ORANGE PUBLIC SCHOOLS
OFFICE OF CURRICULUM AND INSTRUCTION
OFFICE OF SCIENCE

GRADE 5
SCIENCE
Pre - Assessment

School Year 2013-2014

Directions for Grade 5 Pre-Assessment

The Grade 5 Pre-Assessment is made up of multiple choice questions, and constructed response questions.

Read each question carefully, including diagrams and/or graphs.
Work as rapidly as you can without sacrificing accuracy. Do not spend too much time puzzling over a question that seems too difficult for you. Answer the easier questions first; then return to the harder ones. Try to answer every question, even if you have to guess.

Where necessary, you may use scratch paper for your work. Do not use the margins of the test booklet to do scratch work.

YOU MUST RECORD YOUR ANSWERS ON THE SCANTRON SHEET PROVIDED. ALL SHORT CONSTRUCTED RESPONSES AND ESSAY RESPONSES MUST BE WRITTEN IN YOUR TEST BOOKLET.

Student Name _____ **Date _____**

Grade 5 – FOSS **Teacher _____**

SGO Pre-Assessment-Grade 5

Multiple Choice

Identify the choice that best completes the statement or answers the question and write the letter of the correct answer in the blank provided.

____ 1. Sugar belongs to the group of nutrients called
A. fats. B. carbohydrates. C. sweets. D. yeasts.

_____ 2. Donny wanted to find out the percentage of fat in chocolate frosting. He plans to do the fat test on the frosting. Which food should he use as a control?
A. another chocolate frosting B. pure vanilla frosting C. pure chocolate ice cream D. pure vegetable oil

_____ 3. What is the indicator in the sugar test?
A. carbon dioxide B. sugar C. water D. yeast

_____ 4. Acids taste
A. sweet. B. sour. C. salty. D. bitter.

_____ 5. If Peggy eats more food (calories) than she uses,
A. her breathing becomes faster. B. she loses weight.
C. her heart rate increases. D. the extra food is stored as fat.

_____ 6. When seeds start to grow, we say they have
A. generated. B. germinated. C. granulated. D. graduated.

_____ 7. In which order do the parts of a plant appear when seeds start to grow?
A. Shoot, root, then leaves B. Root, leaves, then shoot
C. Leaves, shoot, then root D. Root, shoot, then leaves

_____ 8. _____ are openings on leaves that let gases in and out.
A. Guard cells B. Xylem C. Root hairs D. Stomates

_____ 9. Why is transpiration an important process in a plant?
A. It keeps the plant from taking in too much water and drowning.
B. It gets rid of unusable water in the plant.
C. It delivers water to every cell in the plant at all times.
D. It helps plants get water from other plants.

_____ 10. An organism's habitat is
A. how it adapts to changes in the environment. B. the other plants and animals in the area.
C. the place where it lives and gets what it needs for life. D. structures and behaviors that keep it alive.

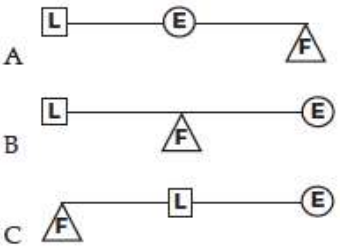
_____ 11. Which statement about a microscope is true?

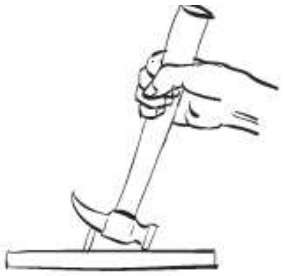
A. Compound microscopes have one lens. B. The position of the focal plane is fixed.
C. A light source is needed to see the objects. D. Objects to be observed are placed on the objective lens.

_____ 12. Which of the following is NOT a structure found in eukaryotic cells?
A. Nucleus B. Ribosome C. Mitochondrion D. Stomate

_____ 13. Microbes in the natural environment are mostly
A. consumers. B. decomposers. C. parasites. D. producers.

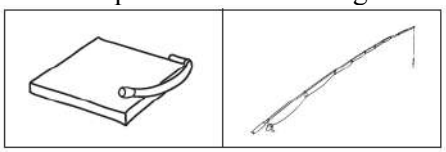
_____ 14. Amber used a hammer to pry a nail out of a board. Which of the following diagrams correctly shows where the fulcrum, effort, and load are located on the hammer when it is used this way?



