

GENERAL CHEMISTRY

STANDARD 1.15

1.15: Explain the states of matter in terms of particles

STATES OF MATTER

- Five states of matter in order of increasing energy
 - Bose-Einstein Condensate (rare)
 - Solid
 - Liquid
 - Gas
 - Plasma (rare)
- Bose-Einstein Condensate and Plasma are rare states
 - Bose-Einstein Condensate is near absolute zero (extremely low energy)
 - Almost no particle motion
 - Plasma is a very high energy state of matter
 - Common in stars
 - Solid, Liquid, and Gas are common in everyday situations

STATES OF MATTER

State of Matter	Shape	Volume	Particle Motion
Bose-Einstein Condensate	Definite	Definite	Nearly Zero
Solid	Definite	Definite	Vibratory Only
Liquid	Indefinite	Definite	Sliding & Vibratory
Gas	Indefinite	Indefinite	Full Motion
Plasma	Indefinite	Indefinite	Full Motion