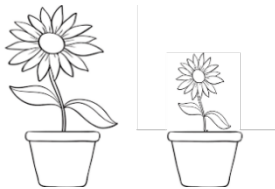


Name: _____

Date: _____

Grade 5 End-of-Year Science Assessment

1. Ronald and Joseph bought a pack of seeds and some soil from the store to share. They wanted to grow flowers for Mother's Day. They planted the seeds at the same time and used the same tap water. After a few weeks Ronald noticed that his flowers were smaller than Joseph's and he wanted to know why. Which is the best plan for Ronald to use to figure this out?



- A. Ask Joseph what kind of light he used when growing his seeds, purchase that light and use it for his own flowers, then add more water than the first time.
- B. Purchase different kinds of flower seeds, soil, and flower pots, plant the seeds and observe which flowers grow the tallest, then make sure to use those seeds the next time.
- C. Research information about growing flowers, plant identical seeds, test variables, make observations about the flowers' growth, record and analyze the data, then draw a conclusion to answer the question.
- D. Put all the plants in a row and give them all more water. Measure all the plants, make a graph, and report on the different sizes of the plants. Research how tall the flowers should get and record that information.
2. Ms. Evelyn lined up four students at recess on the soccer field. She told each student to kick a soccer ball as hard as they could. Then she measured how far each student kicked the soccer ball and marked the distance with a flag. After the activity she brought the class back inside and created a chart from the data. Did Ms. Evelyn's class do an experiment?

Name	Distance
John	25 m.
Giada	30 m.
Melvin	28 m.
Ann Marie	32 m.

- A. Yes, because they measured and recorded their observations.
- B. Yes, because every student kicked the same soccer ball.
- C. No, because they did not start with a hypothesis or a control group. This was an investigation.
- D. No, because all experiments require the use of a laboratory and scientists.

3. Dr. Jones conducted an experiment to test out if doing hands-on science activities would increase his students' test scores on the end of the year 5th grade science test. He designed many fun and engaging activities that allowed students to explore science concepts. When the end of the year came, he gave his class the same test that he always gives his class at the end of the year. Then he looked at the data and drew a conclusion. What does Dr. Jones also need to do to check the results of his experiment?
- A. He needs to make sure that the students understood the test questions.
 - B. He needs to compare the data to last year's class that did not do any hands-on activities.
 - C. He needs to research the most effective hands-on science activities to use next year.
 - D. He needs to reteach the standards that students scored lowest on.
4. While riding her bike in the rain, Nicole noticed that the tires kept slipping on the road. When she got home, she let some air out of the tires to see if that would make them slip less. Nicole kept letting out more air until she decided that the tires were good enough. When Karen asked her what she was doing, Nicole told her she was doing a scientific investigation. Karen told Nicole that she needed to follow the scientific method if she wanted to do a real scientific investigation. Nicole said she could do it this way if she wanted. Who is right?
- A. Karen is right. All science has to follow the Scientific Method.
 - B. They are both right because Nicole did follow the Scientific Method.
 - C. They are both wrong because Nicole was just messing around, not doing real science.
 - D. Nicole is right. Scientific investigations can look different, depending on the situation.
5. Bella likes to look out her classroom window. One day she saw a squirrel outside picking things off the ground to eat. She asked her teacher what the squirrel was doing, and the teacher said the squirrels like to eat acorns. Bella knows that acorns are a type of nut and wondered if squirrels would eat other kinds of nuts as well. What is the **best** way Bella could test this idea?

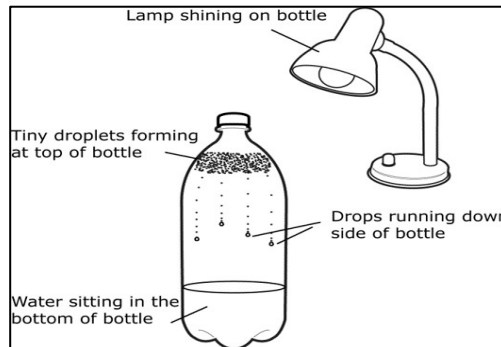


- A. Place some walnuts and peanuts near the tree and come back the next day to see if they are gone.
- B. Place some peanuts and walnuts near the tree and observe what the squirrel eats.
- C. Read a book about the diets and habitats of squirrels.
- D. Place a large pile of acorns near the tree and observe how many acorns the squirrel eats.

