Guided Practice | power up STAAR to science | **Supporting Standard 5.5.B**

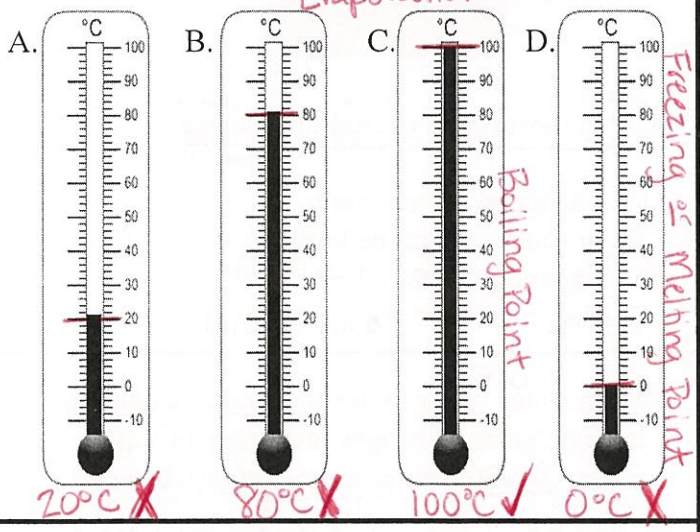
Name_____ Date_____

1. A group is making ice cream in a bag for a science experiment. At what temperature will the water in the ice cream begin to freeze?

   A. 100°C Boiling
   B. 100°F
   C. 0°C Freezing
   D. 0°F

2. Which thermometer shows water starting to change from a liquid into a gas? (3.5.C)

   Evaporation



3. Analyze the data in the chart below. (5.2.D)

Type of matter	Melting Point	Boiling Point
Water	0°C	100°C
Gold	1064°C	2807°C
Aluminum	660°C	2519°C

Based on the data in the chart, which statement is true?

A. All substances have the same melting points and boiling points. (all different)
B. All substances do not have the same melting points and boiling points.
C. Some substances take longer to melt and boil.
D. Aluminum melts faster than water. (No time mentioned)

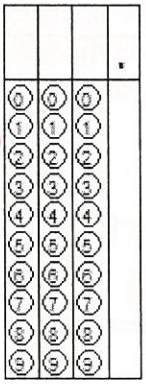
4. During the winter months rain with freezing temperatures can create ice on the road. City workers often spread salt or sand on the roads to make them safe for driving. Why is salt most likely used on icy roads?

   A. Salt lowers the freezing point and melts the ice. (same temp: 0°C)
   B. Salt evaporates the ice. (No liquid → gas)
   C. Salt condenses the ice. (No gas → liquid)
   D. Salt lowers the boiling point and melts the ice. (different temps.)

5. The temperature of a pot of water is 27°C. After one minute on a hot plate, the temperature of the water rises 10 degrees. How many more degrees Celsius must the temperature rise before it reaches the boiling point of water?

   100°C

   Record your answer and fill in the bubbles on the grid below. Be sure to use the correct place value.



   27° (starting) + 10° (after 1 min) = 37°C

   100° (boiling pt) − 37° (current temp) ← (how many degrees needed)

6. Students investigate the rate at which water begins to boil. Which of the following will increase the reliability of results for the students? (5.2.E) (dependable, truthful)

   A. Illustrate the results (draw results)
   B. Form a hypothesis (educated guess)
   C. Repeat the investigation (same results over, over, over, over again)
   D. Record data on a chart (organizes data)

Guided Practice | power up STAAR to science | Supporting Standard 3.5.C

Name _____ WK 6 Date _____

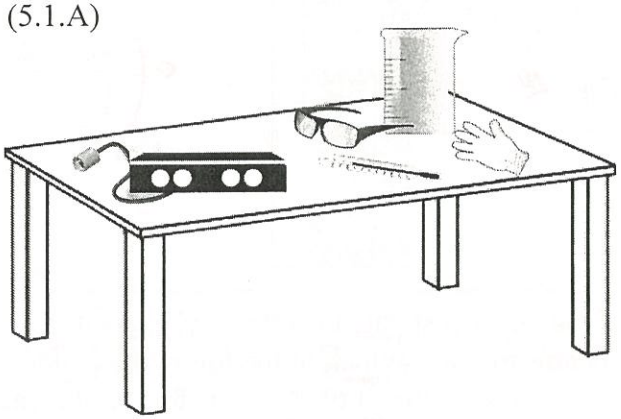
1. A student collects rain water in a bowl and leaves it outside for a week. What will most likely happen to the water in the bowl if it does not rain again within the week? (5.2.D)

   A. The amount of rain water will increase ↑ due to condensation. (cooling) ✗
   B. The amount of rain water will increase ↑ due to moisture from the sky.
   C. The amount of rain water will decrease ↓ due to evaporation. (heating)
   D. The amount of rain water will stay the same. =

2. Which of the following is an example of changes in the state of matter caused by heating?

   A. melting heating
   B. freezing cooling
   C. hardening freezing? - cooling
   D. cooling taking/removing heat

3. Students walk into the science lab and see the following materials on the table along with directions for testing the three states of matter. (5.1.A)

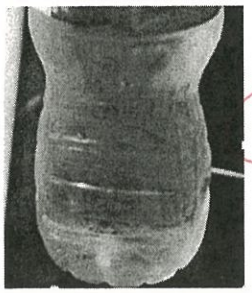


   What should the students do first?

   A. Put the safety goggles on.
   B. Plug in the hot plate to warm it up.
   C. Read the directions and begin the lab.
   D. Wait for the teacher's directions. safest

   Wait!

4. After sitting out on the counter for an hour, tiny water droplets have formed on the outside of the cold water bottle shown below.



   Condensation gas → liquid

   What most likely caused this change?

   A. change in temperature
   B. a water leak in the bottle ✗
   C. ice melting solid → liquid
   D. freezing water liquid → solid

5. When warm water vapor in the air touches a cold glass, it is cooled and changes into drops of liquid water. What is the process of a gas changing into a liquid form? gas → liquid

   A. evaporation liquid → gas
   B. freezing liquid → solid
   C. condensation gas → liquid
   D. precipitation rain, snow, sleet, hail

6. Students make a small container out of foil and place an ice cube inside. The container and the ice cube are put in a sunny place for 1 hour and then observed. Which question were the students most likely trying to answer? (5.2.B)

   A. What happens when water is cooled? ✗
   B. What happens when water is heated? ✓ ↑ sunny place
   C. What happens when foil is placed in the sun? ✗ no change
   D. What happens when foil is cooled? ✗