

NAME: Key DATE:    /   /     
SCIENCE SECTION: \_\_\_\_\_ SCORE:     /     pts

### MATTER WEBQUEST



BEFORE STARTING OUR NEW UNIT ON MATTER, SHOW OFF YOUR SKILLS IN MEASUREMENT!

Go to the following site and select "Hard Centimeters."  
<http://www.funbrain.com/measure/index.html>

Record your score here: 10 / 10

### NOW LET'S GET STARTED ON MATTER!

#### TASK #1

Complete the matching game at <http://www.quia.com/custom/2202gate.html>  
\*\*If you are having difficulty remembering the definitions of this vocabulary, select the "show answers" tab on the right to help you.

Rate this matching game. Circle one of the numbers below:

- 1 (Very difficult)      2 (Some words were not easy to find.)      3 (Easy)

#### TASK #2

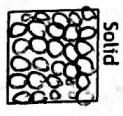
Complete this Matter Pre-Test (All about Matter):  
<http://www.yaide.com/dmg/matter.htm>

Rate this Pre-Test:

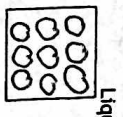
- 1 (I had to fix a lot of my answers.)      2 (I had to fix some of my answers.)      3 (I had to only fix 1 or 2 answers.)

Go to [http://www.chem4kids.com/files/matter\\_states.html](http://www.chem4kids.com/files/matter_states.html) and answer the questions below by using this website- remember to use the tabs on the side also... QUESTIONS ARE MIXED UP!

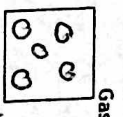
- Gases hold huge amounts of energy, and their molecules are spread out as much as possible.
- Rust is an example of chemical change.
- Elements and compounds can move from one phase to another phase when special physical conditions are present.
- What is another word for gas? vapor
- When you reach the temperature of the melting point, you become a liquid.
- Melting a sugar cube is a physical change because the substance is still sugar.
- Fill in the boxes below to represent each of the phases below:



Solid



Liquid



Gas

- Scientists use something called a freezing point to measure when that liquid turns into a solid.
- Plasma are a lot like gases, but the atoms are different because they are made up of free electrons and ions of the element.
- The atoms inside of a Solid are not allowed to move around too much.

#### TASK #3

Go to <http://www.factmonster.com/ce6/sci/A0832242.html> to answer the questions below. Use titles under "Sections in this Article" to find the answers. They are all mixed up tool

- Name 3 properties of matter:  
a. Ductility      Porosity  
b. elasticity      malleability  
c. hardness      tenacity
- The atom is considered the basic unit of any element.

3. Define matter: anything that has mass and occupies space

4. Empedocles held that all matter is made up of four "elements"—earth, air, fire, and water.

5. In a Physical change, such as a change of state (e.g., from solid to liquid), the substance as a whole changes, but its underlying structure remains the same.

**TASK #5** Fill in the chart below using this site as a reference.  
<http://www.chem.purdue.edu/gchelp/atoms/states.html>

Some Characteristics of Gases, Liquids and Solids and the Microscopic Explanation for the Behavior		
gas	liquid	solid
assumes the shape and volume of its container particles can move past one another	particles can move/slide past one another	retains a fixed volume and shape rigid - particles locked into place
compressible	not easily compressible little free space between particles	not easily compressible little free space between particles
flows easily particles can move past one another	flows easily particles can move/slide past one another	rigid - particles cannot move/slide past one another

lots of space between particles

does not flow easily

assumes the shape of the part of the container which it occupies

**TASK #6**  
Have fun at this site watching the substance change states.  
[http://www.harcourtschool.com/activity/states\\_of\\_matter/index.html](http://www.harcourtschool.com/activity/states_of_matter/index.html)

**TASK #7**  
Melting/heating Experiment- This one is a challenge. You can start it from the beginning as many times as necessary to help you see the change in temperature.  
<http://www.harcourtschool.com/activity/hotplate/index.html>

Once on this site, select the pink or the green material.  
(Circle which one you selected.)

What was the melting point? \_\_\_\_\_

	Pink	Green
M.P.	47	30
B.P.	143	121

What was the boiling point? \_\_\_\_\_

**TASK #8**  
Read about Physical/Chemical Changes and take notes from this website below.  
[http://nobel.scas.bcit.ca/chem0010/unit2/2.3\\_changes.htm#](http://nobel.scas.bcit.ca/chem0010/unit2/2.3_changes.htm#)

What is a physical change?

Changes physical form and appearance but not basic composition

Name 3 examples of physical changes

- A ice melting
- B boiling water
- C cutting a piece of paper

What is a chemical change?

Change in the composition and form of a substance

Name 3 examples of chemical changes

- A digesting food
- B over time a battery loses its charge
- C iron turning into rust in moist air

**TASK #9**  
D extracting sulfur from car battery acid  
Take this quiz to test your knowledge on physical/chemical changes:  
<http://www.guia.com/quiz/303980.html>

Score: \_\_\_%