

Sand: Exploring Measurement

Step in Progression	Interaction Ideas (Sand)
Identifying the attribute	<p>You notice children are playing in the sand area. Take the opportunity to draw their attention to the attributes of the objects they are using. Extend children's understanding by naming the attributes you are focusing on. For example</p> <p>When the children are digging:</p> <ul style="list-style-type: none"> • Can you please pass me the shovel with the short handle? • Kathryn's ditch is long. Can you dig a long one too? • Elizabeth's hole is really deep. Can you make a deep one too? Let's see. • Look, Sally's made a shallow trench. Let's drive our cars in it. <p>When the children are making roads:</p> <ul style="list-style-type: none"> • Look at Jenny's long road. Can you make a long road too? • Tai's made a short road. Let's all make a short road. • This road has to go from my house all the way to the supermarket over there, that's a long way. Let's make the long road together. <p>When the children are filling and tipping</p> <ul style="list-style-type: none"> • This tip-truck needs to be filled up. Can you fill it with sand please? Now let's empty it over there. • Ann's bucket is full. Can you fill your one up too? • Can everybody find an empty bucket? Now let's fill them up.
Direct comparison	<p>Children are running cars down a spouting or plank into the sandpit. Encourage them to compare the distances different cars travel to find out whose car goes the furthest.</p> <ul style="list-style-type: none"> • Ben, has your car gone a longer way than Amy's into the sandpit? How do you know? • Whose car has gone the shortest distance? How can we check? • Your car's gone a long way Faliqh. Is it longer than Anna's? Let's find out together. • What happens if we use a shorter plank? Let's find a shorter one. Now let's see what happens. <p>You see children filling containers with sand. As appropriate, encourage them to lift and hold containers to find out which is the heaviest.</p> <ul style="list-style-type: none"> • Is your container heavier than mine? Let's check? • Can you make your container lighter than mine? Is it lighter? How can you tell? • Let's all make a cake in our container. Who has the heaviest cake? Let's find out. • Who has the lightest cake? Let's feel all the cakes to find out. <p>Click to see an annotated interaction.</p>

<p>Indirect comparison</p>	<p>The children are making roads in the sand area. Encourage them to use string to compare the lengths of their roads.</p> <ul style="list-style-type: none"> • Which of these squiggly roads is the longest? Let's use string to find out. • How far along the string does this road come? Show me. • Now let's measure the other road. Is it longer or shorter? How do you know? <p>The children are making volcanoes out of sand. Encourage them to use string to compare the distances around the base of their volcanoes.</p> <ul style="list-style-type: none"> • Honi has made a huge volcano. It's a long way around the bottom of it. Let's use string to find out how long. • I wonder if Sarah's volcano is longer around the bottom. Let's see. <p>Ask children to describe their thinking as they measure:</p> <ul style="list-style-type: none"> • How are you going to use the string to measure? • What are you doing with the string? What are you going to find out? • How do you know this one is shorter? Show me.
<p>Using something to measure</p>	<p>The children are making roads in the sand area. Encourage them to use other objects they have available to measure the length of their roads.</p> <ul style="list-style-type: none"> • How long is your road? Let's walk along it to find out. We could count our steps. • Is Nicole's longer? Let's measure it to see. How many steps long do you think it will be? Now let's try. • Which of these squiggly roads is the shortest? Let's use these blocks to compare. <p>The children are making volcanoes out of sand. Encourage them to use available objects to measure the size of their volcanoes.</p> <ul style="list-style-type: none"> • You have made a massive volcano. How tall is it? It comes up to my knee. How far does it come up on your body? • How many people can hold hands around our volcano? • Three people can fit around our volcano. Can we make one that more people can fit around? <p>You see the children filling up containers with sand. Support them to use cups or other small containers to measure and compare volume.</p> <ul style="list-style-type: none"> • Tama is making a cake in this container. How many cups do you think he will need to fill it? Let's try. • Look at Trey's container. How many cups do you think it would take to fill that? Let's find out. • Sally's container is full of sand. Let's empty it with this cup into this other container. I wonder if it will fill it? What do you think?