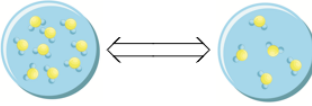


CONCEPT: INTERMOLECULAR FORCES & PHYSICAL PROPERTIES

- Recall, the physical properties are measurable and observed through the senses that describe the _____ of matter.
 - Intermolecular forces are _____ forces that exist between molecules and influence physical properties.

Direct Relationships

- Under direct relationships, the stronger the intermolecular force then the _____ the physical property.

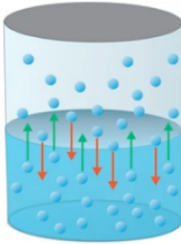
Intermolecular Forces (Physical Properties)			
Boiling Point (BP) Temperature where a ____ & ____ are in equilibrium. 	Melting Point (MP) Temperature where a ____ & ____ are in equilibrium. 	Surface Tension Measure of _____ forces on a liquid surface. 	Viscosity At constant T, the _____ to flow for a substance.  ☐ ____ viscosity = ____ movement ☐ ____ Temperature = ____ viscosity

EXAMPLE: Which of the following compounds would have the **highest** melting point?

- a) $\text{C}_2\text{H}_5\text{OH}$ b) CaS in H_2O c) CH_2Br_2 d) $\text{CH}_3\text{CH}_2\text{CH}_3$

Indirect Relationships

- Under indirect relationships, the stronger the intermolecular force then the _____ physical property.

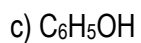
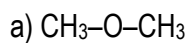
Intermolecular Forces (Vapor Pressure)
Vapor Pressure The pressure exerted by a ____ at the surface of a liquid ☐ An equilibrium between _____ & _____ 

EXAMPLE: Choose the substance with the **highest** vapor pressure.

- a) AgClO_4 in CH_3OH b) Kr c) CH_4 d) H_2S

CONCEPT: INTERMOLECULAR FORCES & PHYSICAL PROPERTIES

PRACTICE: Which of the following will have the **lowest** boiling point?



PRACTICE: Which molecules would most likely cause a liquid to have the **lowest** viscosity?

a) Large, polar molecules

b) Small, nonpolar molecules

c) Small, polar molecules

d) Large, nonpolar molecules

PRACTICE: Which of the following should have the **highest** surface tension at a given temperature?