Use the information from question #5 to answer question #6.

6. By the end of the week, Bella concluded that squirrels do not like walnuts or peanuts. Bella's friend Michaela doesn't believe Bella and thinks that squirrels do like peanuts and walnuts. Michaela would like to repeat the scientific investigation on her own to see if she gets the same results. What is the **best** way for Michaela to test whether Bella's conclusion is true?
- A. Follow the exact same procedure that Bella used.
 - B. Come up with a better procedure to prove that she is right.
 - C. Analyze Bella's observations and look for mistakes.
 - D. Interview Bella and ask her why she decided to use walnuts and peanuts instead of almonds.
7. The Milky Way is the name of the galaxy that contains Earth and many other planets. What are some other things that are also included in the Milky Way galaxy? Choose the best answer.
- A. Gas, dust, stars, but not comets or asteroids.
 - B. Comets, asteroids, planets, but not stars.
 - C. Gas, dust, stars, planets, comets, asteroids, and moons.
 - D. Planets, suns, moons, but not gas or dust.
8. Hiroshi had trouble remembering the difference between rotation and revolution. His teacher reminded him that the word revolution is longer than the word rotation, and a year is longer than a day. Using his knowledge of the distance of inner and outer planets from the Sun, which planet most likely has the shortest year compared to Earth?
- A. Mars
 - B. Mercury
 - C. Jupiter
 - D. Saturn
9. Elisa loves the solar system, especially the planets that are mostly gas. She is fascinated by the fact that some planets do not have a rocky surface like Earth. She wonders what it would be like to visit one of these gas planets. If Elisa wanted to travel to one of these gassy planets, which one should she **not** choose?
- A. Neptune
 - B. Jupiter
 - C. Saturn
 - D. Venus

10. Scott created a nearly perfect model of the water cycle. He put saltwater in the bottom of an empty bottle and used a lamp to mimic the sun. Eventually freshwater collected at the top of the bottle and ran down the sides back to the bottom of the bottle.



How did the lamp effect the water that was in the bottom of the bottle?

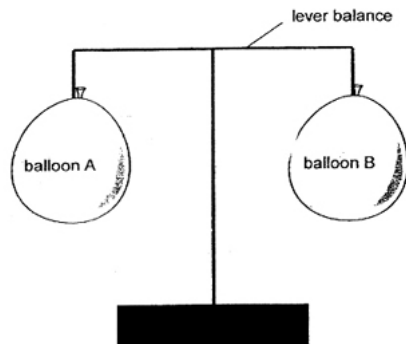
- A. The lamp warmed the freshwater to allow it to precipitate.
 - B. The lamp caused the water to change from one physical state to another.
 - C. The lamp warmed the freshwater and caused it to condensate.
 - D. The lamp caused the bottle to change its chemical properties.
11. Johanna and Paige are visiting their grandparents in Fort Lauderdale in June. The girls think that it is always hot and sunny, but their grandparents tell them to bring an umbrella with them when they leave the house because it will rain in the afternoon. How do their grandparents know that it might rain in the afternoon?
- A. The warm humid air will cool and condense when the sun goes down.
 - B. The air pressure and temperature were rising all week long.
 - C. The humidity and windspeed were dropping all week long.
 - D. The winds were getting stronger and the temperature was rising.
12. Deshawn called Monique as he left the gym on a cold winter night. He told her he might be a little late because it was snowing outside. Monique said she heard it was hailing not snowing in their neighborhood. What could Deshawn say to convince Monique that it is snowing, not hailing.
- A. The precipitation is large balls of ice.
 - B. The precipitation is warm and a liquid.
 - C. The precipitation is soft and crystals.
 - D. The precipitation is small ice pellets.
13. Bakersville and Petersburg are two popular tourist destinations in the same state. Bakersville is on top of a mountain and Petersburg is in the middle of desert. How would the average weather in Bakersville **most likely** compare to the average weather in Petersburg?
- A. Bakersville would have lower humidity and a large range of temperatures.
 - B. Petersburg would have higher humidity and a small range of temperatures.
 - C. Both towns would have low humidity and a large range of temperatures.
 - D. Both towns would have high humidity and a large range of temperatures.

14. Which combination of words **best** completes the sentence below?

All _____ is made up of _____ parts called _____.

