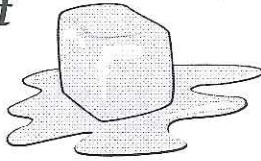


# Claim, Evidence, Reasoning Writing Prompt

Name: Key

Date:      -      -      HR:     

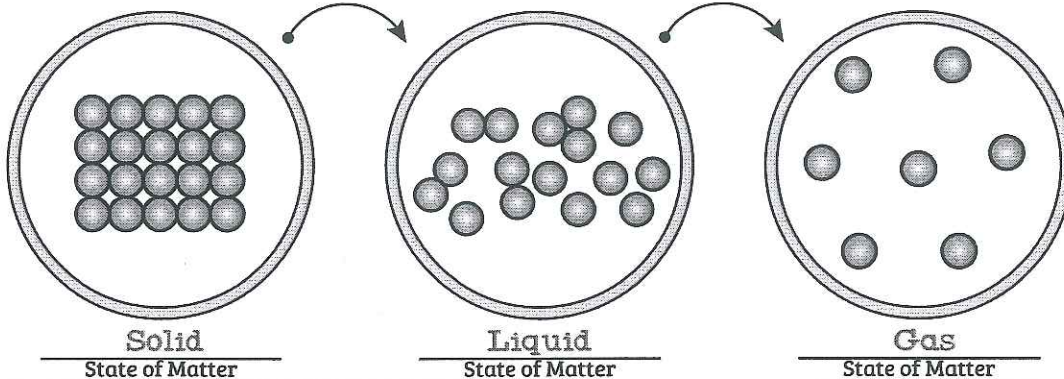


## STATES OF MATTER

**Question:** A block of ice is placed in a frying pan and heated until it reaches boiling (100 degrees Celsius). **What 3 states of matter changes occur during this experiment?** Justify your answer with both a written explanation and molecular diagrams. Include (and underline) the following vocabulary words in your explanation: state of matter, ice, water, water vapor, solid, liquid, gas, vibrate, slide, particles, rapidly, heat energy, melt, vaporization

**Claim:** (Answer the question in one full sentence.)  
The ice changes from a solid to a liquid and then to a gas.

**Evidence:** (Draw what the particles looked like in each state of the experiment.)



**Reasoning:** (Explain why your evidence supports your claim using paragraph format; include relevant scientific principles.)

When the ice is first placed in the pan it is in the solid state of matter. The particles in the ice are close together and can only vibrate back and forth. Heat energy from the burner causes the ice to melt and turn into water (solid → liquid). In the liquid phase, the particles start moving faster and slide past each other. As more heat energy is added, the liquid particles start moving rapidly and spread out. The water changes to water vapor in a process called vaporization (liquid → gas). The particles are spread far apart and move rapidly as they escape the frying pan. Eventually, all of the particles escape and there will be no more water particles in the pan.