

Science Spring Break Packet

Reminder- BEFORE YOU BEGIN, TAKE OUT YOUR RESOURCES!

**This is due on the first day back from break!

Pride – your spring break packet should be completed meticulously to show that you **own your learning** over break. Use your resources and call me if you have any questions!



Directions:

- I annotated key words in my question.
- I “searched my brain” **for background knowledge about a Scientific topic BEFORE I chose an answer.**
- I annotated key words in the answer choices, if the answer choices are longer than 1-2 words.
- I proved right answers right by explaining WHY thoughtfully.

1. **Which type of weather is usually associated with a cumulus cloud?**

- A) fair
- B) humid
- C) foggy
- D) stormy

Explain:

2. **When a barometer rises, a student can expect the outside air**

- A) pressure to increase.
- B) pressure to decrease.
- C) speed to increase.
- D) speed to decrease.

Explain:

3. **Otto pushed a toy car across a floor. The car traveled fast across the wood, but it slowed to a stop on the carpet. Which best explains what happened when the car reached the carpet?**

- A) Inertia decreased.
- B) Gravity increased.
- C) Friction increased.
- D) Magnetism decreased

Explain:

4. **Which of these statements best describes a difference in climate?**

- A) Las Vegas had clear skies and Carson City had cloudy skies last week.
- B) Yesterday Carson City had lower barometric pressure than Las Vegas.
- C) Last July Las Vegas had a higher average temperature than Carson City.
- D) Carson City averages over twice as much rain yearly as Las Vegas

Explain:

Directions:

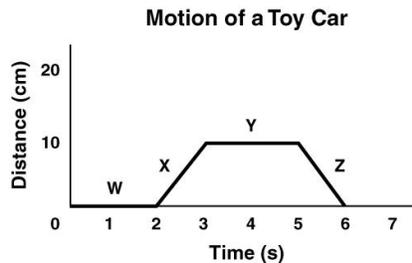
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5. The boiling of water results in a physical change in matter from

- A) solid to liquid.
- B) gas to solid.
- C) solid to gas.
- D) liquid to gas

Explain:

The motion of a toy car is shown in the graph below.



6. In which section of the graph does is the car returning to the starting point?

- A) W
- B) X
- C) Y
- D) Z

Explain:

7. When the jet stream moves to the south of Henderson, how will our weather change as a result?

- A) our weather will become warmer.
- B) our weather will become cooler.
- C) our weather will become wetter.
- D) our weather will become drier.

Explain:

8. Which best demonstrates a chemical change?

- A) salt dissolving
- B) wood burning
- C) water boiling
- D) ice melting

Explain:

9. A student standing near a campfire feels warmer as the fire grows. Which process most likely transfers heat from the campfire to the student?

- A) conduction
- B) convection
- C) radiation
- D) transformation

Explain:

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10. Which organ is part of the respiratory system?

- A) stomach
- B) lungs
- C) spinal cord
- D) large intestines

Explain:

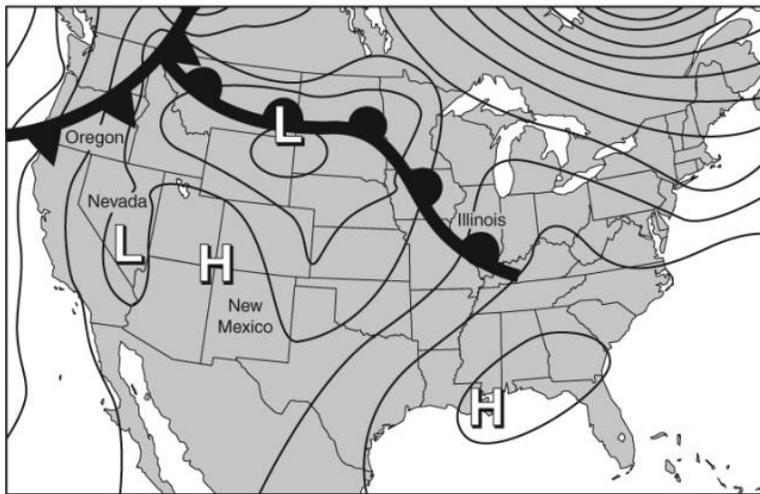
11. Ana noticed that sunny skies suddenly became stormy. Which most likely happened when the weather changed in this way?

- A) Winds weakened.
- B) Humidity decreased.
- C) Air pressure dropped.
- D) Temperatures increased

Explain:

The diagram shows a weather map.

