ORANGE PUBLIC SCHOOLS
OFFICE OF CURRICULUM AND INSTRUCTION
OFFICE OF SCIENCE

GRADE 6
SCIENCE
Post-Assessment
Answer Key and Scoring Guide

School Year 2013-2014

Teacher _____ Date _____

Grade 6 – CPO Earth Science KEY

SGO Post-Assessment – Grade 6 – Earth Science KEY- 55 pts

Multiple Choice - 1 pt ea

Identify the choice that best completes the statement or answers the question. Write the letter of the correct answer in the space provided.

Use the following information to answer question 1.

Jorge discovered that a piece of bread left in a sandwich bag had developed a black mold-like substance growing on its surface. He decided to perform an experiment to determine factors affecting mold growth.

__D__ 1. In Jorge's bread mold experiment, he used the same brand of bread and sandwich bags. He placed the sealed bags in places that had varying temperatures. Temperature is the:

a. control variable.
b. hypothesis.
c. analysis.
d. experimental variable.

__B__ 2. Which of the following is the same measurement as 2000 grams of soda?

a. 0.2 liters of soda
b. 2 liters of soda
c. 2 kilograms of soda
d. 2 milliliters of soda

__A__ 3. All matter consists of tiny particles known as atoms. The different types of atoms are known as:

a. elements.
b. compounds.
c. molecules.
d. chemicals.

__B__ 4. The atoms in gases:

a. vibrate in place.
b. move freely about
c. vibrate and move freely about.
d. vibrate and move freely about, but not at the same time.

Choose the one response below that appropriate fills in the blanks from top to bottom.

__D__ 5. Heat is transferred in conduction by_____.
Heat is transferred in convection by _____.
Heat is transferred in radiation by _____.

a. Movement of fluids
Direct contact
Waves through the air

b. waves through the air
direct contact
movement of fluids

c. direct contact
waves through the air
movement of fluids

d. direct contact
movement of fluids
waves through the air

__B__ 6. Most of Earth's water is found in which phase?

a. Solid
b. Liquid
c. Gas
d. None of the above

__D__ 7. Which of the following is an example of water changing its phase?

a. Glacier ice melting
b. A mud puddle evaporating
c. Dew drops on grass in early morning
d. All of the above

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__A__ 8. What affect does increasing atmospheric pressure have on the rate of evaporation?

a. evaporation decreases
b. evaporation increases
c. evaporation stays the same
d. the effect depends on latitude

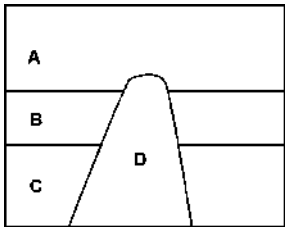
__B__ 9. The long-term record of precipitation, wind, and temperature for an area is:

a. weather.
b. climate.
c. meteorology.
d. seasons.

__B__ 10. The correct order for fossil formation is:

a. Soft body parts decay, sediments are deposited and cover organisms, sediments and hard parts become rock.
b. Sediments are deposited and cover organism, soft body parts decay, sediments and hard parts become rock.
c. Hard and soft body parts decay and become rock.
d. Sediments cover organism and all body parts decay.

__A__ 11. Rocks A, B, and C are layers of sedimentary rocks. Rock D is a rock intrusion. Which rock is oldest? Which rock is youngest?



a. C is oldest, D is youngest
b. D is oldest, A is youngest
c. B is oldest, D is youngest
d. A is oldest, C is youngest

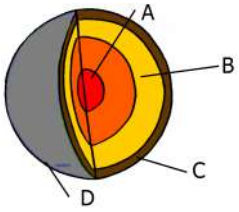
__D__ 12. In the Geologic Time Scale, ***eras***:

a. determine the dominant life forms present.
b. are divided into periods.
c. lasted for millions of years.
d. All of the above.

__C__ 13. The idea that continents move slowly on Earth's surface is known as:

a. sea-floor spreading.
b. mountain making
c. continental drift.
d. convection cells

Refer to the figure to answer question 14



__D__ 14. On the figure to the right, which area marked is the crust of the earth?

a. A
b. B
c. C
d. D.