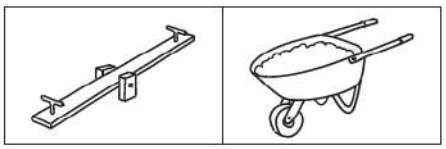


_____ 15. Which of these pairs of levers belong to the same class?

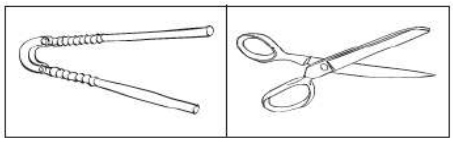
A. a paper cutter and a fishing rod



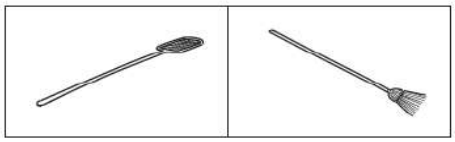
B. a teeter-totter and a wheelbarrow



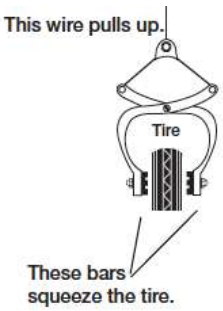
C. a nutcracker and scissors



D. a fly swatter and a broom



_____ 16. The hand brake on a bicycle is a simple machine. The bars that squeeze the tire are examples of a
A. wedge. B. wheel and axle.
C. lever. D. inclined plane.



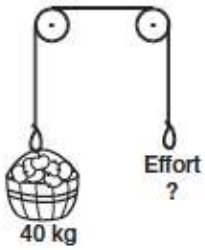
_____ 17. When a pulley is used to lift a load, as shown in the illustration,

the advantage gained is

A. mechanical. B. less work.
C. less friction. D. directional.

_____ 18. Annie wanted to lift a load of apples. She set up the pulley system you see in the picture. How much effort will Annie need to pull on the rope in order to lift the apples?

A. 400 N B. 200 N C. 800 N D. 450 N



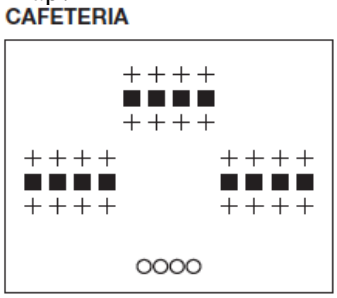
_____ 19. The box to the right shows a map of a cafeteria, including tables, chairs, and food station. Which of the following is the most reasonable key for this map?

A. ○ Chair
+ Food station
■ Table

B. ○○○○ Chair
+ + + + Food station
■ ■ ■ ■ Table

C. ○ Food station
+ Table
■ Chair

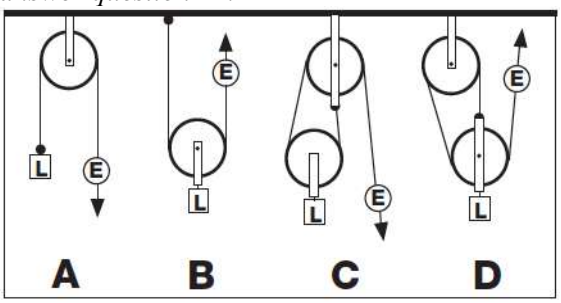
D. ○ Food station
+ Chair
■ Table



_____ 20. A freeway on-ramp is a simple machine. Which type is it?

A. wedge B. wheel and axle C. lever D. inclined plane

Reference the picture below to answer question 21.

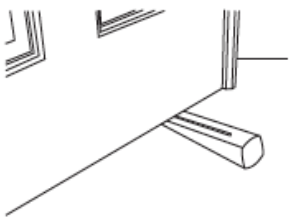


_____ 21. Which pulley system will provide the greatest mechanical advantage?

A. pulley system A B. pulley system B C. pulley system C D. pulley system D

_____ 22. A doorstop is a simple machine. Which type is it?

A. wedge B. wheel and axle
C. lever D. inclined plane

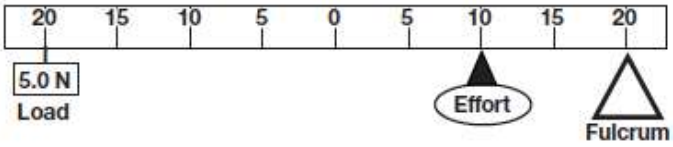


_____ 23. A zip line uses a simple machine to move people from one place to another on a cable. What simple machine is used to move people along the zip line?