U.S. Weather Map



12. According to this map, a cold front is moving through which state right now?

- A) New Mexico
- B) Illinois
- C) Oregon
- D) Nevada

Explain:

Directions:

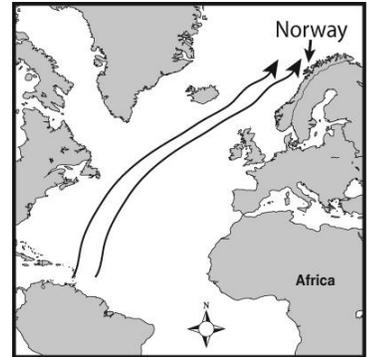
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Look at the diagram to answer the question that follows.

13. If a northern coastline such as the Norway coast is located near a warm ocean current

- A) the climate will be colder than normal for that latitude.
- B) the climate will be warmer than normal for that latitude.
- C) spring is longer than normal for that latitude.
- D) spring is shorter than normal for that latitude

Explain:



14. A student put a metal pot on the stove to boil some water. The metal transferred heat to the water through

- A) radiation.
- B) insulation.
- C) convection.
- D) conduction

Explain:

15. Nana studied the ways in which human body systems work together. He compared the respiratory and circulatory systems. In which way are these two systems similar to each other?

- A) They both bring oxygen to the body.
- B) They both send messages to the body.
- C) They both digest nutrients for the body.
- D) They both pump blood through the body.

Explain:

16. Which of the following factors best explains why the Northern and Southern Hemisphere have different seasons?

- A) the ocean tides
- B) the tilt of the Earth's axis
- C) the weather
- D) the force of gravity

Explain:

17. Which statement describes the transfer of energy when an ice cube is placed in a cup of hot tea?

- A) Heat flows from the tea to the ice.
- B) Cold flows from the ice to the tea.
- C) Cold flows from the ice, and heat flows from the tea.
- D) Heat flows simultaneously between the ice and the tea.

Explain:

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18. The best example of heat transfer by convection is when

- A) sunlight warms soil.
- B) a ceiling fan blows air.
- C) flames heat up a pan.
- D) heat rises in a chimney

Explain:

19. A rocket is traveling toward space. What force must the rocket act against to reach space?

- A) inertia
- B) gravity
- C) magnetism
- D) momentum

Explain:

20. How far does a train travel if it moves at a speed of 20 mph for 5 hours?

- A) 4 miles
- B) 25 miles
- C) 15 miles
- D) 100 miles

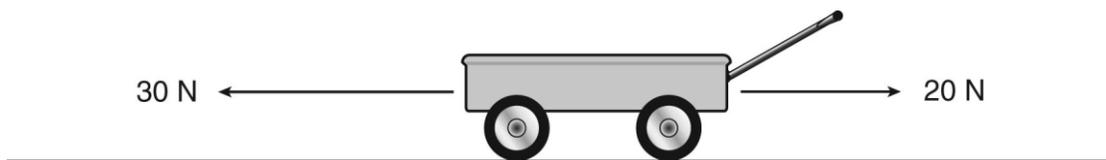
Explain:

21. After Todd took a hot shower, he noticed that the bathroom mirror looked foggy. He could not see his reflection. Which statement best explains what happened?

- A) Water froze on the mirror because its surface was cold.
- B) Hot water splashed on the mirror and heated its surface.
- C) Water evaporated when it touched the hot mirror’s surface.
- D) Water vapor condensed when it touched the cold mirror’s surface.

Explain:

22. The diagram shows forces acting on a wagon.



A wagon is pulled to the right using a force of 20 N and to the left using a force of 30 N. What is the net force on the wagon?

- A) 10 newtons to the left
- B) 50 newtons to the left
- C) 10 newtons to the right
- D) 50 newtons to the right

Explain:

23. Which statement describes the transfer of energy when an ice cube is placed in a cup of hot tea?

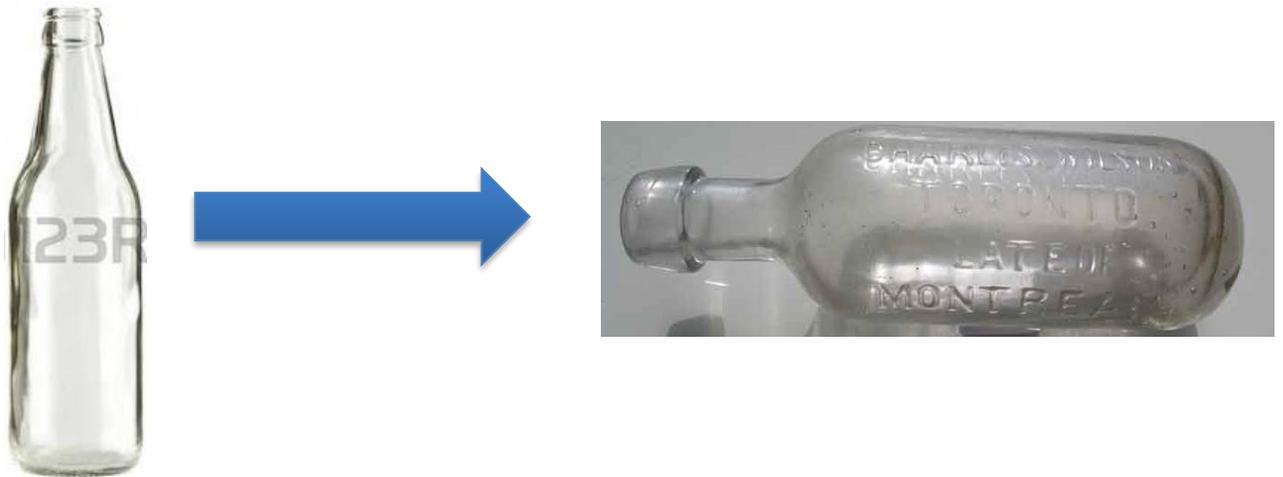
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Directions:

