PITFALL TRAP MULTIPLE CHOICE ASSESSMENT

Directions: This is a multiple-choice test of your knowledge and understanding of the pitfall trap experiment and scientific methods. Circle or underline the best answer from the four choices provided. Where charts, pictures, or graphs are shown, answer those questions that refer to them to the best of your ability.

		BAITS					
		Peanut Butter	Apple	Cheese	Syrup	Meat	None
	Ants	**60**	**12**	**14**	**120**	**24**	**8**
	Bugs	**6**	**1**	**3**	**5**	**2**	**0**
	Beetles	**3**	**2**	**0**	**4**	**8**	**1**
A	Pill (Sow)Bugs	**2**	**6**	**1**	**3**	**0**	**2**
N	Spiders	**0**	**1**	**0**	**2**	**3**	**0**
I	Crickets	**2**	**2**	**0**	**1**	**0**	**2**
M	Centipedes	**0**	**1**	**0**	**1**	**1**	**0**
A	Millipedes	**1**	**0**	**1**	**0**	**0**	**1**
L	Insect Larvae	**1**	**3**	**2**	**2**	**2**	**1**
S	Earthworms	**0**	**1**	**0**	**0**	**0**	**1**
	Scorpions	**0**	**0**	**0**	**0**	**0**	**0**
	Snails	**0**	**1**	**0**	**0**	**1**	**0**
	Other	**3**	**3**	**1**	**5**	**2**	**2**

1) Which description would make the best title for the chart?
   a) Trapped Insects
   b) Animals and Their Baits
   c) Pitfall Trap Contents
   d) Schoolyard Animals

2) Which animal would cause problems when trying to graph the above information?
   a) Ants
   b) Bugs
   c) Earthworms
   d) Other

3) Which of the following best infers the absence of scorpions?
   a) The wrong type of bait
   b) The wrong location in the schoolyard
   c) The wrong type of habitat
   b) The wrong time of year

4) What is the manipulated (independent) variable in the above chart?
   a) The number of animals
   b) The number of baits
   c) The types of animals

d) The types of baits

5) Based on the knowledge you gained as you conducted your pitfall trap investigation, what conclusion would be most appropriate?
   a) Bait has little impact on the number of animals caught in a pitfall trap.
   b) Ants are the most common insects caught in the pitfall trap.
   c) Ants are the most common insects found in the schoolyard.
   d) Earthworms and snails are seldom found in the schoolyard.

6) The main purpose of a control in your pitfall trap experiment was to:
   a) Control the number of trapped animals.
   b) Control the variety of trapped animals.
   c) Make certain that no other factors (variables) affected the outcome of the experiment.
   d) Make certain that several factors (variables) affected the outcome of the experiment.

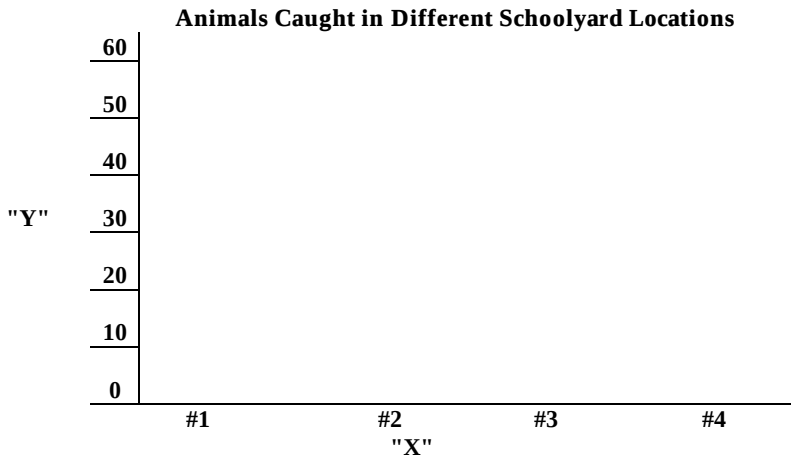
7) Which of the following would **not** be an acceptable change to produce a new pitfall trap experiment?
   a) Changing the baby food jars to all the same sized plastic cups.
   b) Changing the type of baits used in the experiment.
   c) Adding a milliliter of water to all of the pitfall traps.
   d) Using a variety of different sized baby food jars.

8) When checking your traps, you discover that one of the baby food jars is completely empty of animals and the peanut butter bait that you had placed in it the day before. Which of the below statements would be your best inference (assumption)?
   a) The trapped animals ate the food a then escaped from the jar.
   b) Someone removed your jar and replaced it with a clean one.
   c) A larger animal was able to lick the trap clean of the bait and trapped animals.
   d) The peanut butter evaporated when It was exposed to the air.

9) When checking your pitfall traps you discover that the traps placed by the woods contain a large number of cockroaches compared to those traps that you placed by the field. Which of the below statements would be your best inference (assumption)?
   a) Cockroaches are less likely to fall into pitfall traps located near fields.
   b) Cockroaches are more likely to fall into pitfall traps located near woods.
   c) Cockroaches are more common to a woods habitat.
   d) Predators in a field reduce the number of cockroaches found there.

10) Based on your knowledge of the construction of scientific graphs, which of the below descriptions would best represent the vertical (up and down) axis marked by a "Y" on the pictured graph?
    a) animals
    b) locations
    c) days
    d) centimeters

11) Based on your knowledge of the construction of scientific graphs, which of the below descriptions would best represent the horizontal (side to side) axis marked by an "X" on the pictured graph?
    a) animals
    b) locations
    c) days
    d) centimeters



12) When you placed your pitfall trap (baby food jar) into the ground, why was it necessary to make certain the top was level with the ground's surface?
    a) To prevent rainwater from running into the trap.
    b) To allow dirt to fall into the trap.
    c) To make it more difficult for unwanted animals to fall into the trap.
    d) To make it easier for animals to fall into the trap.

13) Which one of the following statements is the best reason for using glass baby food jars in the pitfall trap experiment.
    a) They were easier to clean and set up.
    b) They made it easier to view the trapped animals.
    c) Their curved lips and slick sides prevented most trapped animals from escaping.
    d) They were the easiest traps to design.

14) Which of the methods listed below would be the best way to identify the animals caught in your pitfall trap?
   a) Study the distinguishing characteristics of your animals and use these to help you classify the organisms.
   b) Compare your animals with those identified by others in your class.
   c) Compare you're animals to pictures you have found that look similar.
   d) Use color and shape of the animals to help you key each one out correctly.

15) Of the statements listed below, which one would be the best reason for repeating your experiment several times.
   a) Variables that are hard to control, such as weather, might drastically change your results from one test to the next.
   b) Your independent (manipulated) variable may get changed during the experiment.
   c) You may not have conducted the experiment the same way each time.
   d) The results from your first experiment did not match your original hypothesis.

Pitfall Trap Multiple-Choice Assessment Answers

1. b
2. a
3. c
4. d
5. b
6. c
7. d
8. c
9. c
10. a
11. b
12. d
13. c
14. a
15. a