

## COMPARISON OF PROPERTIES OF GASES, SOLIDS, AND LIQUIDS

PROPERTY	GAS	LIQUID	SOLID
Shape	Does not have its own shape; takes shape of container.	Does not have its own shape; takes shape of container.	Has its own shape.
Volume	Does not have its own volume; takes volume of container.	Has its own volume.	Has its own volume.
Distance between particles	Average distance between particles very large.	Particles close together.	Particles close together.
Attractions between particles	No attractions	Weak attractions	Strong attractions
Motion of Particles	Particles move very fast; no attractions to slow particles down.	Particles can move past each other but not very rapidly because of the attractions between particles.	Motion limited to vibration about a fixed point.
Flow & Diffuse	Yes	Yes, but not as readily as gases.	No
Expand when Heated	Expand greatly when heated.	Expand a little when heated.	Expand a little when heated.
Density	Very low	Density of a substance is usually lower in the liquid than in the solid state. (Notable exception: water)	High