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24. Alexander wanted to have cold water with him all day for a field trip. To prepare, he filled a plastic bottle with water in the freezer the night before. He made sure the lid was on tight. When he got the bottle out of the freezer, the bottom of the container had become rounded and the water bottle would no longer sit on the counter top.



Which of the following gives the best explanation for what happened.

- A) The water in the bottle expanded because the mass of the water increased.
- B) The water in the bottle expanded, but the mass of the water did not change.
- C) The water in the bottle contracted because the mass of the water increased.
- D) The water in the bottle contracted, but the mass of the water did not change.

Explain:

25. Kendall travelled 45 miles per hour in order to get from her home to her grandma’s house. What else does Kendall need to know in order to calculate the total time it will take her to travel?

- A) The miles between her house and her grandma’s house.
- B) The direction Kendall is moving in.
- C) The hours it takes her to travel from her house to her grandma’s house.
- D) The speed she travels between her house and her grandma’s house.

Explain:

Directions:

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26. Which of the following is a physical property?

- a. Make gas or bubbles without heat
- b. Ability to burn
- c. Change in the state of matter
- d. Reaction with oxygen

Explain:

27. How will a cell phone change when you leave it outside in the summer?

- a. The cell phone’s size will contract, but its weight will not change.
- b. The cell phone’s size will expand, but its weight will not change.
- c. The cell phone’s mass will increase when it gains thermal energy.
- d. The cell phone’s mass and size will stay the same.

Explain:

28. As part of Science experiment, Romeo mixes together 2 liquids in a glass. After he mixes together the liquids, ice begins to form on the glass. Which of the following best describes what happened?

- a. Manolo mixed together 2 liquids to create a physical change.
- b. Manolo created a change that can be easily reversed.
- c. Manolo caused evaporation to take place within the glass.
- d. Manolo caused a change that created new materials.

Explain:

29. How will a metal spoon change when you place it in the refrigerator?

- a. The mass will increase.
- b. The mass will decrease.
- c. The length will increase.
- d. The length will decrease.

Explain:

30. Mr. Tullos’s mom has a glass vase that she uses to hold flowers. This vase weighs 200 grams. Mr. Tullos accidentally knocks over the glass vase, and it smashes on the floor and breaks into 20 different pieces. How much will the 20 pieces of the vase weigh when combined together?

- a. 4000 grams
- b. 220 grams
- c. 180 grams
- d. 200 grams

Explain:

MORE ON THE BACK!

Note: If we are out longer than April 7th, then these questions are required. If we are NOT out longer than April 7th, then these questions are Above and Beyond.

1. What best describes what is happening in the picture to the right?
 - a. Clouds are forming through the process of condensation.
 - b. Clouds are forming through the process of precipitation.
 - c. Clouds are forming through the process of evaporation.
 - d. Clouds are forming through the process of run-off.

2. Which of the following could be an example of condensation?
 - a. Snow falling down to the ground.
 - b. Droplets of water forming on the grass during a cold morning.
 - c. Water vanishing from the street on a hot summer day.
 - d. Rain that falls down over the land flowing back into the ocean.

3. What is the energy source that drives the Water Cycle?
 - a. fossil fuels
 - b. the Sun
 - c. warm ocean waves
 - d. clouds

4. While playing soccer in the afternoon, Jose spills a bottle of liquid water on the ground, and it evaporates up into the sky as water vapor. What has to happen before this water vapor can become a cloud in the sky?
 - a. The water vapor must rise higher into the air, where the temperatures are warmer.
 - b. The water vapor must remain as a gas.
 - c. The water vapor must lose heat energy after it rises upwards.
 - d. The water vapor must become a solid when it freezes.

5. What must happen immediately before precipitation can fall to the ground?
 - a. It must evaporate into a solid.
 - b. It must freeze into a solid.
 - c. It must condense into a liquid.
 - d. It must condense into a gas.