- A. Mass, heavy, solids
 - B. Matter, tiny, atoms
 - C. Matter, invisible, waves
 - D. Matter, magnetic, neutrinos
15. Weather forecasters can tell us when a hurricane is coming many days in advance. This allows people to get ready and prepare for the storm. There is always the chance that the power will go out for a long time. Of the following four choices, which is the **worst** way to prepare for the storm?
- A. Stock up on toys and candy for the kids.
 - B. Fill the cars with gasoline and buy water to drink.
 - C. Buy extra food to eat that does not have to be refrigerated.
 - D. Buy extra batteries for flashlights and charge your cell phones.

16. Jeffrey and Terry are comparing two samples of matter. They are planning to use the setup shown below.



Which of the following could they most likely be comparing?

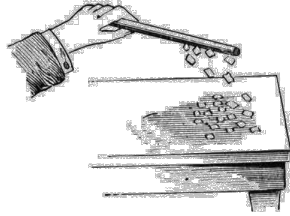
- A. The temperature of gases.
 - B. The mass of gases.
 - C. The volume of gases.
 - D. The texture of gases.
17. Diana heated a large pot of water to boiling and added small amounts of salt, pepper, sugar, and sand. Then she stirred the pot of water for two minutes. Next, she poured the hot solution into a large glass jar. What will Diana see when she looks at the water in the jar?
- A. Salt and Sugar
 - B. Sugar and Pepper
 - C. Sand and Pepper
 - D. Sugar and Pepper

18. Taylor saves all his loose change. He has a very large collection of coins that he wants to exchange for paper money. He takes his loose change to the supermarket where a machine will count his coins and give him paper money in exchange. What physical properties of the coins can the machine use to separate them?



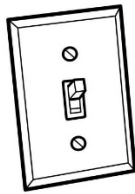
- A. Color and texture
B. Magnetic attraction
C. Size and shape
D. Solids and color
19. Alisha was curious how temperature affects chemical changes. She bought three glow sticks at the store and brought them home. She took three glass jars from her kitchen cabinet. She added ice water to one jar, hot water to another jar, and room temperature water to the third jar. Then she cracked the glow sticks and placed one in each jar of water. What will she **most likely** observe?
- A. The glow stick in the cold water will glow the brightest.
B. The glow stick in the room temperature water will glow the brightest.
C. The glow stick in the hot water will glow the brightest.
D. The glow stick will glow the same in all three waters.
20. Modern houses have many fancy appliances like washers, driers, televisions, and ceiling fans. These appliances use one form of energy and transform it into other forms of energy. How are these appliances able to create so many kinds of energy? Choose the best answer.
- A. They transform mechanical energy into electrical energy.
B. They transform electrical energy into chemical energy.
C. They transform chemical energy into heat energy.
D. They transform electrical energy into heat, light, sound, and mechanical energy.
21. Harry would like to investigate some basic forms of energy. He is curious about what forms of energy he uses the most on an average day. There is heat, light, electrical, chemical, and mechanical energy. What would be the best way for Harry to carry out this scientific investigation?
- A. Carry a clipboard and mark a checklist every time he uses each type of energy.
B. Use sticky notes to label the forms of energy he uses in his car.
C. Research the most used types of energy that most people use on an average day.
D. Create a hypothesis and follow the scientific method.

22. Leslie ripped up some notebook paper and placed them on her desk. Then she rubbed a plastic rod against her pants and waved it above the pile of ripped up uncharged notebook paper. Some of the notebook paper pieces stuck to the plastic rod. What is the best explanation of why the small paper squares stuck to the plastic rod?



- A. Rubbing the plastic rod against her pants had no effect on its charge.
- B. Rubbing the plastic rod against her pants gave the rod an electric charge.
- C. The plastic rod and the paper pieces were both negatively charged.
- D. The plastic rod and the paper pieces were both positively charged.

23. Nell’s mom always tells her to turn off the lights when she leaves a room. They have many of these light switches in their house, but she never really thought about how they work and how they are connected to the light bulbs. How do these light switches work to turn the lights on and off?



- A. When the lights are turned on the circuit is open.
- B. When the lights are turned on the circuit is closed.
- C. When the lights are turned off the circuit is closed.
- D. When the lights are turned on the circuit is broken.

