

### **BENCHMARK SC.5.P.8.1**

<b>Reporting Category</b>	Physical Science
<b>Standard</b>	<b>Big Idea 8</b> Properties of Matter
<b>Benchmark</b>	<b>SC.5.P.8.1</b> Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature. (Also assesses SC.3.P.8.1, SC.3.P.8.2, SC.3.P.8.3, and SC.4.P.8.1.)
<b>Also Assesses</b>	<p><b>SC.3.P.8.1</b> Measure and compare temperatures of various samples of solids and liquids.</p> <p><b>SC.3.P.8.2</b> Measure and compare the mass and volume of solids and liquids.</p> <p><b>SC.3.P.8.3</b> Compare materials and objects according to properties such as size, shape, color, texture, and hardness.</p> <p><b>SC.4.P.8.1</b> Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets.</p>
<b>Benchmark Clarifications</b>	<p>Students will compare and/or contrast the physical properties of solids, liquids, and/or gases.</p> <p>Students will describe or classify a material as a solid, liquid, or gas.</p>
<b>Content Limits</b>	<p>Items will not address or assess particle behavior in each state of matter or between states of matter.</p> <p>Items will not address or assess the water cycle.</p> <p>Items may refer to common tools used to measure basic properties of solids, liquids, and gases but will not assess specific knowledge of the tools.</p> <p>Items will not assess the difference between weight and mass.</p> <p>Items will not assess unit of measure.</p> <p>Items will not require unit conversions to compare data.</p> <p>Items will not address or assess density as a property.</p>
<b>Stimulus Attribute</b>	Dual thermometers showing degrees Fahrenheit and degrees Celsius must be used if the scenario requires an illustration of a thermometer.
<b>Response Attributes</b>	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, SC.1.P.8.1, SC.2.P.8.1, SC.2.P.8.2, SC.2.P.8.3, SC.2.P.8.4, SC.2.P.8.6, and SC.1.E.5.3.

**Sample Item 12**      **SC.5.P.8.1**

Kyle and Jan are comparing two samples of matter. They make a table of the properties of each sample.

**PROPERTIES OF SAMPLES**

Property	Sample 1	Sample 2
Color	Red	Silver
Mass (grams)	30	5
Shape	Pyramid	Cube
Volume (milliliters)	40	3

Which property provides the **best** evidence that both samples are solids rather than liquids?

- A. color
- B. mass
- ★ C. shape
- D. volume