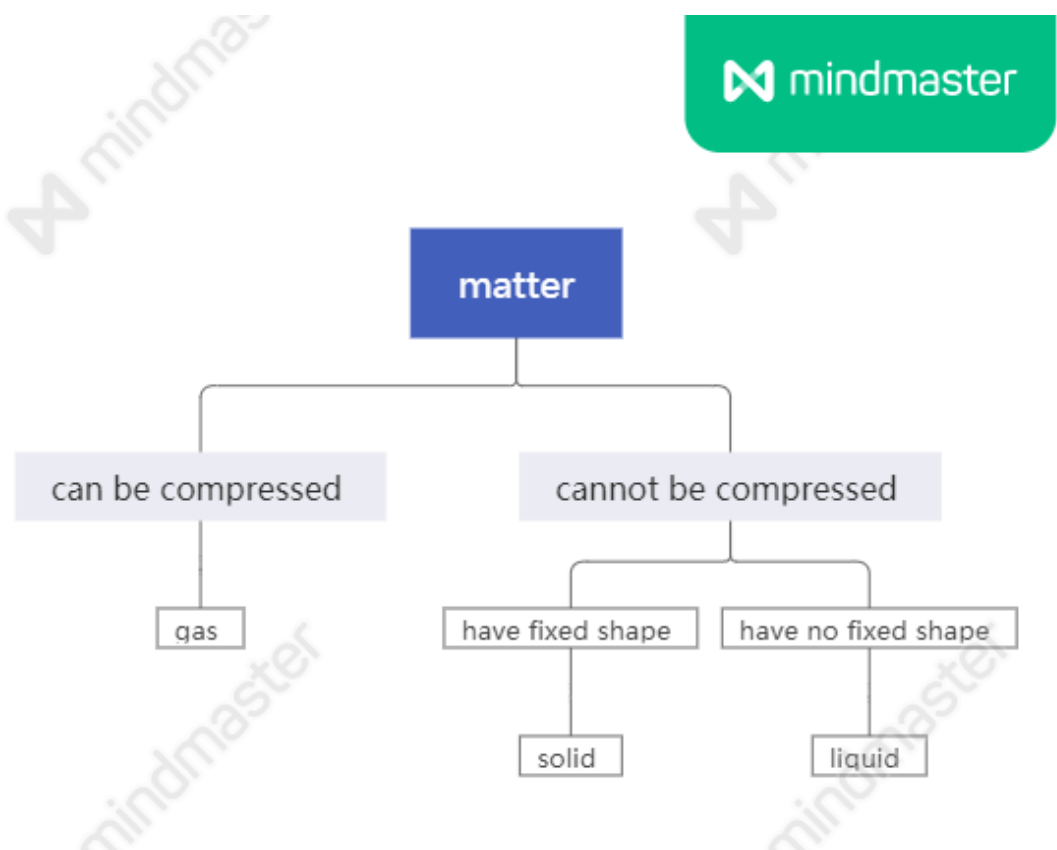


6.2 particle model

- properties of matter in 3 states

- - solid
 - ✓fixed shape
 - ✓fixed volume
 - liquid
 - ✗fixed shape
 - ✓fixed volume
 - gas
 - ✗fixed shape
 - ✗fixed volume



- particle model

- models in science
 - designing aeroplane → make model & test model in wind tunnel
 - help scientists study how aeroplane work
 - use models → study & explained how things work

- illustrate structures of objects & real systems as well as concepts
 - use kinetic motion model → explain Brownian motion of fat droplets in water
- arrangement & movement of particles in three states of matter
 - - proposed particle model based on particle theory
 - help describe arrangement & movement of particles in solids, liquids & gases
 - solid
 - particles
 - close together & arrangement regularly
 - ~~X~~ move from one position to another
 - only vibrate about fixed positions
 - particles in solids → like audience sitting in cinema
 - audience → close & in regular arrangement
 - liquid
 - particles
 - close together
 - arrangement irregularly
 - move around each other
 - particles in liquid → like people in crowd
 - people → close
 - move through crowd
 - gas
 - particles
 - far apart
 - move freely in all directions
 - particles in gases → like people running in all directions with lots of space between them
- scientists use particle model → describe arrangements & movement of particles in three states of matter.