



Matter Changing States Quiz

1. What are the three main states of matter?
 - A. Solid, liquid, and gas
 - B. Ice, water, and steam
 - C. Temperature, pressure, and energy
2. What is matter?
 - A. Anything that is visible
 - B. Anything that has mass and takes up space
 - C. Anything that reflects light
3. What type of change is a change in state?
 - A. A physical change
 - B. A chemical change
 - C. A molecular change
4. How do the molecules in a solid move?
 - A. They bounce off one another randomly
 - B. They flow past one another
 - C. They vibrate
5. The heat required to change a solid into a liquid is its:
 - A. Heat of vaporization
 - B. Heat of condensation
 - C. Heat of fusion
6. What is the melting point of water?
 - A. 0 degrees Fahrenheit
 - B. 0 degrees Celsius
 - C. 0 Kelvin
7. The heat required to change a liquid into a gas is its:
 - A. Heat of steam
 - B. Heat of gaseousness
 - C. Heat of vaporization
8. What is it called when a solid turns directly into a gas?
 - A. Sublimation
 - B. Vaporization
 - C. Melting
9. What is dry ice?
 - A. Frozen water
 - B. Solid carbon dioxide
 - C. Ice that gives off water vapor
10. How do the molecules of a gas behave?
 - A. They vibrate in place
 - B. They clump together
 - C. They bounce around randomly



Temperature Quiz

1. How much of the matter in the universe is comprised of molecules?
 - A. One-half of one percent
 - B. All of it
 - C. Fifty percent
2. What creates heat?
 - A. The movement of molecules
 - B. Molecules standing still
 - C. The absence of molecules
3. What does temperature measure?
 - A. How fast molecules are moving
 - B. How much a person sweats
 - C. How much potential energy is exerted
4. What happens when you heat something up?
 - A. Its molecules stop moving
 - B. Its molecules move faster
 - C. Its molecules move more slowly
5. What happens when molecules start moving faster?
 - A. The temperature falls
 - B. The temperature rises
 - C. The temperature stays the same
6. Which of these instruments is used to measure temperature?
 - A. A barometer
 - B. A triple-beam balance
 - C. A thermometer
7. Which temperature scale is the most commonly used throughout the world?
 - A. Celsius
 - B. Fahrenheit
 - C. Kelvin
8. What is the freezing temperature of water on the Celsius scale?
 - A. 0 degrees Celsius
 - B. 32 degrees Celsius
 - C. 273 degrees Celsius
9. What is absolute zero?
 - A. The temperature at which ice begins to form
 - B. The average temperature of the universe
 - C. The temperature at which all molecular motion stops
10. How does a thermometer work?
 - A. Heat causes the liquid to contract, boosting the mercury level
 - B. Heat causes the liquid to expand, making the mercury level rise
 - C. Scientists aren't exactly sure



Heat Quiz

Bill Nye: 1pt ec print

Phases of Matter



True or False? Circle T or F

1. The atoms or molecules in solids have no motion. T or F
2. Energy must be removed from a liquid to change it to a solid. T or F
3. Molecules in the gas phase move faster than the same molecules move in the liquid phase. T or F
4. Nitrogen changes from a liquid to a gas at the same temperature at which water changes from a liquid to a gas. T or F
5. There is enough energy in air at room temperature to change some liquids to gases. T or F
6. The temperature of ice water is lower than the temperature of dry ice in alcohol. T or F
7. Carbon dioxide can change directly from the solid phase to the gaseous phase. T or F

Multiple Choice: Circle the letter of the best answer

8. Which of the following is a correct description of what happens when you place a liquid in the freezer?
 - A. Energy removed from the liquid remains in the freezer.
 - B. Energy from the freezer is absorbed by the liquid.
 - C. Energy from the liquid is exhausted into the atmosphere outside the freezer.
 - D. None of the above.
9. Which of the following statements correctly represents the relationship between molecular motion and pressure?
 - A. The greater the molecular motion, the less pressure the molecules exert.
 - B. The greater the molecular motion, the greater the pressure the molecules exert.
 - C. Molecular motion is not related to the pressure the molecules exert.
 - D. None of the above.
10. Which of the following statements about absolute zero is correct?
 - A. Absolute zero is the temperature at which there is no molecular motion.
 - B. Absolute zero is the temperature at which there is the absolute maximum molecular motion.
 - C. Absolute zero is 0° Celsius.
 - D. Absolute zero is 0° Fahrenheit.

1. Heat is a form of:
 - A. Light
 - B. Energy
 - C. Time
2. When do objects heat up?
 - A. When they are in a vacuum
 - B. When they are placed on a high point
 - C. When they are exposed to energy
3. When a substance heats up, what happens to its molecules?
 - A. They gradually slow down and contract
 - B. They move around faster and bump into each other
 - C. Heat does not cause any molecular changes
4. Absolute zero is:
 - A. The temperature at which molecules stop moving
 - B. 273 degrees Celsius
 - C. Tim's high-school nickname
5. What is the difference between heat and temperature?
 - A. Temperature measures the motion of molecules, and heat is this energy of that motion
 - B. Temperature is read by a thermometer, and heat is read by a stepping scale
 - C. Heat is measured in calories, and temperature is measured in joules
6. What happens when two objects of different temperatures are put next to each other so they are:
 - A. They gradually become the same temperature
 - B. They switch temperatures
 - C. The colder object gets colder and the warmer object gets warmer
7. What happens if you add lots of heat to a liquid substance?
 - A. It turns into a plasma
 - B. It turns into a solid
 - C. It turns into a gas
8. Which takes up the most space?
 - A. A cube of steel at 0C
 - B. The same cube of steel at 50C
 - C. The same cube of steel at 100C
9. What causes wood and gas to give off heat when they're burned?
 - A. The chemical energy stored within them
 - B. Electrical energy
 - C. Solar energy
10. Why is there more heat in an iceberg than in a pot of boiling water?
 - A. Boiling water is actually very cold
 - B. The iceberg contains many more molecules
 - C. Icebergs are red-hot to the touch