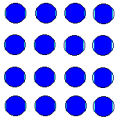
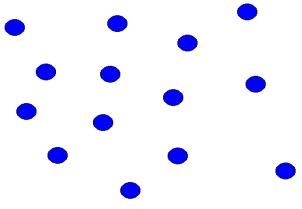
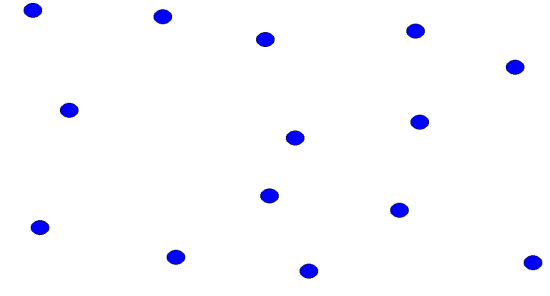
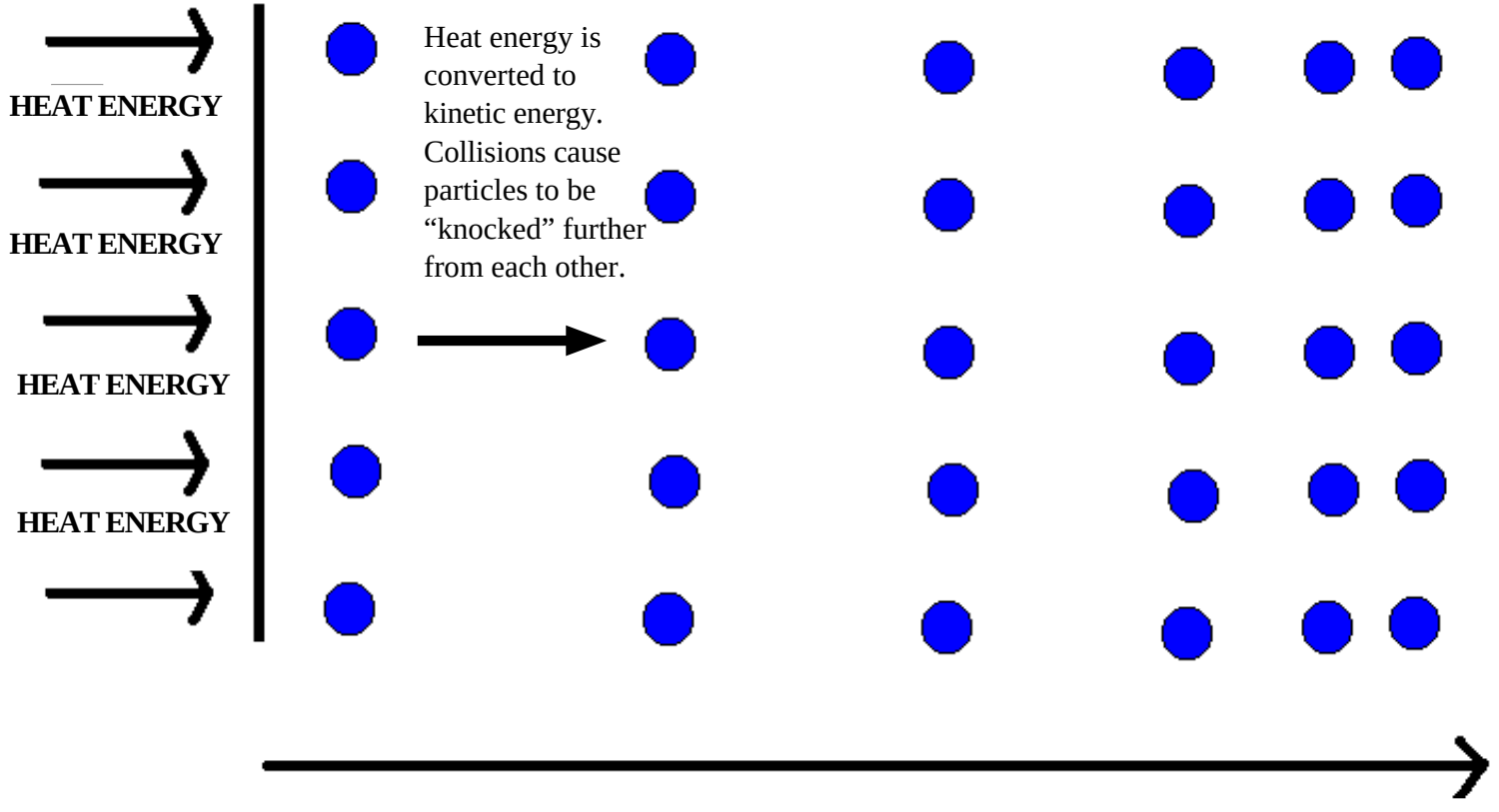
PARTICLES AND STATES OF MATTER

States	Relative Position	Description
Solid (ice)		
Liquid (water)		
Gas (water vapour)		

THE KINETIC MOLECULAR THEORY



Particles nearer the heat source speed up causing collisions and increasing distance between particles. Further from the source, the energy is reduced, decreasing the distance between the particles. As the heat energy applied increases, the further from the source this energy is distributed.