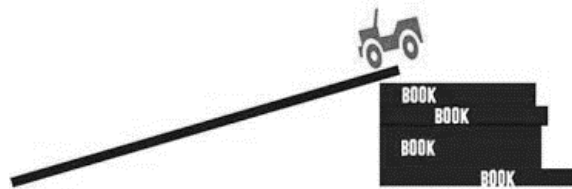
24. Ted was setting up a circuit with batteries and lights. He didn’t have any wires, so he was using things he could find around his house. Which of the following would work for Ted’s circuit? Choose the best answer.

- A. Plastic wrap
- B. Wax paper
- C. Aluminum foil
- D. Napkins

25. What is the relationship between the mass of an object and the effect of a force on that object?

- A. The more mass an object has, the less effect a given force will have on that object.
- B. The more mass an object has, the more effect a given force will have on that object.
- C. The less mass an object has, the less effect a given force will have on that object.
- D. The mass of an object makes no difference when a force is applied to it.

26. Lorraine was setting up an investigation about energy and movement. She stacked four books and placed one end of a ramp on top of the stack of books and the other end of the ramp on the floor. Lorraine placed a plastic car at the top of the ramp and lifted her hand up off the car. The car rolled down the ramp. What could Lorraine do to make the car move slower?



- A. Make the ramp slippery with oil to reduce friction.
- B. Add a fifth book to the stack to make it taller.
- C. Place a magnet in the car to make it heavier.
- D. Cover the ramp with salt to create friction.

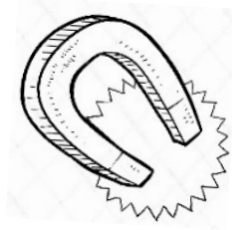
27. Julian and Eric were playing soccer at recess. Julian was kicking the soccer ball softly, so it stayed right in front of him as he ran down the field. When he got closer to the goal, he kicked the ball faster, past Eric and into the goal.



What is the best explanation of why the ball moved **faster** on the last kick than the other kicks?

- A. Julian put a spin on the ball.
- B. Julian made the ball bounce.
- C. Julian kicked the ball harder.
- D. Julian kicked the ball sideways.

28. Timothy was investigating the power of magnetism. He used a horseshoe magnet to lift various objects off his desk. First, he picked up a paper clip. Next, he picked up an iron nail. Then he picked up an iron stapler. What is the best reason why Timothy was able to pick up all those objects?



- A. The forces of magnetism and gravity were equal.
- B. The force of magnetism was stronger than the force of gravity.
- C. The force of gravity was stronger than the force of magnetism.
- D. The force of electromagnetism was stronger than gravity.

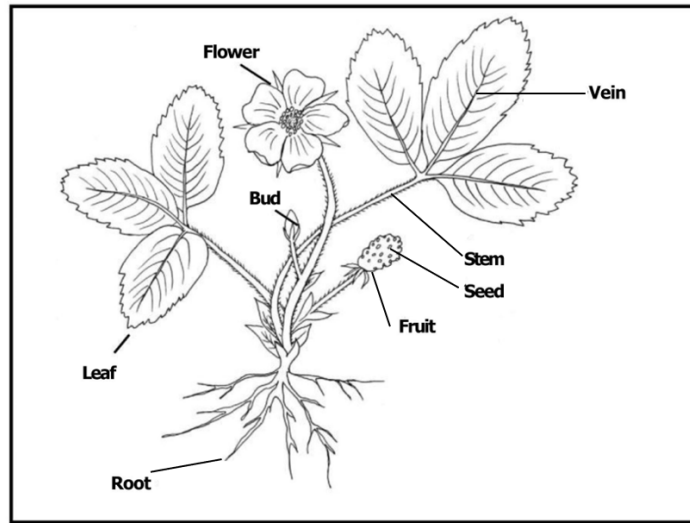
29. Marisol is making a chart of human organs and their functions, but she mismatched two of the organs and functions.

Organs of the Human Body	Function
Skin	Provides protection and regulates temperature
Brain	Controls thoughts, speech movement, and other organs
Heart	Pumps blood through the body
Lungs	Removes oxygen from the air
Kidneys	Filters bloods coming from the digestive track
Intestines	Removes nutrients from food
Liver	Passes waste as urine and filters blood
Pancreas	Releases hormones like insulin

Which two organs and functions are mismatched?

- A. Kidneys and intestines
- B. Liver and bladder
- C. Pancreas and bladder
- D. Kidneys and liver

30. Animals and plants have structures that serve similar purposes. One example would be the eggs of animals and the seeds of plants. What structure do animals have that is **most like** the stem of plants?



