

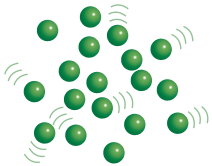
States of Matter

Water freezes. Ice melts. Steam condenses. These are ways that water—and all matter—can change. Scientists refer to these changes as "changes of state." However, the molecules that make up the matter do not change.



Gases

If it fills the entire space of the container it's in, it's a gas. Unlike liquids and solids, the molecules in a gas are spread far apart and full of energy. They bounce around, spreading out to fill the volume and shape of the container they're in—a balloon, for example.

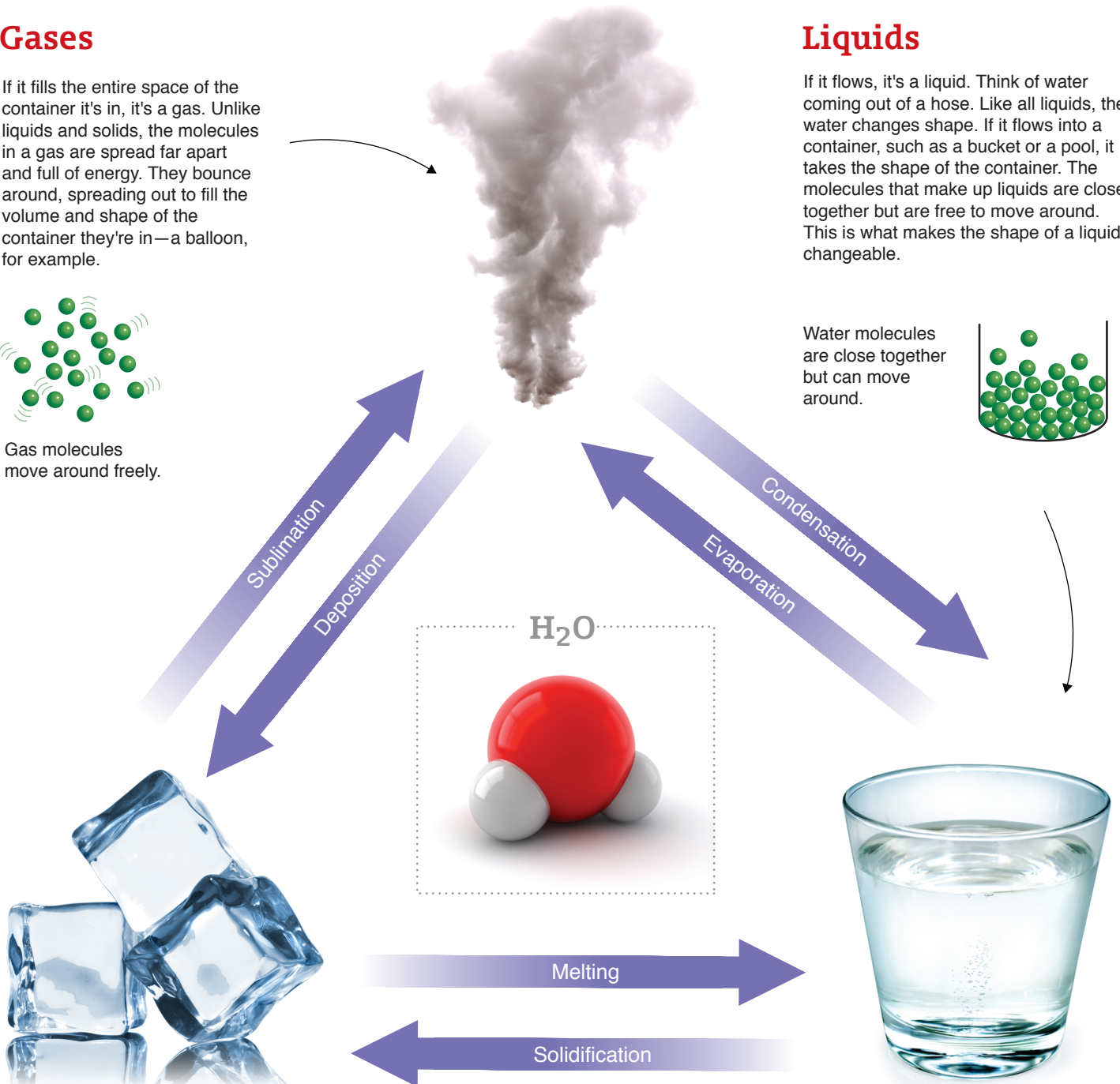
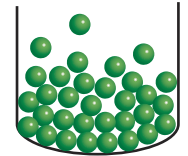


Gas molecules move around freely.

Liquids

If it flows, it's a liquid. Think of water coming out of a hose. Like all liquids, the water changes shape. If it flows into a container, such as a bucket or a pool, it takes the shape of the container. The molecules that make up liquids are close together but are free to move around. This is what makes the shape of a liquid changeable.

Water molecules are close together but can move around.



Solids

If matter is a solid object, it maintains its own shape. Take rocks, for example. A rock is a solid object. It keeps its shape unless it is crushed or something else happens to it. This is because the molecules in solids are so tightly packed that they are not free to move around.

Solid molecules are tightly packed and stay in a fixed position.

