

Complete the following review on a separate piece of paper. Be sure to include all heat arrows and diagrams to help with your explanation. Be sure to include the proper terminologies in your description. Bring the complete version of the test review to receive 2 bonus marks.

By using heat arrows, explain the following phase changes.

1. Liquid to solid

Endothermic or Exothermic

2. Solid to gas

Endothermic or Exothermic

3. Gas to liquid

Endothermic or exothermic

4. Solid to liquid

Endothermic or exothermic

1. Explain why melting is an endothermic process.

2. Explain with diagrams how ice can boil water.

b. Why does it have to be in a closed system?

3. What does it mean to reach a plateau during a heating/cooling curve?

4. What is an elastic collision?

5. How does the kinetic energy of particles vary as a function of temperature?

6. Explain why the baking instructions on a box of cake mix are different for high and low elevations. Would you expect to have a longer or shorter cooking time at a high elevation?

7. Compare and contrast vaporization and evaporation

8. Explain the relationships amount vapor pressure, atmospheric pressure and boiling point.

9. Use the kinetic-molecular theory to explain why gases are easier to compress than liquids or solids.

10. What is a dynamic equilibrium? Give an example.

11. Be able to explain various phenomena such as boiling water with ice, evaporative cooling, and cooking in higher altitudes.

12.

Material	Boiling (°C) - becomes a gas	Freezing (°C) - becomes a solid
H ₂ O (water)	100° C	0° C
Fe (iron)	2750° C	1535° C
O (oxygen)	-183° C	-218° C
Hg (mercury)	357° C	-39° C
Ethyl Alcohol	78° C	-114° C

Find out the state for each of the temperatures

Material	-499C	-183C	-5C	53C	504C
Fe					
O					
Hg					
Ethyl Alcohol					
Water					

13. Explain why ionic solids have a higher melting point than covalent solids.

14. Describe the difference between the densities of the states of matter. Include examples to support your answer.

15. What does "kinetic" mean in terms of kinetic energy and the movement of molecules?

16. Explain the relationship between intermolecular forces and vapour pressure.