6. Mr. Terranova washes his car by spraying it with water. At first, the car is soaked, but after 20 minutes, it is completely dry! What can you infer based on this observation?
 - a. The weather must be warm because condensation takes place very quickly.
 - b. The weather must be warm because evaporation takes place very quickly.
 - c. The weather must be cool because condensation takes place very slowly.
 - d. The weather must be cool because evaporation takes place very quickly.

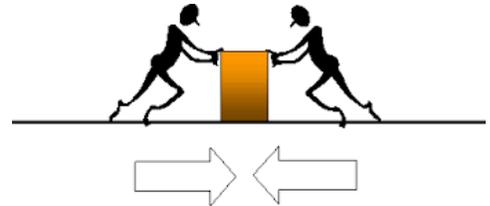


7. What part of the water cycle occurs when rain, snow, sleet, or hail falls from clouds to the earth?
- evaporation
 - precipitation
 - condensation
 - freezing
8. What part of the water cycle requires liquid water to gain heat energy from the sun?
- condensation
 - evaporation
 - precipitation
 - runoff
9. On a cold morning, dew forms on the grass. There has been no rain for the last 3 days, but there are tiny water droplets covering the ground. How could this happen?
- The water vapor in the air came into contact with the cold grass and condensed.
 - The liquid from the atmosphere fell down from clouds as rain.
 - Transpiration caused liquid water to melt from the plant.
 - Runoff made the grass wet.
- 
10. When water is in clouds, its state of matter is a
- Solid
 - Liquid
 - Gas
 - Condensation
11. Mr. Tullos's dog chases after his cat for 10 seconds. During this time, his dog travels 80 yards. What is the speed of his dog?
- 800 yards per second
 - 90 seconds
 - 8 yards per second
 - 70 yards
12. Leslie can run at a speed of 12 mph. How far will she go if she sprints for 6 hours at her fastest speed?
- 6 miles
 - 2 miles
 - 72 miles
 - 18 miles
13. Jeremy is conducting a science experiment to find out how fast an eagle can fly. He observes that the eagle travels for 25 miles. What else does Jeremy need to know in order to figure out how fast the eagle was moving?
- How many times the eagle flapped its wings
 - What direction the eagle was flying in
 - How far the eagle moved
 - How many hours the eagle was flying

14. McKenzie drops a cup of water at the dinner table. The cup of water falls through the air, hits the dinner table, and stops moving. What force holds up the cup of water once it hits the dinner table?
- Gravity
 - Friction
 - Normal force
 - Speed

15. Cruz and Angela kick a soccer ball at the same time. Cruz kicks the ball to the left with a force of 100 N and Angela kicks it to the right with a force of 50 N. What is the net force acting on the soccer ball?
- 50 N to the left
 - 50 N to the right
 - 150 N to the left
 - 150 N to the right

16. Two people push a box from opposite sides, but the box remains stationary. What could the people do in order to move the box?
- They could both push with greater force.
 - They could both stop pushing.
 - They could both push with less force.
 - They could both push from the same side.



17. Mr. Tullos hits a baseball across the ground as hard as he can. What best describes what will happen next?
- A normal force will slow down the baseball and eventually stop it.
 - Friction will slow down the baseball down and eventually stop it.
 - Gravity will slow the baseball down and eventually stop it.
 - The baseball will continue moving until another person moves it in the opposite direction.
18. Jordan drops a basketball from the top of the stairs. What force will cause the basketball to speed up as it falls?
- Friction
 - Gravity
 - Normal force
 - Balanced forces
19. A space shuttle is flying to the moon. What information do you need to know in order to calculate how far the space shuttle travels?
- The length of the wings on the space shuttle and the direction it is moving
 - The age of the pilot who is flying the space shuttle and the height of the shuttle
 - How fast the space shuttle can fly and how many days it will take to get to the moon
 - The size of the moon and the time when the space shuttle will arrive at the moon
20. A truck is rolling down a hill. Which of the following statements best describes how different forces will impact the motion of the truck?
- Friction will cause the speed of the truck to increase.
 - Friction will cause the speed of the truck to decrease.
 - Gravity will cause the speed of the truck to decrease.
 - Normal force will cause the speed of the truck to increase.

Above and Beyond Challenges:

- Create a list of physical and chemical properties.

- Name every organ system in the human body. Then write a bullet point describing the purpose of each one.

- Explain what season the Southern Hemisphere experiences in July and why. Use the word “tilt” and “sunlight” in your answer.

- Write an explanation for why plants need transport systems, but bacteria do not need transport systems.

- Write a list of all the unicellular organisms. Use your notes!

- Draw the water cycle, label each part, and explain how the state of matter is changing.

