

# Lesson 1

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**ANSWER KEYS**

# Figures & Reading Checks

## Dancing In The Crowd

**Figure 3** People at a packed concert don't move very far, but if they're having fun, they're not standing still either! These people dancing in place are a lot like particles vibrating in a solid.

### SEP Communicate

**Information** Think about the motion of the particles in a solid and come up with your own way of describing them.

They would be packed closely together and bouncing in place, like a box full of vibrating cell phones.

## Comparing Solids

### Figure 4 Determine Differences

Write down the differences that you notice in shape, structure, and texture between the quartz and the eraser.



Eraser Sample: flexible, crumbly material that rubs off on other materials

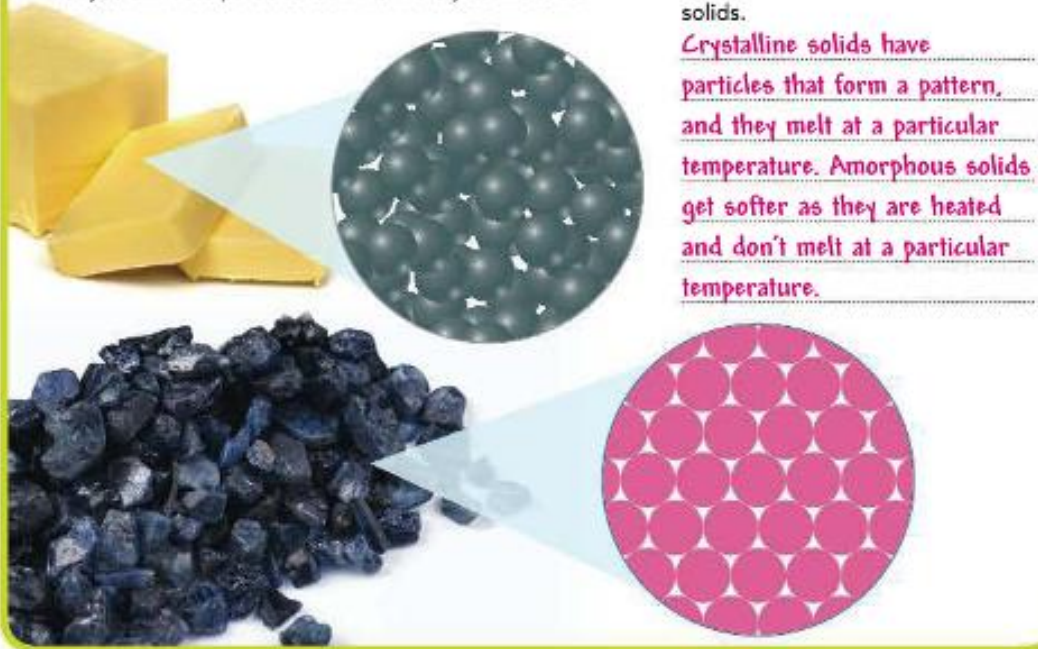
Quartz Sample: hard, angular, pointy crystal

# Figures & Reading Checks

## Model It!

### Crystalline and Amorphous Solids

**Figure 5** ✎ A pat of butter is an amorphous solid. The particles that make up the butter are not arranged in a regular pattern. The sapphire gem stones are crystalline solids. Draw what you think the particles look like in a crystalline solid.



### READING CHECK Explain

In your own words, explain the main differences between crystalline solids and amorphous solids.

*Crystalline solids have particles that form a pattern, and they melt at a particular temperature. Amorphous solids get softer as they are heated and don't melt at a particular temperature.*

## Spilled Liquid

**Figure 6** When the water spilled, what changed: its shape or its volume?

*Its shape changed.*

# Figures & Reading Checks

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**READING CHECK** Write Informative Texts Would honey be considered more viscous or less viscous than cranberry juice? Why?  
*Honey would be more viscous than cranberry juice because it flows more slowly than cranberry juice. Flowing more slowly means it has a higher viscosity.*

**READING CHECK** Determine Central Ideas What are the main differences between gases and liquids?  
*Liquids have a definite volume, whereas gases do not. Gases expand to fill their containers. Gases have particles that are more spread out and not in constant contact with one another.*