__B__ 15. More earthquakes occur near the region on Earth's surface that is split into two pieces because of earthquakes. This region is called a(n):

a. chasm.
b. fault.
c. vent.
d. stick-slip.

__A__ 16. _____ rocks are formed from other rock particles broken down into small pieces by the rock cycle.

a. Sedimentary
b. Metamorphic
c. Igneous
d. All of the above

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__B__ 17. Which substance has the greatest effect on the rate at which rocks weather (break down)?

a. Sunlight
b. Water
c. Chlorophyll
d. Hydrogen

__B__ 18. If sustainable energy sources are not found and society continues to primarily use non-renewable energy

a. pollution will decrease
b. there will be an energy shortage
c. there will be more jobs created
d. people will stop needing energy

__A__ 19. If humans put too much pollution in the environment:

a. plants and animals can die.
b. habitats can be destroyed.
c. animals move to cleaner areas.
d. all of the above.

__B__ 20. An astronaut weighs 400 Newtons on the Moon's surface. On Earth they would:

a. weigh less.
b. weigh more
c. weigh the same
d. increase in mass

__B__ 21. The length of a planet's day is defined by its:

a. mass.
b. period of rotation.
c. density.
d. period of revolution.

__C__ 22. Which of the following is most responsible for causing changing seasons on Earth each year?

a. Closeness to Earth to Sun during orbit
b. Speed of Earth's rotation
c. Tilt of Earth on its axis
d. Amount of meteorites in sky

__A__ 23. During which phase of the Moon does a solar eclipse occur?

a. Full Moon
b. New Moon
c. Waning Gibbous
d. First Quarter

__C__ 24. Buoyancy describes the concept that:

a. all objects float in water
b. objects denser than water will float in it
c. less dense objects will float in more dense fluids
d. objects must be filled with air in order to float

__D__ 25. The state of water as a solid, liquid, or gas in the water cycle is most affected by:

a. humidity
b. wind
c. amount of water
d. temperature

__B__ 26. As shown on the diagram, the imaginary vertical lines that are east and west of the prime meridian are called:

a. latitude lines.
b. longitude lines.
c. contour lines.
d. bathymetric lines.

__A__ 27. When an object's volume is made smaller and its mass remains the same, its density:

a. increases.
b. decreases.
c. remains the same.
d. increases then decreases.

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Completion –*Write a response to best fit each sentence.* ***1 pt ea***

