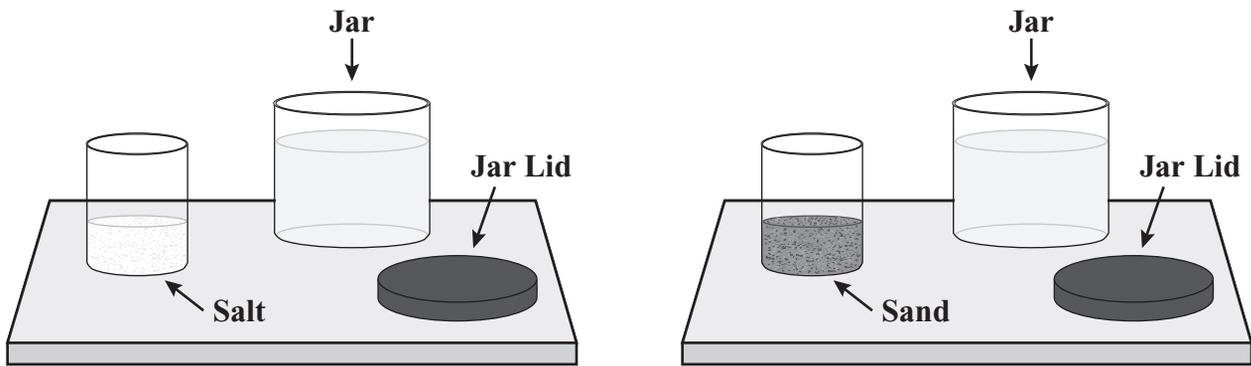


BENCHMARK SC.5.P.8.3

Reporting Category	Physical Science
Standard	Big Idea 8 Properties of Matter
Benchmark	SC.5.P.8.3 Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction. (Also assesses SC.5.P.8.2.)
Also Assesses	SC.5.P.8.2 Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.
Benchmark Clarifications	<p>Students will describe and/or explain how mixtures of solids can be separated.</p> <p>Students will identify common materials that dissolve in water.</p> <p>Students will identify or describe conditions that will speed up or slow down the dissolving process.</p>
Content Limits	<p>Items assessing conditions used to speed up or slow down the dissolving process are limited to temperature, stirring, and/or surface area.</p> <p>Items will not use the term <i>solution</i>, <i>solvent</i>, <i>solute</i>, <i>saturation</i>, or <i>catalyst</i>.</p> <p>Items will not assess the difference between a mixture and a solution.</p>
Stimulus Attribute	Dual thermometers showing degrees Fahrenheit and degrees Celsius must be used if the scenario requires an illustration of a thermometer.
Response Attributes	None specified
Prior Knowledge	Items may require the student to apply science knowledge described in the NGSSS from lower grades. This benchmark requires prerequisite knowledge from SC.K.P.8.1 and SC.1.P.8.1.

Sample Item 13 **SC.5.P.8.2**

Dani adds 10 grams (g) of salt to a jar of water. She then adds 10 g of sand to a second jar of water. She covers and shakes both jars and sets them on the table for five minutes. The materials Dani uses are shown below.



What should Dani expect to observe after those five minutes?

- A. Both the salt and the sand dissolved in the water.
- B. Both the salt and the sand settled to the bottom of the jar.
- C. The salt settled to the bottom of the jar, and the sand dissolved in the water.
- ★ D. The salt dissolved in the water, and the sand settled to the bottom of the jar.