

INVESTIGATION 2 I-CHECK

WATER AND CLIMATE

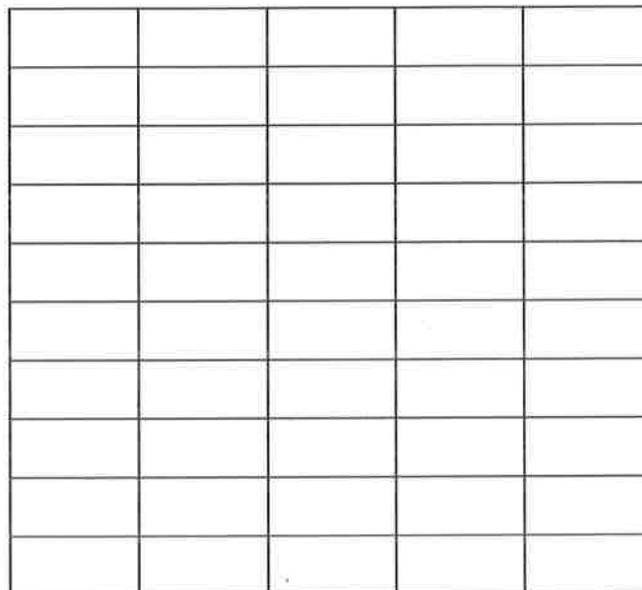
Name _____

Date _____

1. This table shows the air temperature on December 18. It was a sunny day in a city with a mild climate. Sunrise was at 7:18 a.m., and sunset was at 4:51 p.m.

Time of day	Temperature
Midnight	4°C
6 a.m.	2°C
Noon	14°C
6 p.m.	10°C
Midnight	9°C

a. Use the grid below to make a bar graph that shows how the temperature changed throughout the day.



b. Looking at the pattern shown on the graph, what was the most likely air temperature at 3:00 p.m. ?

(Mark the one best answer.)

A 17°C

B 2°C

C 12°C

D 9°C

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2. A family moved into an apartment in Minnesota in the fall. They noticed that the sidewalk in front of the building had a small crack.

That winter it snowed a lot. The sidewalk was covered in snow and ice. In the spring, the snow began to melt during the day, but then it froze again at night. When the snow had completely melted, they noticed that the crack in the sidewalk was a lot bigger.

Think about what you have learned about water at different temperatures. Explain why the crack got bigger. Use evidence from class and what you have read to support your explanation.

3. A class watched a video that showed icebergs floating in the ocean near Greenland. The teacher asked the class to explain why the icebergs float.

(Mark the one best answer.)

- A** Ice contains air bubbles.
- B** Ice has less mass than water.
- C** Solids usually float in water.
- D** Ice is less dense than water.

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4. Below is a table with the temperature of the air and ground at different times during the year in the same place in Truckee, California.

Day	Air temperature (°C)	Ground temperature (°C)
January 1	-3	-4
March 1	7	-2
June 1	15	14
September 1	17	19
December 1	-5	-4

- a. Write **S** next to each day on which precipitation would likely be snow.
Write **R** next to each day on which precipitation would likely be rain.

_____ January 1
 _____ March 1
 _____ June 1
 _____ September 1
 _____ December 1

- b. Sometimes when it snows, it stays frozen when it hits the ground, and other times it melts. Sometimes when it rains, the water remains liquid, and other times it freezes.

Write **L** next to each day when precipitation on the ground would be a liquid.
Write **S** next to each day when precipitation on the ground would be a solid.

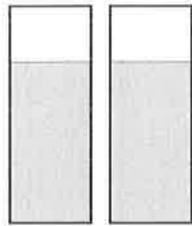
_____ January 1
 _____ March 1
 _____ June 1
 _____ September 1
 _____ December 1

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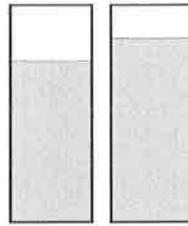
5. Two containers have the same amount of water in them. Container Y is put in the freezer, and the water turns to ice.

Before freezing Y



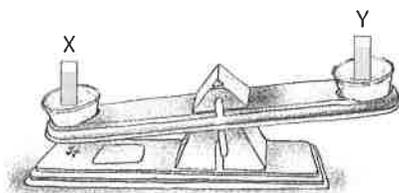
X Y

After freezing Y

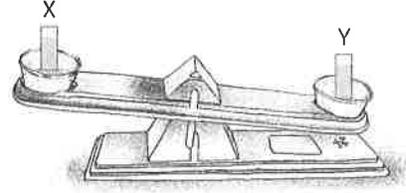


X Y

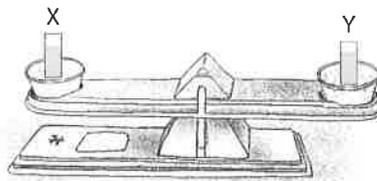
- If containers X and Y are placed on a balance **before** placing Y in the freezer, what would the balance look like? *(Mark the one best answer.)*



A

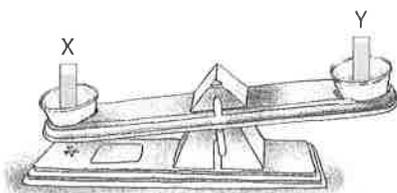


B

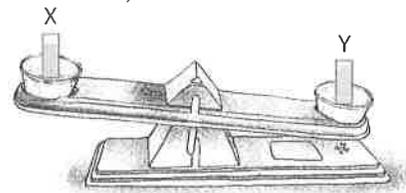


C

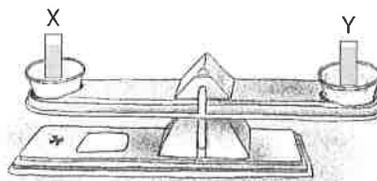
- If containers X and Y are placed on a balance **after** placing Y in the freezer, what would the balance look like? *(Mark the one best answer.)*



F



G



H

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6. There are glaciers in places like Greenland and Antarctica that are near oceans. Scientists are worried that as the average temperature of Earth warms, the glaciers will break away from the land and fall into the ocean.

Write **Y** (yes) next to each sentence that describes what is an effect of a large glacier falling into the ocean. Write **N** (no) next to each sentence that describes something unlikely to happen as a result of the glaciers falling into the ocean.

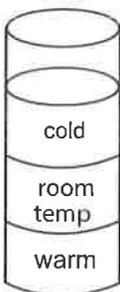
- _____ More fresh water will be added to the salt water in the ocean.
- _____ Sea level will rise because the heavy ice sinks to the bottom of the ocean.
- _____ Icebergs from the fallen glaciers will float on top of the water in the ocean.
- _____ Sea level will stay the same.

7. Thermometers are a technology used to measure temperature. Complete the sentences below to explain how a thermometer works.

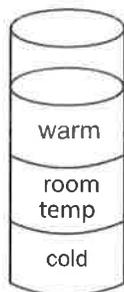
- When the liquid in the thermometer cools it _____.
- When the liquid in the thermometer heats up it _____.

8. Which picture below shows what would happen if you put these liquids together?

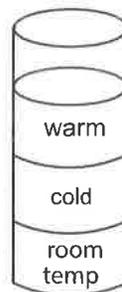
(Mark the one best answer.)



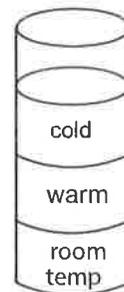
A



B



C



D