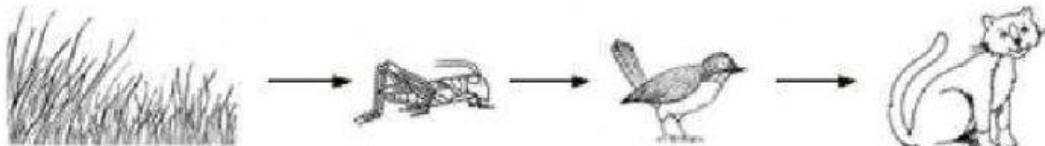




Instituto Americano of Caborca
6th grade
Science Diagnostic Test
Mrs. Gabriela

Name: _____ Date: _____

1. All living things in an ecosystem need energy. What is the original source of that energy for most ecosystems on Earth?
 - a) Soil
 - b) Wáter
 - c) Wind
 - d) sunlight
2. Many rainforest plants have large, flat leaves. Many desert plants have small, needle-like leaves. What is the best reason for that difference?
 - a) The plants are different ages.
 - b) The plants in the desert do not reproduce.
 - c) The plants are adapted to the conditions of their environment.
 - d) The plants carry out photosynthesis in different ways.
3. The diagram below shows a simple food chain. Which organism makes food for the entire ecosystem?
 - a) Cat
 - b) Bird
 - c) Grasshopper
 - d) grass



4. How might introducing nonnative species harm an ecosystem?
 - a) The species might remove pollution from the ecosystem.
 - b) The species might become a food source for existing species.
 - c) The species might become more popular to people.
 - d) These species might take resources away from existing species.

5. Stephen has placed a beaker of salt water on a hot plate. He is going to turn on the hotplate and observe as all the water evaporates. What will happen to the salt?

- a) It will evaporate into the air with the water.
- b) It will remain behind in the beaker.
- c) It will disappear once the water becomes a gas.
- d) It will change into a different substance.

6. Rebecca is making a solution by adding a solid to a liquid. Which of the following should she do to speed up the dissolving process?

- a) cool the solution
- b) add more solute to the solution
- c) allow the liquid to evaporate
- d) stir the solution

7. Miguel added several substances to water. He found that all but one dissolved in the water. Which of the following substances will not dissolve in water?

- a) Sugar
- b) Salt
- c) Sand
- d) baking soda

8. Ricky left a full bottle of water outside on a cold night. The next morning the water was ice and had burst through the sides of the bottle. Which of the following happened?

- a) Freezing the water increased its mass.
- b) Freezing the water increased its weight.
- c) Freezing the water increased its volume.
- d) Freezing the water increased the amount of volume.

9. Elena places a glass on a scale and sets the scale to zero. Next she pours water into the glass until the scale reads 500 g. She then dissolves 10 g of lemonade mix powder in the water. What will the scale read after the powder is fully dissolved?

- a) 490 g
- b) 500 g
- c) 510 g
- d) There is not enough information to know

10. Jason wants to investigate a hypothesis. He has decided that a survey is the best way to conduct his investigation. Which of the following describes a survey?

- a) He will measure the height of every 10th student who arrives at school.
- b) He will record the air temperature each day for one month.
- c) He will ask several questions to people who are 60 years of age or older.

d) He will mix four different liquids together and observe the results.

11. A scientist announces that she has discovered a process for making a new fuel that can be used in automobiles. What must be true for her conclusion to be accepted by other scientists?

- a) Other scientists must be able to replicate her results
- b) The conclusion must agree with her original hypothesis.
- c) The process must be able to earn money when it is used.
- d) She must have made the discovery without the input of other people.

12. Which question can be answered by making observations or measurements?

- a) What is the best book ever written?
- b) Is it wrong to cheat on a test?
- c) Is football a better sport than baseball?
- d) How long can most people hold their breath?



Graduated Cylinder Ruler

A balance scale is shown with two pans, one on each end, used for measuring mass. A thermometer is shown vertically with markings along its glass tube.

