Name:_____Period:_____

Science Midterm REVIEW 2008

Lab Safety/Equipment

1. What piece of lab safety equipment should be worn when there is the possibility of harmful chemicals splashing in your eyes?_____
2. What safety procedure should always be followed for every experiment?

   _____
3. What should be done with long hair when working in the lab?

   _____
4. Draw and label the following pieces of lab equipment:
   A) Beaker
   B) Petri dish
   C) Graduated cylinder
   D) Flask
   E) Triple Beam Balance
   F) Test tube
   G) Medicine dropper
   H) Ruler
   I) Microscope
5. What is the first thing that should be done when there is an accident in the laboratory?

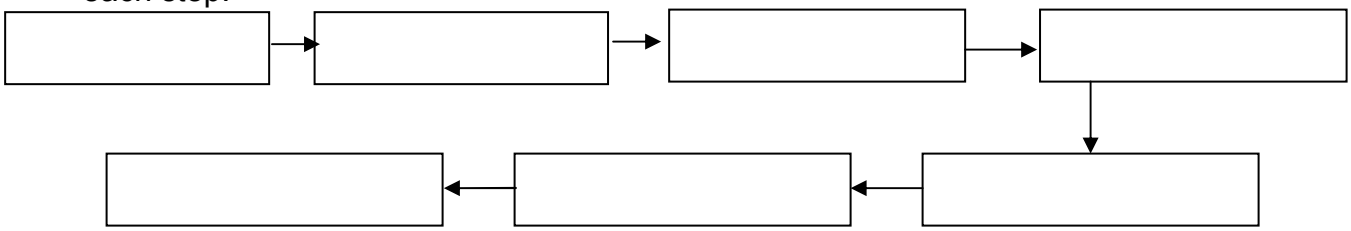
   _____
6. What lab equipment would you use to measure 50mL of water?_____
7. What should hot glassware be handled with? _____
8. What is the first lab safety you should follow when you receive the lab experiment procedures? _____

9. Why are safety goggles one of the most important pieces of lab equipment?

_____

Scientific Method

10. Draw a flow map of the scientific method. Below the flow map give a brief description of each step.



#1:_____
#2:_____
#3:_____
#4: _____
#5: _____
#6: _____
#7: _____

For the following lab experiment use the terms below to identify each step of the Scientific Method: **Problem, Hypothesis, Experimental Design , Data Collection, Conclusion**

11. Put the Duracell battery into the flashlight and turn the flashlight on. When that battery runs out of power, change out the battery and put the Energizer battery into the flashlight and turn it on. _____

12. Record how long each battery lasted into your log book. _____

13. After performing the experiment the Energizer lasts longer than the Duracell battery. _____

14. Which battery will last longer when being used: Energizer or Duracell? _____

15. The Energizer battery will last longer because it was more expensive. _____

Matter, Mass, Volume

16. Define matter.

17. What is the measure of how much space something takes up?

18. What are the basic metric units for

    a) length:

    b) volume:

    c) mass:

Physical/Chemical Changes

19. Give three examples of a physical property.

20. Give three examples of a chemical property.

21. What is the difference between a physical and a chemical change?

22. List three physical changes.

    A)

    B)

    C)

    List three chemical changes

    D)

    E)

    F)

Photosynthesis/Cellular Respiration

23. What is photosynthesis?

24. What are the reactants (needed ingredients) of photosynthesis?

25. What are the products(produced substances) of photosynthesis?

26. What sugar is made in photosynthesis?

Periodic Table

27. What does the atomic number tell you about an element?

28. How is the periodic table arranged?

29. Are F, Cl, Br, and I in the same period or family (group)?

30. Where on the Periodic Table are metals, nonmetals, and metalloids located?

31. What are atoms?

32. How many different <u>elements</u> are in the chemical formula H_2SO_4?

33. How many <u>atoms</u> of Sulfur are in H_2SO_4?

34. Write an example of a chemical formula.

35. How many elements did you list in your chemical formula on #34?

Energy

36. What is the law of conservation of Energy?

37. Where does all energy on Earth come from?

38. What are the six forms of Energy? Give examples of each form of energy:

A)

B)

C)

D)

E)

F)

39. What is kinetic energy?

40. What is potential energy?

41. What are the two types of potential energy and give an example of each?

42. Flow map the following energy conversions using the six forms of energy.
    A) Rubbing your hands together on a cold day: (2 conversions)

    B) Photosynthesis process: (4 conversions)

    C) Turning on a flashlight: (4 conversions)

Renewable and Nonrenewable Resources

43. What is a nonrenewable resource and give an example.

44. What is a renewable resource and give an example.

45. What is an inexhaustible energy resource and give an example.

Force and Motion

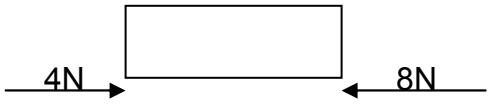
46. What is force?

47. What is Newton's First Law of Motion?

48. Define inertia.

49. What is net force?

50. What is the net force if a person pushes on a box with a force of 8N to the left and another person pushes on the same box with a force of 4N to the right?



51. List 6 simple machines. Give examples of each.

A)

B)

C)

D)

E)

F)

52. Draw an illustration of the following levers. Label the class of lever, input, output, and fulcrum.

A) Scissors

B) Door

C) Hockey Stick

53. What is a fulcrum?

54. What is a pulley? Give an example.

Rotation and Revolution

55. What does rotation cause and how long does it take for the earth to rotate 1 time?

56. What causes seasons on the earth?

57. If the northern hemisphere is pointed away from the sun, what season is the southern hemisphere experiencing?

Essay Questions: Pick 2 out of the 4 choices and thoroughly explain.

1. Thoroughly explain the photosynthesis process in plants. Include what is needed for photosynthesis, what is happening during photosynthesis, and what is produced.

2. List and explain the seven steps of the Scientific Method.

3. Explain the two types of energy with examples. Also explain the six forms of energy and give examples.

4. Relate the hovercraft demonstration to:
    A) Newton's first law
    B) Inertia and mass
    C) Balanced Forces
    D) Unbalanced Forces