Solid Labels:

SOAP

PLATE

BASEBALL

RUBBER DUCKY

STAMP

BOOK

STAIRS

TOWEL

PENCIL

MAPLE TREE

Liquid Labels:

WATER

MILK

CHOCOLATE SYRUP

APPLE JUICE

MOLASSES

COLA

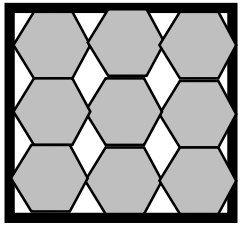
COFFEE

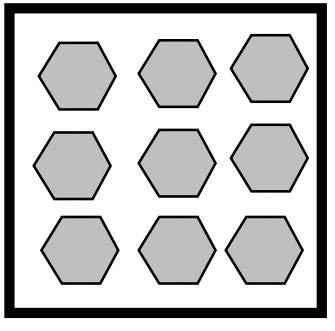
VEGETABLE OIL

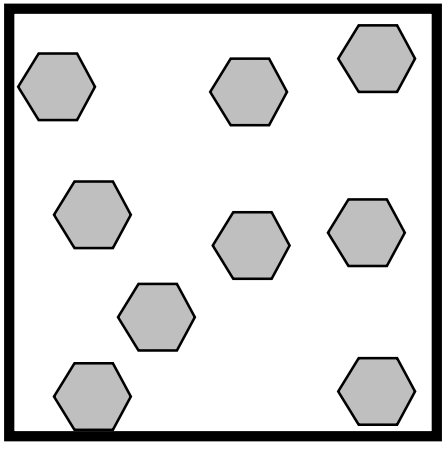
SUNSCREEN

Gas Labels:

