

Solids and Liquids Concept Storyline

Unifying Concept

Solids and liquids are two states of matter. Each state has different properties.

Unit Concept

Solids and liquids can be described and classified on the basis of their properties.

Grade-Level Concept

Solids and liquids have unique properties. Testing can identify properties that cannot be detected by the senses alone.

Subconcept 1

Some properties of solids and liquids can be identified by careful observation with the senses alone.

Lesson 1: Pre-Unit Assessment: Observing and Describing Two Solids

Students examine a spoon and a steel ball. They share what they know and would like to know about solids.

Lesson 2: Observing Properties
Students classify 20 solid objects on the basis of their observable properties.

Lesson 3: Comparing Solids that Roll with Solids that Stack
Students describe and sort solids on the basis of their shapes.

Lesson 4: Rolling Solids
Students examine the factors that affect how far a solid will roll.

Lesson 5: Testing the Hardness of Solids
Students use their sense of touch to explore the property of hardness.

Subconcept 2

Some properties of solids and liquids can be identified only by testing.

Lesson 6: Investigating Solids and Water

Students perform a test to determine which solids float and which solids sink.

Lesson 7: Testing Solids with a Magnet

Students identify similarities and differences between the solids that are and are not attracted to a magnet.

Lesson 8: Guess My Reason

Students group solid objects on the basis of a property of their choice.

Lesson 9: Investigating Two New Solids

Students apply what they have learned to identify the properties of a button and a sponge.

Subconcept 3

Liquids have unique properties that may be identified by the senses and testing.

Lesson 10: Observing and Describing Two Liquids
Students describe water and liquid glue. They discuss what they know and would like to know about liquids.

Lesson 11: Investigating Liquids

Students investigate how four liquids feel and how they look under magnification.

Lesson 12: Flowing Liquids

Students discover that liquids have no definite shape and that they flow at different rates.

Lesson 13: Drop Races

Students explore viscosity.

Lesson 14: Mixing Liquids

Students explore miscibility.

Lesson 15: Investigating Two New Liquids

Students apply what they have learned to identify the properties of two liquids.

Subconcept 4

Solids and liquids have both similarities and differences.

Lesson 16: Comparing Solids and Liquids

Students summarize what they have learned about the similarities and differences between solids and liquids.

Lesson 17: Post-Unit

Assessment: Sharing What We Know about Solids and Liquids

Students discuss and reflect on what they have learned.