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.

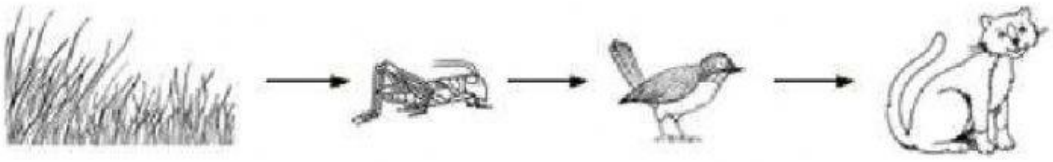
3. The diagram below shows a simple food chain. Which organism makes food for the entire ecosystem?

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.

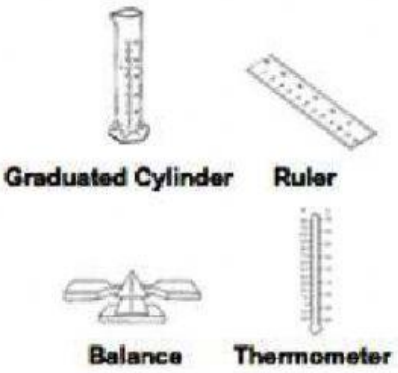
12. Which question can be answered by making observations or measurements?

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?



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.

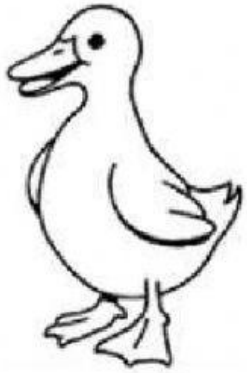
17. A scientist is studying an animal that has a smooth, streamlined body. For which type of environment is the animal adapted?

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

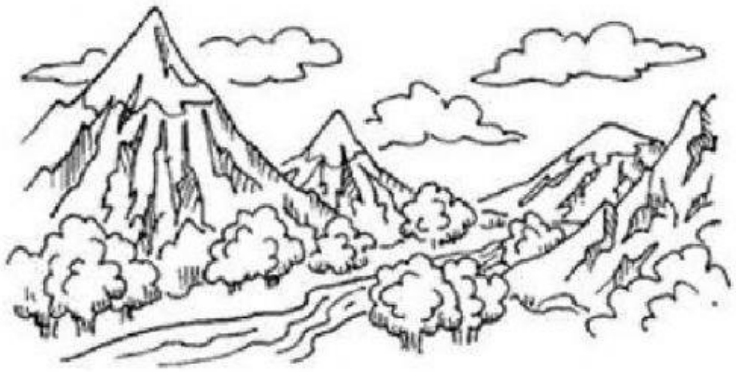
19. Roland is making a dichotomous key. Which trait might he use to separate fish from amphibians?

a) having long hair

b) having scales

c) laying eggs in wáter

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 forcé

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 there 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.