

Teacher Work	Student Work	Observer Work	Notes
<p>Engage students in discussion about focus questions: “How can we compare different solutions to prevent soil from washing away?”</p>	<p>Listen to focus question and offer ideas about comparing design solutions.</p>	<p>Listen for student talk related to quantity of soil washed away. Are they trying to come up with ways to quantify the amount of soil washed away? Are they discussing the different materials?</p>	
<p>Ask students to review their design.</p> <p>Prompt students to identify their reasoning for materials selection and design.</p>	<p>Students will talk about their designs and rationale.</p>	<p>Listen for students talking about:</p> <ul style="list-style-type: none"> ● Material selection ● Material placement ● Rationale 	

<p>Ask students to build and test their design.</p>	<p>Students construct and test their design. They should build based on their design.</p>	<p>Observe if students construct the solution according to their plan.</p> <p>Pay attention to how students pour the water. Is it influencing the results?</p> <p>Note what students say as they begin to see soil washing away or not washing away.</p> <p>Note what changes students see first.</p> <p>Note any questions or wonderings students articulate.</p>	
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<p>Engage students in a discussion to compare the different design solutions.</p>	<p>Students refer to their notes page and compare the different solutions using agreed upon ways to quantify the amount of soil washed away.</p> <p>Students are making claims of which solution is best based on evidence.</p>	<p>Are students discussing their noticing using the notebook page?</p> <p>Are students engaging in evidence based argumentation about which design is best?</p> <p>Do students have a shared understanding of how to quantify how much soil has washed away.</p> <p>Are students building off from each other ideas and pushing each other's thinking?</p>	
<p>Students are asked to redesign their original design using the same materials to improve the design.</p>	<p>In groups students discuss and then write about how they would change their design and why.</p>	<p>Are students engaging in science discourse around changing their design?</p> <p>Note if students are using other designs as a basis for changing their design.</p> <p>Identify any reasons students state for why they think the second design will work better.</p>	