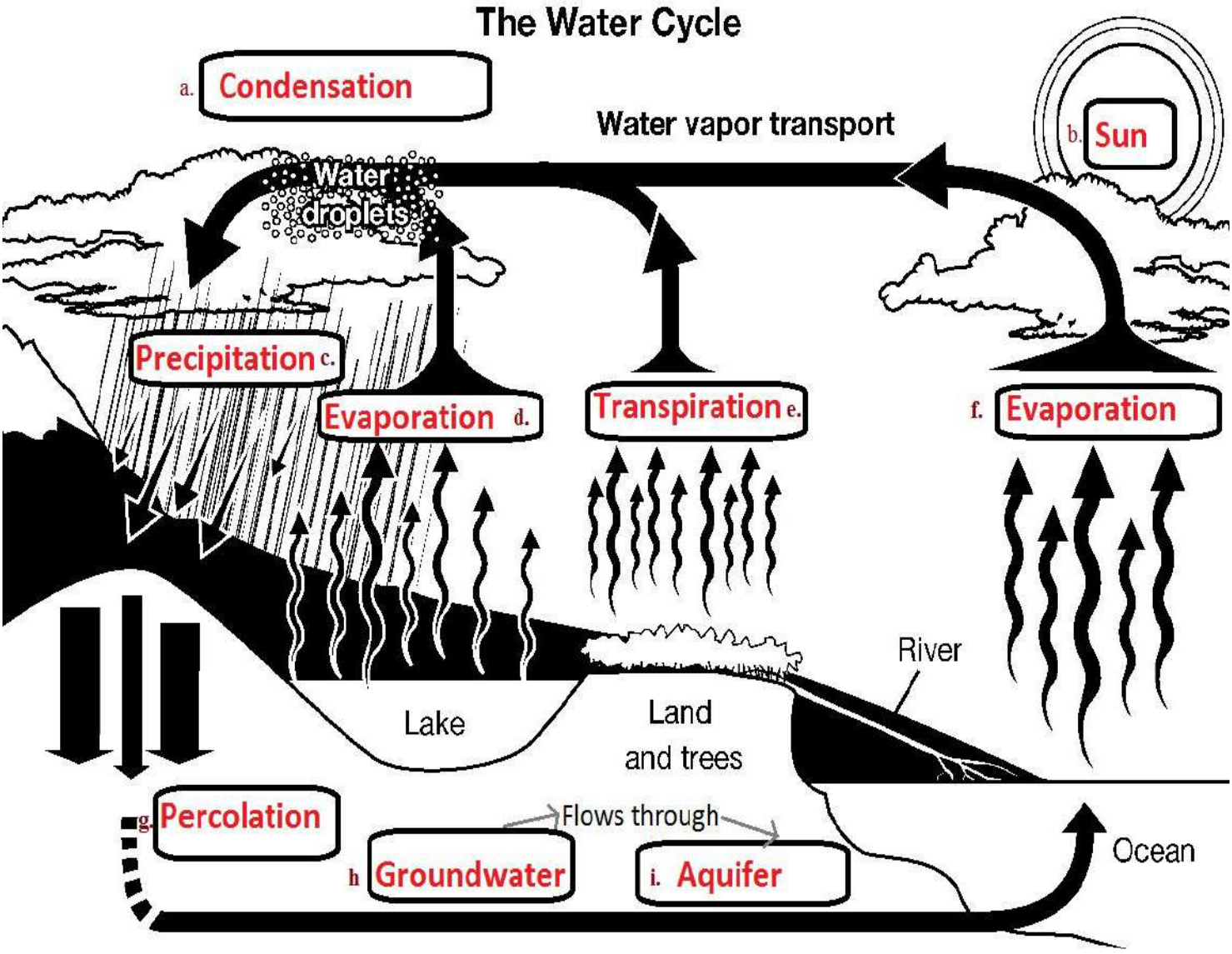
28. The ____**desert**_____ biomes receive less than 35 centimeters of rainfall per year.

29. The ____**rainforest**_____ biomes are located near the equator with near constant temperature year-round.

Short Answer - *Answer each question in the space provided. Use complete sentences.*

30. Label the picture below that illustrates the water cycle. Label all parts as completely as possible, including the four main processes in the water cycle and the source of energy for the water cycle. Be sure to use the following words. Some words may be used more than once. **9 pts**

Aquifer Sun Transpiration Precipitation Evaporation Percolation Groundwater Condensation



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31. Trace the path of water from the ocean to groundwater and back to the ocean. **Describe** the processes that allow water to travel from the ocean to the groundwater. **3 pts**

Responses will vary, but should include accurate descriptions of evaporation, precipitation, transpiration, percolation, condensation.

Code	If the student…
3	Demonstrates a clear understanding of the task by providing an accurate description of at least 3 of the water cycle processes, referencing phase changes.
2	demonstrates a basic understanding of the task by providing an accurate description of at 2 water cycle processes.
1	demonstrates a basic understanding of the task by correctly describing 1 of the water cycle processes.
0	Makes no attempt or provides a response that does not correspond to the question.

This topographic map shows two different views of an island.

32. In Figure 8-1, what is the **elevation** of the hill top? **1 pt**

40 feet

33. Which end of the island is steeper, A or B? How do you know? **2 pts**

A is steeper because the contour lines at A are closer together. Also, you can see from the elevation that the slope is steeper at A.

