

## Reviewing Key Concepts

**1. a.** Solids have definite shapes and definite volumes. **b.** Crystalline solid particles form a regular, repeating pattern and melt at a distinct temperature; amorphous solid particles are not arranged in a regular pattern and melt over a range of temperatures. **c.** Glass is an amorphous solid. Because glass does not have a definite melting point, it becomes softer and softer as it is heated. This is why heated glass may be soft enough to bend.

**2. a.** Liquids do not have definite shape, but do have definite volume. **b.** Because its particles can move freely around one another, a liquid takes the shape of its container. Because its particles are packed closely together, a liquid has a definite volume. **c.** Due to surface tension, a needle can float on the surface of water; the surface of the water acts as a sort of skin.

**3. a.** The shape and volume of a gas are the same as those of its container. **b.** A gas has neither definite shape nor definite volume because its particles spread apart and move freely in all directions, restricted only by the walls of its container.