Name _____ Date _____ Class _____

Midterm Study Guide (answer the questions on a separate sheet of paper)

Chapter 1

What is a physical change?

What is a chemical change?

What is the SI unit for mass? Volume? weight? density?

Can a chemical change be reversed?

What is mass? What tool do we use to measure mass?

What is volume? Describe how to find the volume of a rectangular object and an irregular object.

What is weight? What tool do we use to measure weight?

What is chemistry the study of?

What is the formula of density?

What is all matter made up of?

How is matter classified?

Definition: Elements, substances, mixtures, compounds, molecules

What are the two types of mixtures? How are they different from one another?

What is matter?

How do we describe matter? (Remember: a characteristic of matter that can be measured or observed is a property of that matter.)

Physical Properties =

Chemical Properties =

Characteristics Properties =

What is the Law of conservation of mass? (*Just like energy!)

What does khDbdcm stand for?

What is the International System of Units? How many countries do not use this system?

What is a hypothesis?

What is the difference between an independent and dependent variable?

How does a scientist begin a scientific investigation?

What is the purpose of a control group in an experiment?

At what temperature does water freeze at? Boil? What is average room temperature? (All degrees need to be in Celsius!)

Practice converting these numbers:

1. 3mm =_____ cm
2. 5cm = _____ dm
3. 6dm = _____ m
4. 8g = _____ Dg
5. 6 cl = _____ l
6. 7 dl = _____ Dl

Practice finding the density in these problems.

1. You have a rock with a volume of 15cm^3 and a mass of 45 g. What is its density?

2. You decide you want to carry a boulder home from the beach. It is 30 centimeters on each side, and so has a volume of 27,000 cm^3. It is made of granite, which has a typical density of 2.8 g/cm^3. How much will this boulder weigh?

3. Mercury metal is poured into a graduated cylinder that holds exactly 22.5 mL. The mercury used to fill the cylinder weighs 306.0 g. From this information, calculate the density of mercury.

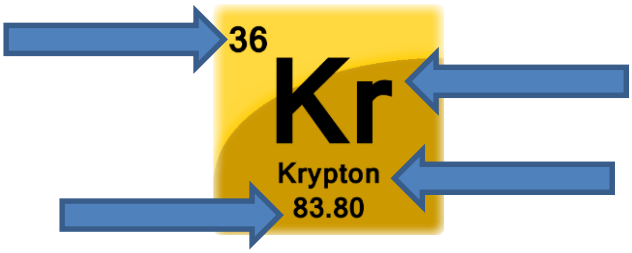
Name _____ Date _____ Class _____

Chapter 2

1. How would you describe a solid?
2. How would you describe a liquid?
3. How would you describe a gas?
4. Explain what happens to the water in a glass when you leave it out for a long time.
5. What happens to balloons when you increase their temperature? Decrease their temperature?
6. The greater the speed of gas particles in a container, the temperature will (rise/ lower). Therefore, the pressure will (increase/ decrease).

Chapter 3

1. Mendeleev organized the periodic table how?
2. What is the periodic table?
3. What is atomic number? Mass number? Atomic mass?
4. What is an isotope?
5. From an element's location in the periodic table, you can predict what?
6. How is the modern periodic table organized?
7. What is a group? How many are on the periodic table?
8. What is a period? How many are on the periodic table?
9. What are three differences between metals and nonmetals?
10. How can an atom be electrically neutral when it contains particles that are charged?
11. Be able to identify the information in a square on the periodic table.



12. What family of elements would you use in construction? Why wouldn't you use group 1 or group 17?
13. What are three differences between noble gases and halogens?

Extra Credit:

1. What is ionic bond? Covalent bond? Chemical bond?
2. What is a valence electron?
3. How can the position of an element tell you its number of valence electrons?