- A. Heart
- B. Lungs
- C. Skeleton
- D. Stomach

31. It is known that when the seasons change and the temperature begins to cool, the days get shorter and some species of flying birds, like geese, will travel from colder parts of the world towards warmer areas of the world. Other birds, like penguins, do not. Why does this happen?

- A. The food source for both animals is unchanged.
- B. The food source for geese had decreased.
- C. The food source for penguins had decreased.
- D. The food source for both animals had increased.

32. The snowshoe hare is a type of rabbit that can change the color of its fur from white to brown depending on the season. The octopus can also change its color depending on certain variables in their environment. Which is the **most likely** reason for these animal adaptations?

- A. Octopus and hares both need to hide from predators.
- B. Hares are mammals but octopus are not.
- C. Hares eat plants but octopus do not.
- D. Octopus can hide from predators, but hares cannot.

33. Gisele and Amanda were both working on Science Fair projects. They both conducted experiments on how light affects caterpillar growth. Gisele only ran one trial. Amanda ran three trials. What is the best reason to have more than one trial in an experiment?
- A. Only one of the trials is needed to support your hypothesis.
 - B. The results are more reliable and there is less chance for error.
 - C. The conditions in the experiment will change every time.
 - D. The results will always change every time you run the experiment.
34. Joelle has a cat and a dog and thinks that cats are more loving than dogs. Marshal does not own any cats or dogs but thinks that dogs are more loving from what he's seen on TV. Which person, Joelle or Marshal, would most likely know which animal is more loving?
- A. Joelle, because she only has an opinion but no observations.
 - B. Joelle, because she has an opinion based on her observations.
 - C. Marshal, because he knows about dogs and cats from TV.
 - D. Marshal, because he only has an opinion but no observations.
35. When precipitation falls at the poles it lands as freshwater snow because the temperatures are so cold. When precipitation falls at the equator it falls as freshwater rain because the temperatures are so warm. What is the **main** source of water that creates both forms of precipitation?
- A. Saltwater from lakes and rivers.
 - B. Freshwater from lakes and rivers.
 - C. Saltwater from oceans.
 - D. Freshwater from oceans.
36. Joseph's parents told him that they are moving. They are keeping the location a surprise, but they did tell him that the new location is in the tropical climate zone. He knows that the tropical climate zone is found near Earth's equator and far from the poles. Which of the following **best** describes the tropical climate zone?
- A. It is warm and humid with long summers and short winters.
 - B. It is warm and dry with long winters and short summers.
 - C. It is cold and humid with short summers and long winters.
 - D. It is cold and dry with short summers and long winters.
37. Edward and Kristen wanted to investigate how energy can cause motion or create change. They were brainstorming and came up with some ideas. Which idea would **not** be a way to investigate energy causing change?
- A. Frying an egg on a stove.
 - B. Building a small hot-air balloon.
 - C. Leaving a metal bicycle out in the rain.
 - D. Building a circuit with three lightbulbs.

Answer Key: Grade 5 End-of-Year Assessment

Question #	Correct Answer	Standard
1	C	SC.5.N.1.1
2	C	SC.5.N.1.2
3	B	SC.5.N.1.4
4	D	SC.5.N.1.5
5	B	SC.5.N.2.1
6	A	SC.5.N.2.2
7	C	SC.5.E.5.1
8	B	SC.5.E.5.2
9	D	SC.5.E.5.3
10	B	SC.5.E.7.1
11	A	SC.5.E.7.3
12	C	SC.5.E.7.4
13	C	SC.5.E.7.5
14	B	SC.5.P.8.4
15	A	SC.5.E.7.7
16	B	SC.5.P.8.1
17	C	SC.5.P.8.2
18	C	SC.5.P.8.3
19	C	SC.5.P.9.1
20	D	SC.5.P.10.4
21	A	SC.5.P.10.1
22	B	SC.5.P.10.3
23	B	SC.5.P.11.1
24	C	SC.5.P.11.2
25	A	SC.5.P.13.3
26	D	SC.5.P.13.1
27	C	SC.5.P.13.2
28	B	SC.5.P.13.4
29	D	SC.5.L.14.1
30	C	SC.5.L.14.2
31	B	SC.5.L.15.1
32	A	SC.5.L.17.1
33	B	SC.5.N.1.3
34	B	SC.5.N.1.6
35	C	SC.5.E.7.2
36	A	SC.5.E.7.6
37	C	SC.5.P.10.2