K-4SMARTS
2010 - 2011
NCLB: Improving Teacher Quality: p-16 Education Partnership

Post-Assessment

Last four Digits of your SS#
K-4 SMARTS 2010-2011

Please show your work for each section
Directions: Circle the correct letter for each of the following questions:

1. What has volume and takes the shape of the container in which it is contained?
   (a) Gas
   (b) Liquid
   (c) Solid
   (d) Steam

2. A plant with red flowers pollinates a plant with white flowers. All the F₁ generation (offspring) plants produce pink flowers. This is an example of:
   (a) Co-dominance
   (b) Pseudo-dominance
   (c) Complete dominance
   (d) Incomplete dominance

3. If a plane travels a distance of 2,000 miles in 6 hours, what is its average speed?
   (a) 340 miles/hr
   (b) 200 miles/hr
   (c) 33.3 miles/hr
   (d) 333.3 miles/hr

4. ____________ is a fruit that is used as a vegetable?
   (a) Potato
   (b) Lettuce
   (c) Tomato
   (d) Carrot
5. Which of the following is not a matter?
   (a) Soda
   (b) Heat
   (c) Sun
   (d) Air

6. If a car traveling 10 miles/hr accelerates to a speed of 50 miles/hr in 5 seconds what is its acceleration?
   (a) 10 miles/hr/sec
   (b) 250 miles/hr/sec
   (c) 25 miles/hr/sec
   (d) None of the above

7. What is a node of a plant?
   (a) A point where leaves are attached
   (b) A point where apical tissue is located
   (c) Area between shoot and root
   (d) Main photosynthetic organ

8. If an object has a mass of 2 kg and an acceleration of 6 m/sec/sec. What force must be applied?
   (a) 12 N
   (b) 3 N
   (c) 0.5 N
   (d) None of the above
9. Which of the following is the strongest natural force?

(a) Gravitational force
(b) Electrical force
(c) Magnetic force
(d) Strong nuclear force
(e) Weak nuclear force

10. What determines the gravity exhibited by an object?

(a) Mass
(b) Weight
(c) Volume
(d) Diameter

Use the following data to answer question 11:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Density g/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>0.8</td>
</tr>
<tr>
<td>Water</td>
<td>1.0</td>
</tr>
<tr>
<td>Plastic</td>
<td>0.9</td>
</tr>
<tr>
<td>Rock</td>
<td>4.2</td>
</tr>
<tr>
<td>Aluminum</td>
<td>2.3</td>
</tr>
</tbody>
</table>

11. When mixed, what would be the order of the substances starting from the bottom and going up?

(a) Rock, aluminum, plastic, water, oil
(b) Rock, aluminum, water, plastic, oil
(c) Rock, plastic, oil, water, aluminum
(d) Rock, oil, aluminum, plastic, water
12. Which of the following statements about vascular plants is **False**?

(a) Vascular plants do not produce flowers
(b) Vascular plants reproduce only by sexually
(c) Vascular plants are very tall plants
(d) Vascular plants have tubes for transportation of food and water

13. A rock and a lead weight both sink when dropped into a lake. What do you know about their densities?

(a) They have the same density.
(b) They have different densities.
(c) They are denser than water.
(d) They are less dense than water.

14. Which of the following has definite volume, but no definite shape?

(a) Gas
(b) Liquid
(c) Solid
(d) Steam

15. An object travels in a circle. The force causing the object to move in a circle is called centripetal force. What is the direction of the force?

(a) Out from the circle
(b) Toward the center
(c) In a straight line along the circle
(d) None of the above
16. A fruit is formed from which part of a flower?

(a) Sepals
(b) Petals
(c) Stamens
(d) Pistil

Use the following groups to answer questions 17 and 18.

Group A are different types of Noogles.

Group B Different types of non-Noogles.

17. Which of the following is a Noogie?

A. B. C. D.

18. Based on the two sets above, what would be a good definition for a Noogie?

(a) A Noogle is a closed figure.
(b) A Noogle is a closed figure with 2 round body markings.
(c) A Noogle is a convex closed figure with line segment sides (polygon).
(d) A Noogle is a convex closed figure with line segment sides (polygon) and 2 round body markings.
Directions: Circle True or False:

19. True or False: Sand grains can be made of animals, plants, rocks, or minerals.

20. True or False: Differences between sand grains can be clues about where the sand came from and how it got to the beach.
Directions: Write a short descriptive answer to each question:

21. What three parts make up the head of a mealworm?

22. What do mealworms eat?

23. Discuss the differences between a dry lima bean and a wet one as it pertains to the color, texture, and firmness.

24. What are the three parts of a seed?

25. What is a baby lady bug called?

26. How can one determine the classification for an animal, a mammal, or an insect?
Directions: Use the graph below to answer the following questions:

The graph above represents motion such as walking. It was created by walking in front of a motion detector, but it could represent any context in which there is change over time. Answer the questions below. You can approximate the points on the graph with the nearest whole number for the x coordinates and the nearest tenth for the y coordinate.

27. The x-axis measures _______ and the y-axis measures ________________________

28. How far from the detector do you start the walk? _______________________

29. What are the coordinates of point X? ____________ You have traveled ________ meters in ________ seconds.

30. What is the rate of change for the walk from start to Point A? ________________________