Lesson 2 Changes in State

Predict *three facts that will be discussed in Lesson 2 after reading the headings. Write your facts in your Science Journal.*

Main Idea

Kinetic and Potential Energy

I found this on page _____.

I found this on page _____.

Thermal Energy

I found this on page _____.

I found this on page _____.

Details

Relate kinetic energy *and* temperature *to particle motion. Draw arrows to show correlating increase or decrease.*

Particle Motion	Kinetic Energy of Particles	Temperature
↑		

Contrast *the potential energy of particles.*

Particles farther apart	Particles closer together

Detail *changes in* thermal energy.

Add thermal energy	particles move	increased
	particles get	increased
Remove thermal energy	particles move	kinetic energy
	particles get	potential energy

Compare thermal energy *with* temperature.

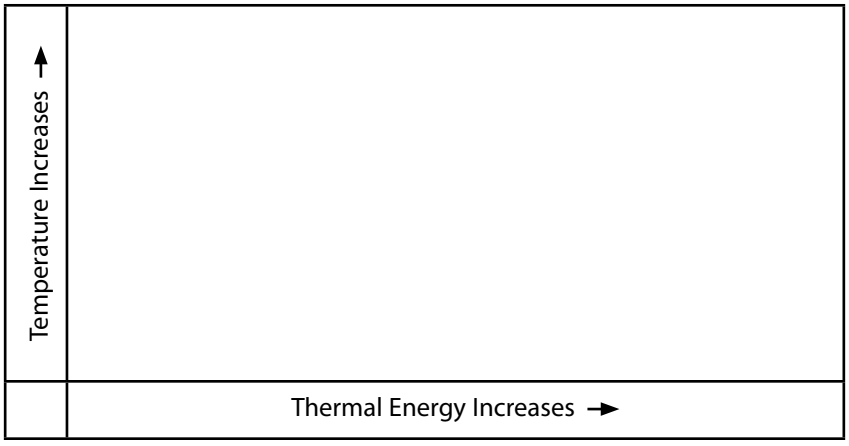
Main Idea

Details

Solid to Liquid or Liquid to Solid

I found this on page _____.

Model *the process of melting. Draw a line to indicate the* thermal energy *versus* temperature *changes as a solid changes to a liquid. Label the line to indicate the changes in* temperature *(T) and potential energy (PE).*



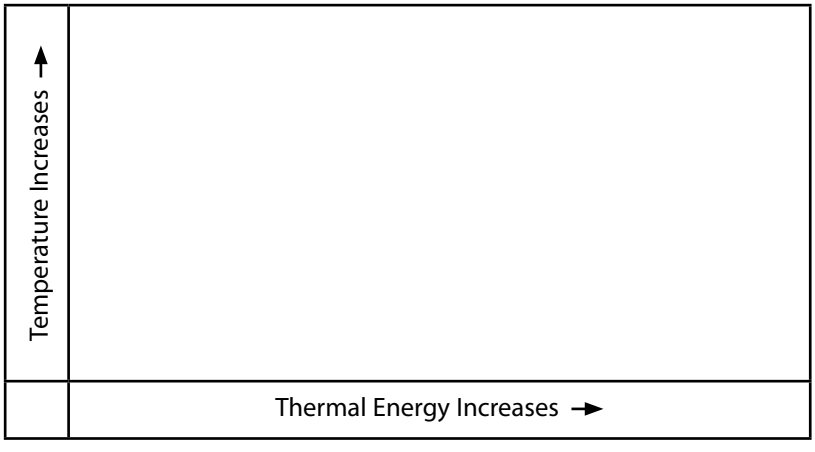
I found this on page _____.

Contrast *freezing with melting.*

Liquid to Gas or Gas to Liquid

I found this on page _____.

Represent *the process of boiling. Draw a line to indicate the* thermal energy *versus* temperature *changes as a liquid changes to a gas. Label the line to indicate the changes in* temperature *(T) and potential energy (PE).*



Main Idea

I found this on page _____.

Details

Differentiate *terms associated with changes of state.*

Term	Description
Vaporization	
Evaporation	
Boiling	
Condensation	

Solid to Gas or Gas to Solid

I found this on page _____.

Compare sublimation *with* deposition.

_____

_____

States of Water

I found this on page _____.

Characterize *water.*

Melting point: _____ Boiling point: _____

Unique because: _____

_____

Conservation of Mass and Energy

I found this on page _____.

Restate *concepts of conservation of mass and energy.*

Mass: Matter changes _____, but the total amount of the matter _____.

Energy: Thermal energy is sometimes _____ by surrounding matter, but the total energy is _____.

Connect It Suppose that you want to compare the mass of a block of ice to its mass as liquid water. You mass the ice, and then you mass a pan. You put the ice in the pan and place it over high heat. What will you find if you measure the mass of the water after it has been boiling for several minutes?

_____

_____

_____