none"> establishing and maintaining an environment that emphasizes reasoning 	<ul style="list-style-type: none"> using norms that support engagement in video workshop understanding the video workshop process

Session	Mathematics	Student thinking	Teaching practice	Learning from practice
Session 3	<ul style="list-style-type: none"> making and justifying/refuting conjectures and generalizations recognizing and using multiple approaches to solve mathematics problems using and knowing the mathematical practices identified in the CCSS 	<ul style="list-style-type: none"> monitoring students' mathematical reasoning 	<ul style="list-style-type: none"> establishing and maintaining an environment that emphasizes reasoning 	
Session 4		<ul style="list-style-type: none"> monitoring students' mathematical reasoning 	<ul style="list-style-type: none"> establishing and maintaining an environment that emphasizes reasoning adapting tasks to nurture mathematical reasoning 	<ul style="list-style-type: none"> using norms that support engagement in video workshop understanding the video workshop process learning to analyze teaching and learning in the context of video workshop

Session	Mathematics	Student thinking	Teaching practice	Learning from practice
Session 5	<ul style="list-style-type: none"> • making and justifying/refuting conjectures and generalizations • recognizing and using multiple approaches to solve mathematics problems • understanding features of a “good” mathematical explanation and producing “good” explanations • using and knowing the mathematical practices identified in the CCSS 		<ul style="list-style-type: none"> • supporting students’ engagement in mathematical practices by teaching them explicitly • supporting students in explaining their mathematical reasoning • adapting tasks to nurture mathematical reasoning 	
Session 6		<ul style="list-style-type: none"> • monitoring students’ mathematical reasoning 	<ul style="list-style-type: none"> • supporting students in explaining their mathematical reasoning • establishing and maintaining an environment that emphasizes reasoning 	<ul style="list-style-type: none"> • using norms that support engagement in video workshop • learning to analyze teaching and learning in the context of video workshop

Session	Mathematics	Student thinking	Teaching practice	Learning from practice
Session 7		<ul style="list-style-type: none"> • monitoring students' mathematical reasoning • noticing collective elements of mathematical reasoning 	<ul style="list-style-type: none"> • supporting students in explaining their mathematical reasoning • establishing and maintaining an environment that emphasizes reasoning 	<ul style="list-style-type: none"> • using norms that support engagement in video workshop • understanding the video workshop process • learning to analyze teaching and learning in the context of video workshop
Session 8	<ul style="list-style-type: none"> • making and justifying/refuting conjectures and generalizations • understanding features of a "good" mathematical explanation and producing "good" explanations • using and knowing the mathematical practices identified in the CCSS 	<ul style="list-style-type: none"> • monitoring students' mathematical reasoning 	<ul style="list-style-type: none"> • supporting students' engagement in mathematical practices by teaching them explicitly 	

Session	Mathematics	Student thinking	Teaching practice	Learning from practice
Session 9	<ul style="list-style-type: none"> making and justifying/refuting conjectures and generalizations understanding features of a “good” mathematical explanation and producing “good” explanations using and knowing the mathematical practices identified in the CCSS 		<ul style="list-style-type: none"> supporting students’ engagement in mathematical practices by teaching them explicitly adapting tasks to nurture mathematical reasoning 	
Session 10			<ul style="list-style-type: none"> supporting students’ engagement in mathematical practices by teaching them explicitly 	<ul style="list-style-type: none"> using norms that support engagement in video workshop understanding the video workshop process learning to analyze teaching and learning in the context of video workshop