AIR
OXYGEN
NITROGEN
CARBON MONOXIDE
HELIUM
CARBON DIOXIDE
HYDROGEN

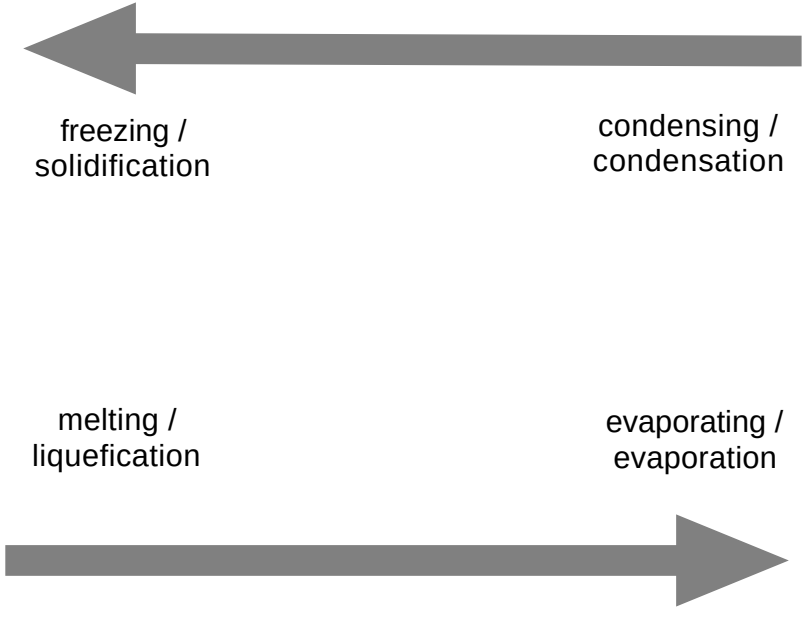


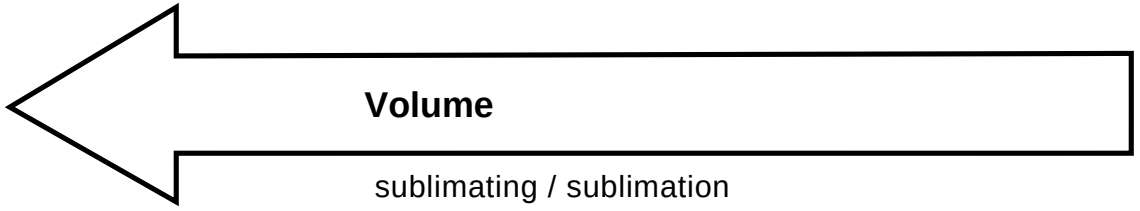


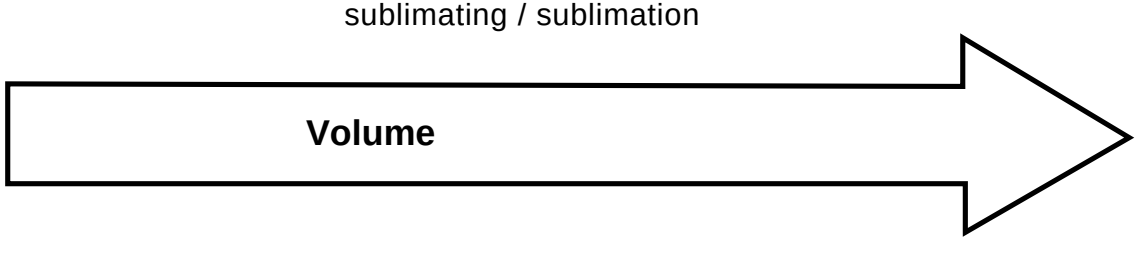


Solid **Liquid** **Gas**

Particle Theory


freezing /
solidification
condensing /
condensation
melting /
liquefication
evaporating /
evaporation


Volume
sublimating / sublimation


sublimating / sublimation
Volume

Decreasing and **Heat ENERGY**

Increasing and **Heat ENERGY**

Decreasing

Increasing

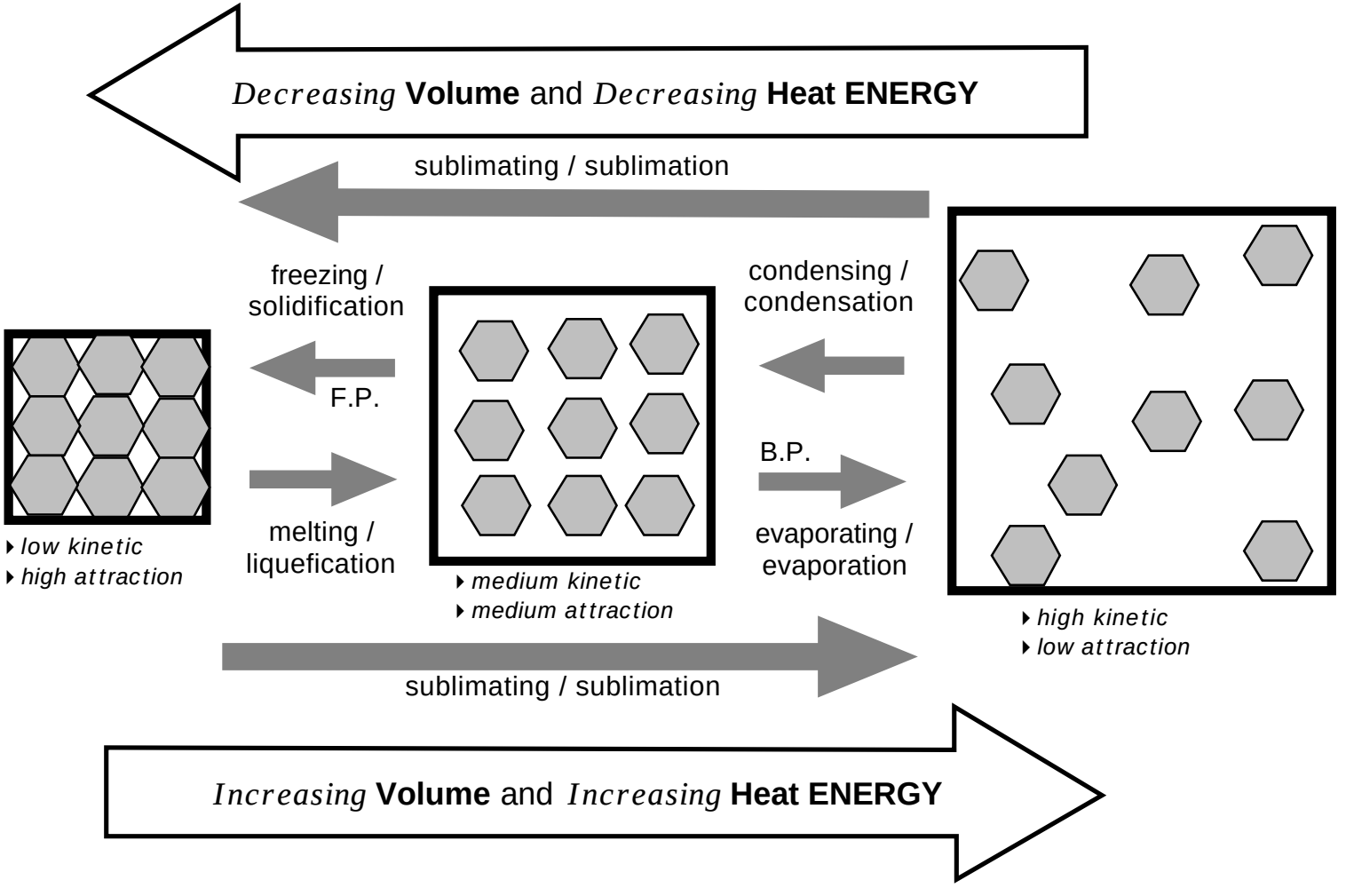
F.P.