A. wedge B. screw
C. pulley D. inclined plane

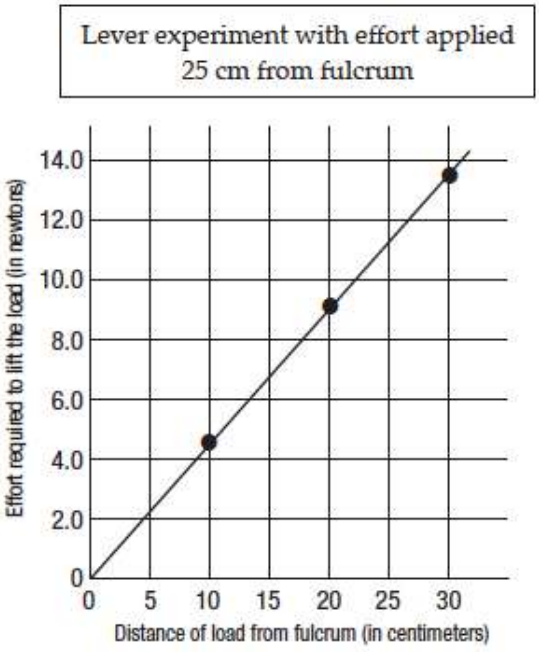
_____ 24. What could you change in the lever system pictured below to make it easier to lift the load?

A. Move the effort toward the fulcrum.
B. Pull down with the effort rather than up.
C. Move the fulcrum so it is just below the effort.
D. Move the effort closer to the load.



Short Answer: *Answer each question in the space provided. Write legibly.*

Study the graph at the right and answer the following questions.



1a. If the load is 13 cm from the fulcrum, how much effort is needed to lift the load?

_____

b. If it takes an effort of 10.0 N to lift the load, how far would the effort be from the fulcrum?

_____

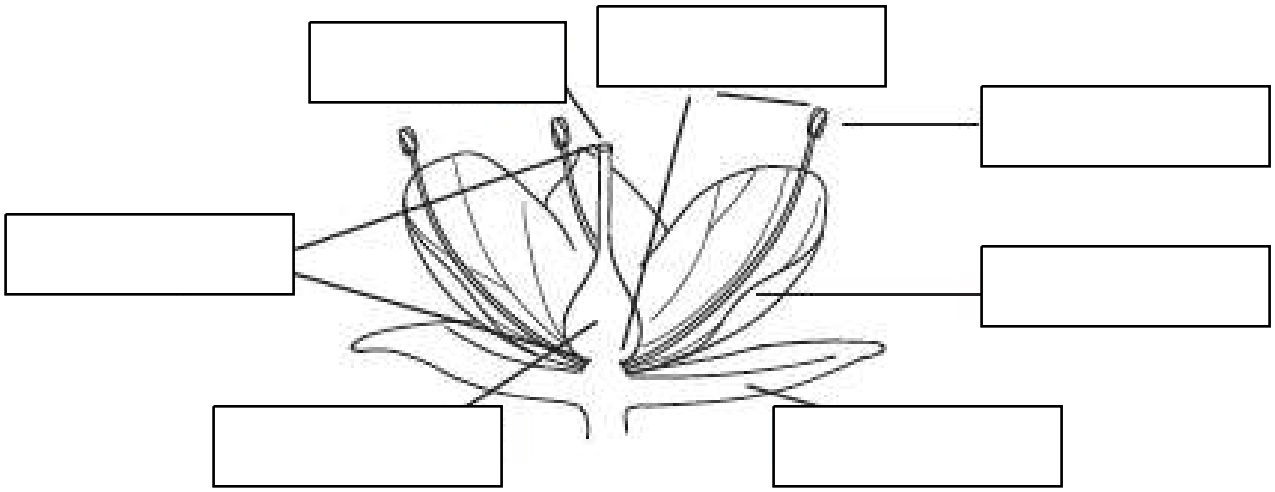
c. What is the relationship between the amount of effort required to lift the load and the distance the load is from the fulcrum?

_____

_____

_____

2. **LABEL** the structures of the flower in the diagram below.



3.

