



Discovery Table: Sand Forts

Children build forts.

Big Ideas	Through using materials and interacting with them, people learn important concepts and gain skills relating to physical science, engineering and technology, and the arts.
Guiding Question	How do people use different tools and materials for different purposes?
Vocabulary	fort: a building protected with a strong wall around it experiment: to try out ideas
Materials and Preparation	<ul style="list-style-type: none"> ● sand fort slides ● sensory/discovery table, or tabletop tubs ● sand ● small figurines to place inside the sand forts (e.g., Lego/Duplo people, small animal figurines, child-created people, etc.) ● small shovels ● carving tool: plastic spoon/knives, or spatulas, or rounded pastry knife ● buckets, or bowls, or cups of various sizes ● funnel ● spray bottles filled with water ● small table or chair(s) to place materials on ● dustpan and brush for sweeping sand ● gloves, optional <p>Offer a few of the following materials to enhance building:</p> <ul style="list-style-type: none"> ● craft/popsicle sticks and/or small twigs ● small, flat wooden blocks/planks ● melon baller or ice cream scoop ● small pieces of fabric/leather ● flags

	Bring an example of the figurines to the Intro to Centers meeting.
Intro to Centers	<p><i>We're reading The Little Red Fort by Brenda Maier. Remember that a fort is a building protected with a strong wall around it. We are going to construct forts for the _____ [figurine] in the Discovery Table with sand.</i></p> <p><i>We've had a lot of experience with sand now. What have we discovered about constructing with sand? Turn and talk with a friend.</i></p> <p>Harvest responses. If it does not come up, mention the importance of water in building with sand.</p> <p>Show the sand fort slides. While showing the slides, discuss what the children notice in the different building strategies. Also, support children with making connections (e.g., <i>I remember Melissa showing us how she uses the spatula to carve</i>) or emphasize new learning.</p> <p><i>This week, it will be important for us to consider the design and engineering process as we experiment with constructing sand forts. As you create, it will be critical for us to think about what we can improve. So let's remember to bring our sand forts to the Thinking and Feedback meeting so we can learn new strategies together.</i></p>
During Centers	<p>Children construct sand forts. They will experiment with different strategies. Revisit the slides as their experience with the sand fort building grows. When possible, engage small groups of children in the Thinking and Feedback process during Centers to capture the organic process.</p> <p>Support as the children desire or need new materials.</p>
Facilitation	<ul style="list-style-type: none"> ● What is your inspiration for this fort? ● What strategy will you use to build the walls? ● What's working? ● What other way can you build it? ● How might _____ [another child] help you?
Standards	<p>K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. Further explanation: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn. Analyzing and Interpreting Data, Forces and Motion, Defining Engineering Problems, Cause and Effect</p>

Centers U3 W6