**Solids, Liquids, Gases, & Plasma Webquest**

This webquest has been designed to help you gain a better understanding of the different states of matter. You need to complete the series of activities outlined below and answer any questions on this sheet. Change all the answers you provide to the color red.

Go to the following website: www.chem4kids.com and click on the link titled MATTER.

**Matter is the stuff around you**

1. What is the definition of matter?

2. What is matter made of?

3. How many states of matter are there? What are they called?

4. What does the word “state” mean in chemistry?

**Changing States of Matter**

5. Draw and label the diagram of the changing hydrogen peroxide to water molecules in the space below.

6. Write 3 descriptions of solids, liquids and gases in the spaces below.

|  |  |  |
| --- | --- | --- |
| Solids | Liquids | Gases |
|  |  |  |
|  |  |  |
|  |  |  |

**SOLIDS LIQUIDS GASES**

7. What does the term “physical state” mean?

\* GO TO THE LINK THAT SAYS NEXT STOP ON THE TOUR.

**States of Matter**

8. What is one physical force that can change an object from one phase to the next? How does it do this?

9. What does the word phase mean?

10. What is water vapor? Where would you find it?

11. Describe what a chemical change is in your own words.

\* GO TO THE LINK THAT SAYS NEXT STOP ON THE TOUR.

**Solids Basics**

12. Draw and label the diagram of the solids, liquids and gases in the space below.

13. Why are solids hard?

14. Solids can hold their shape. True or False.

15. Draw the picture of the solid atoms in the space below.

16. What is a mixture?

\* GO TO THE LINK THAT SAYS NEXT STOP ON THE TOUR.

**Liquids Basics**

17. What are some examples of liquids?

18. What is a solution?

19. In the box below, draw the diagram of the compression of the 3 states of matter.

\* GO TO THE LINK THAT SAYS NEXT STOP ON THE TOUR.

**Looking for a gas**

20. What is atmosphere?

21. Describe what a gas is like.

22. What are some of gases’ physical characteristics?

\* GO TO THE LINK THAT SAYS NEXT STOP ON THE TOUR.

**Plasma Basics**

23. Give two examples of natural plasmas.

24. Plasma is different from a gas, because it is made up of groups of positively and negatively charged what?

25. Give two examples of man-made plasmas.

26. How do neon signs work?

27. Name three noble gases that can be used neon signs.

28. Complete this sentence:

You also see \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when you look at \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Stars are big balls of

\_\_\_\_\_\_\_\_\_\_\_\_\_ at really \_\_\_\_\_\_\_\_\_\_\_\_ temperatures.

29. Give an example of a plasma that is really hot.

30. Give an example of a plasma that is really cold.

\* GO TO THE LINK THAT SAYS NEXT STOP ON THE TOUR.

**Bose-Einstein Condensates**

31. In what year did Cornell and Weiman create the condensate?

32. Draw the diagram of the energy levels of the different states of matter.

33. At what temperature does all molecular motion stop?

34. When you get a temperature near absolute zero, something special happens. What do atoms begin to do?