Directions: **LEGIBLY WRITE** the letter L next to each object listed below that is living. **WRITE** the

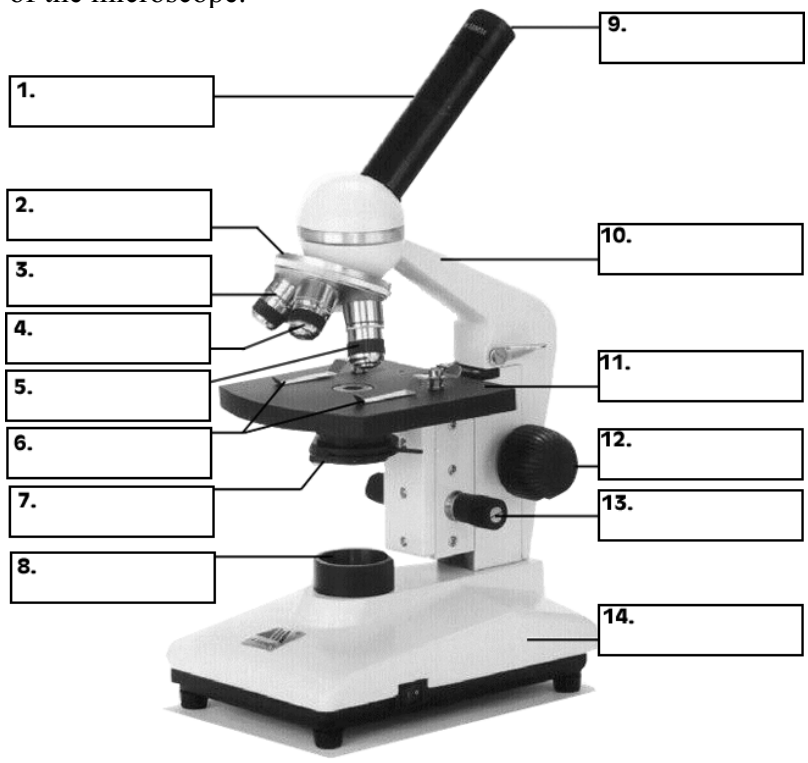
letter N next to each object listed below that is nonliving.

_____ mushroom	_____ waterfall	_____ pine tree
_____ robot	_____ fire	_____ cactus
_____ moss	_____ snail	_____ tomato seed
_____ Sun	_____ bicycle	_____ hermit crab

4. **STATE** no less than 4 of the things you would look for to determine if something is living.

_____
_____
_____
_____

5. **LABEL** the parts of the microscope.



Answer each question in the space provided. Write legibly and in complete sentences taking care to use proper sentence structure. Address each aspect of the question in your answer.

6. Anna wants to compare the fat in walnuts and in peanuts, but she isn't sure how.
a. **WRITE** a procedure Anna can use to compare the fat in walnuts and peanuts.

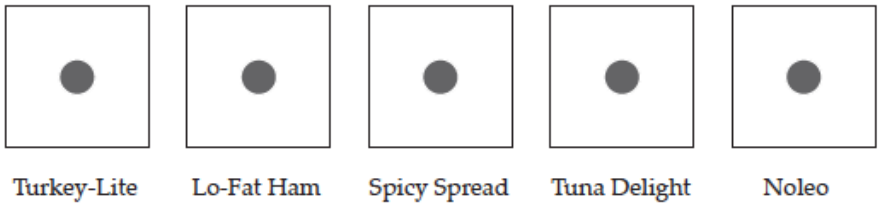
_____
_____

b. Using only the results from her experiment, **EXPLAIN** how Anna will know which one, walnuts or peanuts, has more fat.

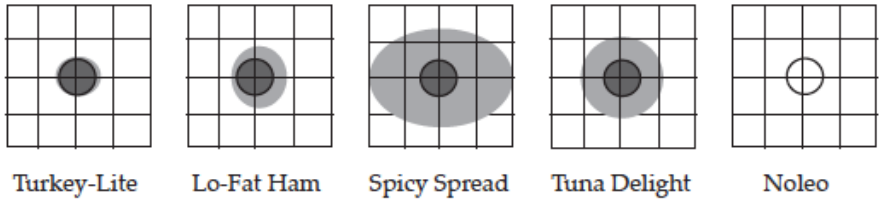
7. **DESCRIBE** the most important difference between prokaryotic cells and eukaryotic cells.

8. Tina and Artie wanted to find out just how much fat there was in five "low-fat" sandwich spreads. They put 1-g samples of each spread on pieces of brown paper.

This is what the papers looked like when they finished setting up.



Two days later the papers looked like this when placed under the grids.



a. Put the spreads in order, starting with the spread that contained the least fat.

least most