

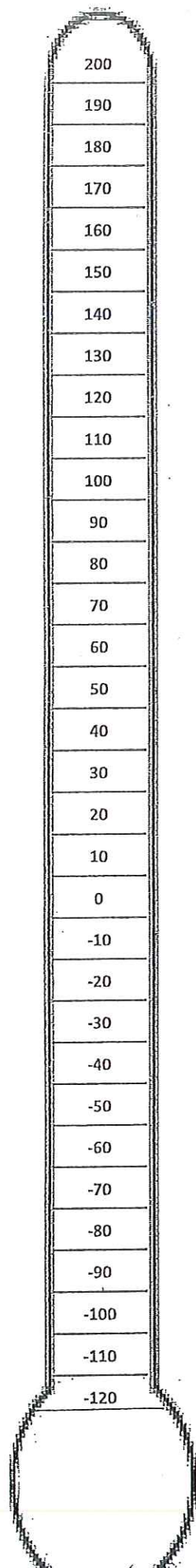
Degrees Celsius

Water

Ethanol

Bromine

Radon



V.P.  
100°C

M.P.  
0°C

GAS

LIQUID

SOLID

V.P.  
78°C

M.P.  
-115°C

GAS

LIQUID

SOLID

VP  
59°C

MP  
-7°C

GAS

LIQUID

SOLID

VP  
-61°C  
MP  
-71°C

LIQUID

GAS

SOLID



# Analysis Questions: (After you've colored the thermometers.)

Write TRUE or FALSE on the line. Then, correct the false statements.

- True water is a *liquid* at  $35^{\circ}\text{C}$
- False bromine is a gas at  $-60^{\circ}\text{C}$  Solid
- True radon is a *solid* at  $-110^{\circ}\text{C}$
- True ethanol is a *gas* at  $140^{\circ}\text{C}$
- True water is a *solid* at  $-5^{\circ}\text{C}$
- True ethanol is a *liquid* at  $-80^{\circ}\text{C}$
- False radon is a liquid at  $0^{\circ}\text{C}$  Gas
- False bromine is a solid at  $0^{\circ}\text{C}$  Liquid
- True radon melts at a *lower* temperature than water (ice)
- False bromine melts at a lower temperature than ethanol higher

Answer each question using your colored thermometers.

- Which substance has the lowest <sup>vaporization</sup> point? Radon
- Which substance has the highest <sup>vaporization</sup> point? water
- Which substance has the highest melting point? water
- Which substance has the lowest melting point? Ethanol
- Name the substances that are liquids at  $-30^{\circ}\text{C}$ . Ethanol
- Name the substances that are gases at  $70^{\circ}\text{C}$ . Bromine, Radon
- Name the substances that are solids at  $10^{\circ}\text{C}$ . None
- What is the lowest temperature at which all four substances will be gasses?  $100^{\circ}\text{C}$
- What is the highest temperature at which all four substances will be solids?  $-115^{\circ}\text{C}$
- Name a temperature at which water is a solid and radon is a gas.  $-61^{\circ}\text{C} \rightarrow 0^{\circ}\text{C}$