13. If you were a geologist, which of these tools would you use to measure the mass of a mineral sample?

- a) Graduated Cylinder
- b) Ruler
- c) Balance
- d) Thermometer

14. Which of these statements is not true about prosthetic limbs?

- a) Some can be controlled by electrical signals from the brain.
- b) Some can look like real limbs.
- c) Some can mimic the movements of the human body.
- d) They make it difficult for users to walk and run.

15. Daniel's class is observing a tadpole. What will the tadpole grow to be?

- a) a grasshopper
- b) a frog
- c) a fish

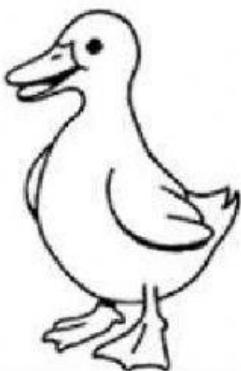
d) a snake

16. Monarch butterflies travel long distances each winter. Some travel thousands of miles from northern locations to places in Mexico. How does this help them survive?

- a) It lets them move from land to ocean environments.
- b) It allows them to carry their young to new locations.
- c) It gives them exercise to keep their wings in shape.
- d) It lets them lay their eggs in warmer conditions.

17. A scientist is studying an animal that has a smooth, streamlined body. For which type of environment is the animal adapted?

- a) a forest environment in which it swings among trees
- b) an ocean environment in which it swims through water
- c) a tundra environment in which it needs to keep warm
- d) a mountain environment in which it needs to climb steep cliffs.

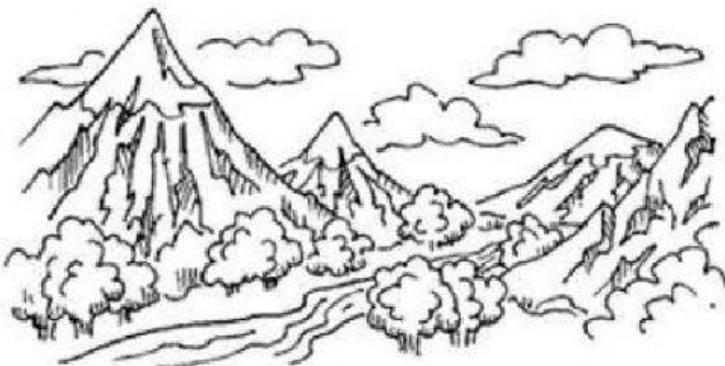


18. A scientist is studying different types of bird. Look at the feet of the bird below. In which type of ecosystem would you expect to find this bird?

- a) a desert
- b) a wetland
- c) a forest
- d) a prairie

19. Roland is making a dichotomous key. Which trait might he use to separate fish from amphibians?

- a) having long hair
- b) having scales
- c) laying eggs in water
- d) being cold-blooded



20. Nick is drawing an illustration to show how a mountain can form. How should he label his drawing?

- a) spreading plate boundary
- b) rift valley
- c) constructive force
- d) destructive force

21. Changes on Earth occur over different periods of time. Which of these events occurs over millions of years?

- a) An earthquake shakes a region.
- b) A landslide pulls soil down a mountain.
- c) A tornado moves through a town.
- d) A mountain forms from flat land.

22. Which of these resources is considered to be inexhaustible?

- a) Wood
- b) Wind
- c) Coal
- d) uranium

23. Suppose scientists send a new probe from the inner planets to the outer planets. What difference might the space probe show?

- a) The outer planets are larger than the inner planets.
- b) The outer planets are made up of solid rock.
- c) The outer planets have oceans of liquid water.
- d) The outer planets do not have any moons.

24. Many meteors move toward Earth every year. Why do most meteors never reach Earth's surface?

- a) They are pulled away by the moon's gravity.
- b) They burn up in Earth's atmosphere.
- c) They sink into oceans.
- d) They become caught in clouds.