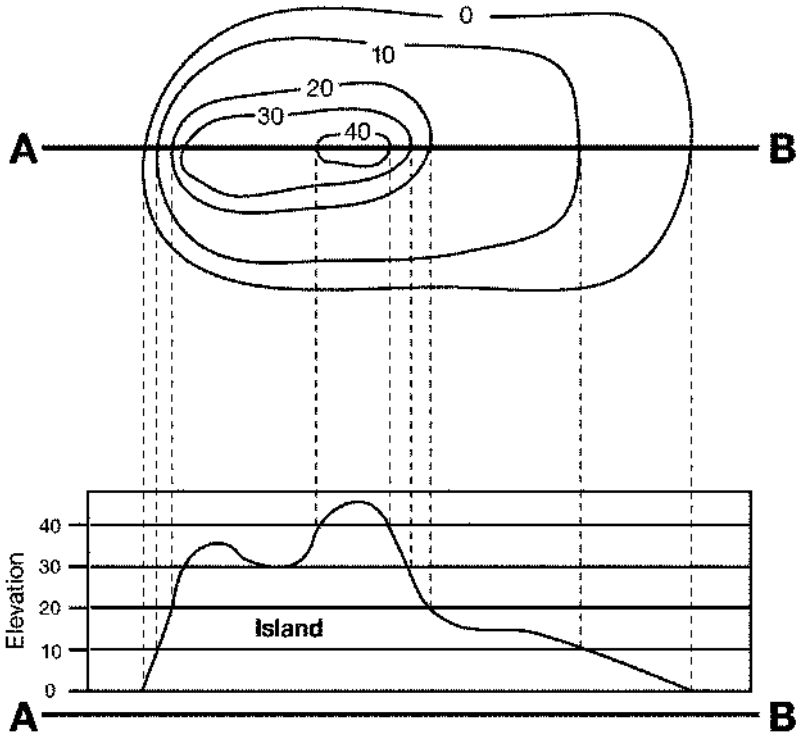

Figure 8-1

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The number of students in Ms. Jones' science class each year for 10 years is shown in the following data set.

1995	35 students
1996	33 students
1997	34 students
1998	32 students
1999	30 students
2000	30 students
2001	29 students
2002	27 students
2003	27 students
2004	26 students
2005	25 students

34. Draw a **line graph** of the data set of Ms. Jones' class size on the axes provided, making sure your graph has all the proper parts (title, labels with units, data points, best fit curve). **9 pts**

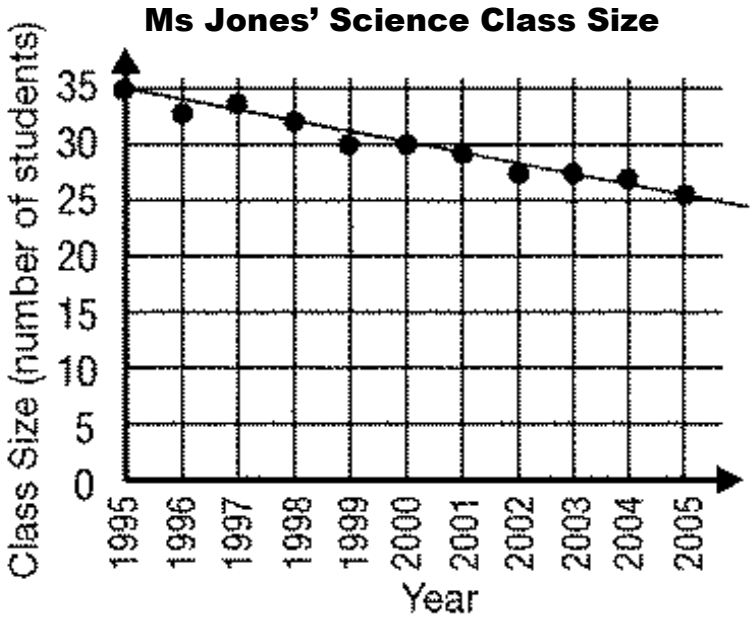
1 pt – Title

2 pts – labeled axis'

2 pts – correct number scale on axis

3 pts – data points plotted correctly

1 pt – best fit curve line



35. What does the data set show about the trend in class size in Ms. Jones' science class over 10 years? **2 pts**

Her class size decreased.