

## Find someone who....

1) Can explain what happens to molecules when the temperature increases.

Answer:  $\uparrow$  Temp.  $\uparrow$  Speed of molecules Name: MRS. K | C

2) Can define temperature in terms of kinetic energy.

Answer: Temp. is a measure of the Name:

average speed of atoms or molecules.

$\uparrow$  Temp.  $\uparrow$  KE,  $\downarrow$  Temp.  $\downarrow$  KE  
3) Can explain why pressure and temperature are directly proportional at constant volume.

Answer:  $\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$   $\frac{P}{T} = k$   $\leftarrow$  constant Name:

$\uparrow T \uparrow P, \downarrow T \downarrow P$

4) Can explain why water boils at a lower temperature on a mountain.

Answer: At higher elevations the pressure Name:

is less (than sea level), so the vapor pressure can exceed  $P_{atmosphere}$  at lower temperatures.

5) Can explain why it is more economical to transport natural gas as LNG (liquefied natural gas).

Answer: LNG occupies less volume, so Name:

you can transport a larger quantity at a time

6) Can give you three different units for pressure.

Answer: 1 atm = 101.3 kPa = 760 mmHg Name:

= 14.7 psi = 760 torr

7) Can identify the three states of matter by how the particles move.

Answer: Solid  $\rightarrow$  fixed pattern, particles Name:

Liquid - particles can slide around vibrate

Gas - particles move around a lot

8) Can convert 32°C into Kelvin.

Answer:  $32 + 273 = 305$  K Name:

9) Can explain the difference between endothermic and exothermic reactions.

Answer: Endo: energy goes into system Name:

Exo: energy exits (goes out of) system

10) Can explain what the critical point on a phase diagram means.

Answer: End of line b/w L and G where Name:

the states cannot be distinguished (i.e. cannot go back to liquid)

11) Can identify melting and vaporization as endothermic or exothermic.

Answer: Melting (S  $\rightarrow$  L): endothermic Name:

Vaporization (L  $\rightarrow$  G): endothermic

12) Can tell you the difference between kinetic energy and potential energy.

Answer: KE = energy related to motion Name:

PE = stored energy in an object due to position/config. (energy stored in bonds)

13) Can tell you STP means.

Answer: STP = standard temp. and pressure Name:

$T = 273$  K  $P = 1$  atm