- *low kinetic*
- *high attraction*

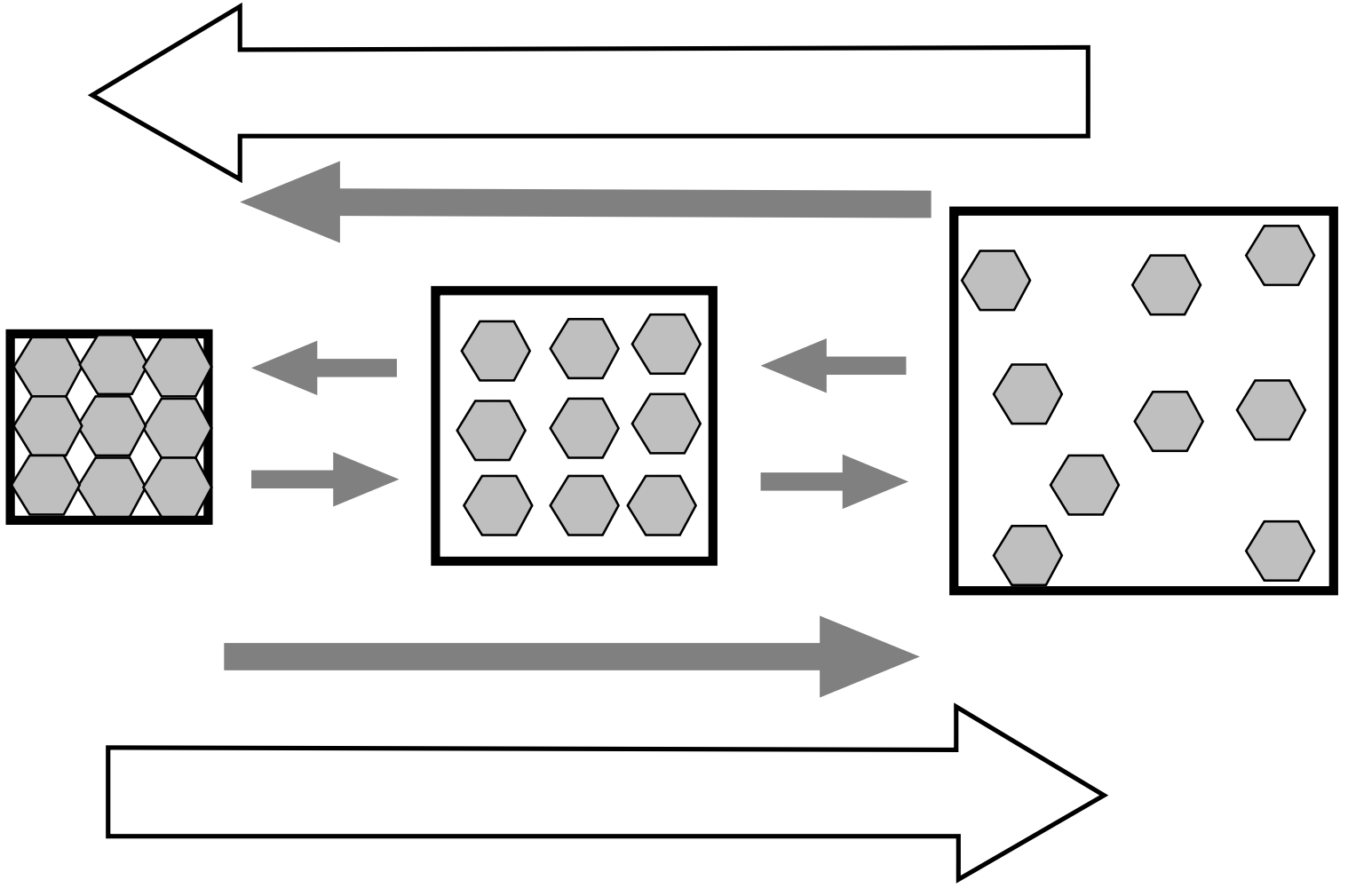
B.P.

- *medium kinetic*
- *medium attraction*

- *high kinetic*
- *low attraction*

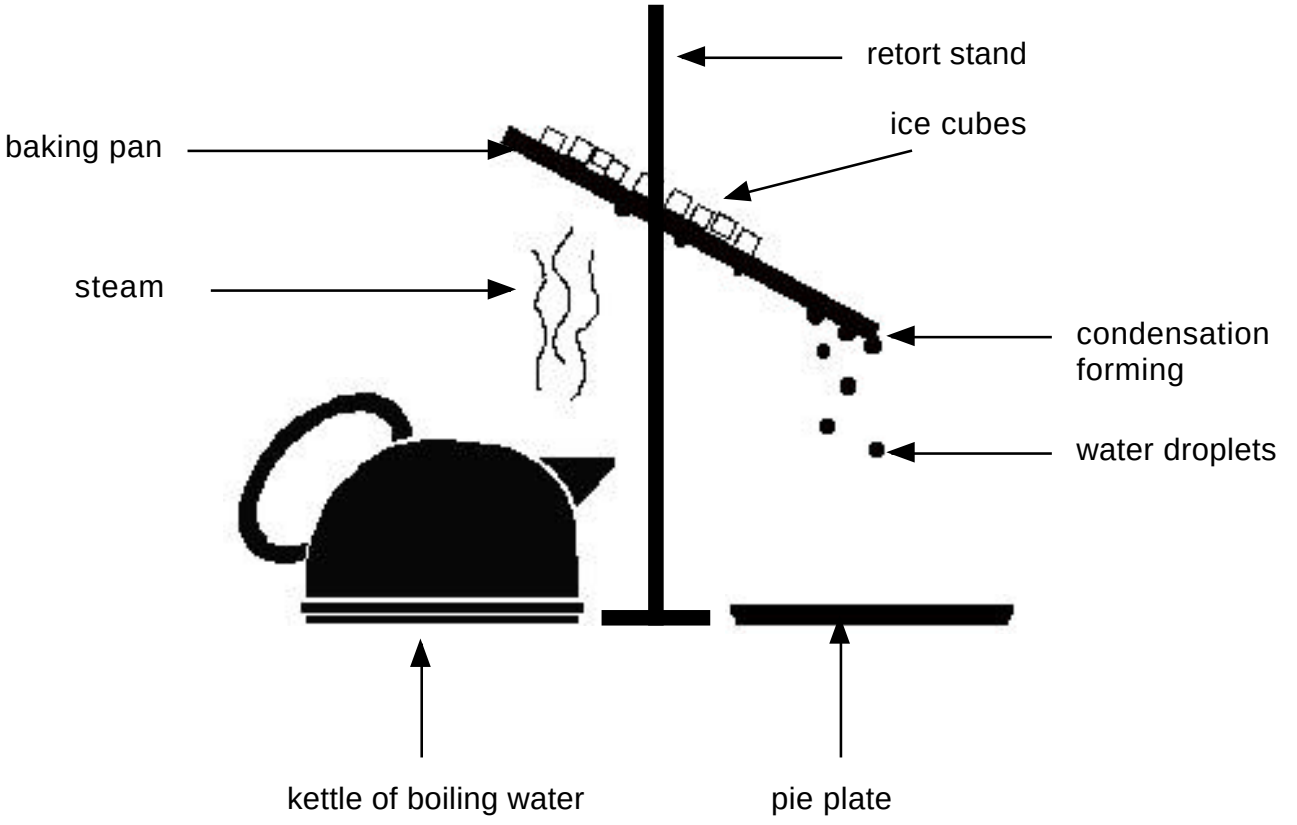


Particle Theory



Particle Theory

Water Cycle Demonstration
Teacher Setup



Note: Pouring the water that collects in the pie plate back into the kettle completes the cycle. Ask the students if they know what part of the cycle this represents (runoff).

Safety Note: Exercise caution when working near the steam. Tongs and clamps are excellent devices to avoid being scalded. Securely attach the baking pan to a retort stand. Clamp the pie plate to the table. Students should stay back a safe distance to avoid being burned by splashes made by the drops of water hitting the pie plate.