Name: Date:

GEOGRAPHY OF THE PERIODIC TABLE (side 1)

INSTRUCTIONS FOR SIDE 1:

1.) Darken the line that separates metals and nonmetals in **black.**

2.) Color the metalloids light blue. (Metalloids have atomic numbers 5, 14, 32, 33, 51, 52, and 84.)

3.) Color the metals yellow. (Metals are on the left side of the "staircase" line that separates metals from nonmetals – see #1 above. NOTE: Hydrogen (top left of Periodic Table) is considered a NONmetal.)

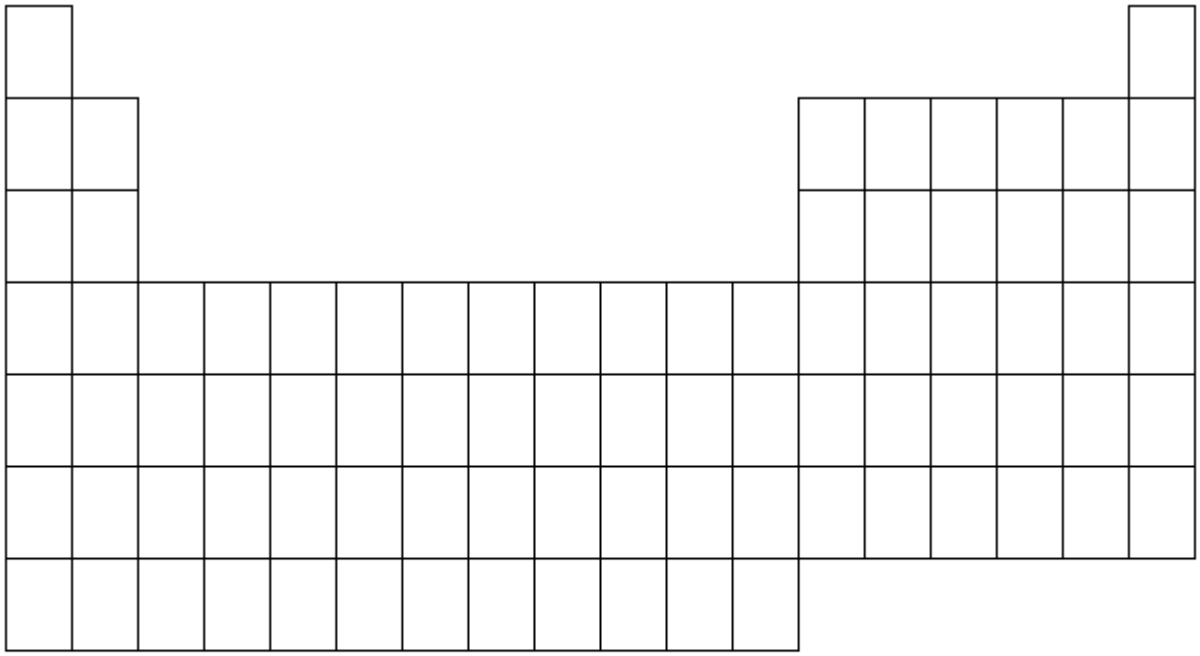
4.) Color the noble gases green. (Not ALL gases – just the group called the noble gases.)

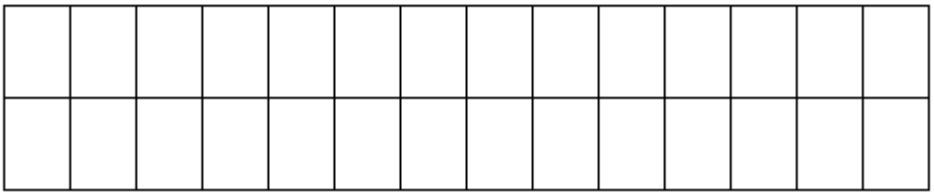
5.) Color the nonmetals pink. (Nonmetals are the boxes you haven't yet colored to the right of the "staircase" line.)

6.) Write the number of each group at the top of the column (1 – 18).

7.) Draw diagonal lines (from the lower left to the upper right - /) in the boxes of the elements that are gases at room temperature. (NOTE: The boxes that you will draw these lines in will already be colored.)

8.) Draw diagonal lines (from the upper left to the lower right - \) in the boxes of the elements that are liquids at room temperature. (NOTE: These boxes will also already be colored.)





Name: Date:

GEOGRAPHY OF THE PERIODIC TABLE (side 2)

INSTRUCTIONS FOR SIDE 2: (NOTE: There will be parts of this Periodic Table that are not colored.)

1.) Color the noble gases blue.

2.) Color the transition metals yellow.

3.) Color the alkaline earth metals orange.

4.) Color the halogens green.

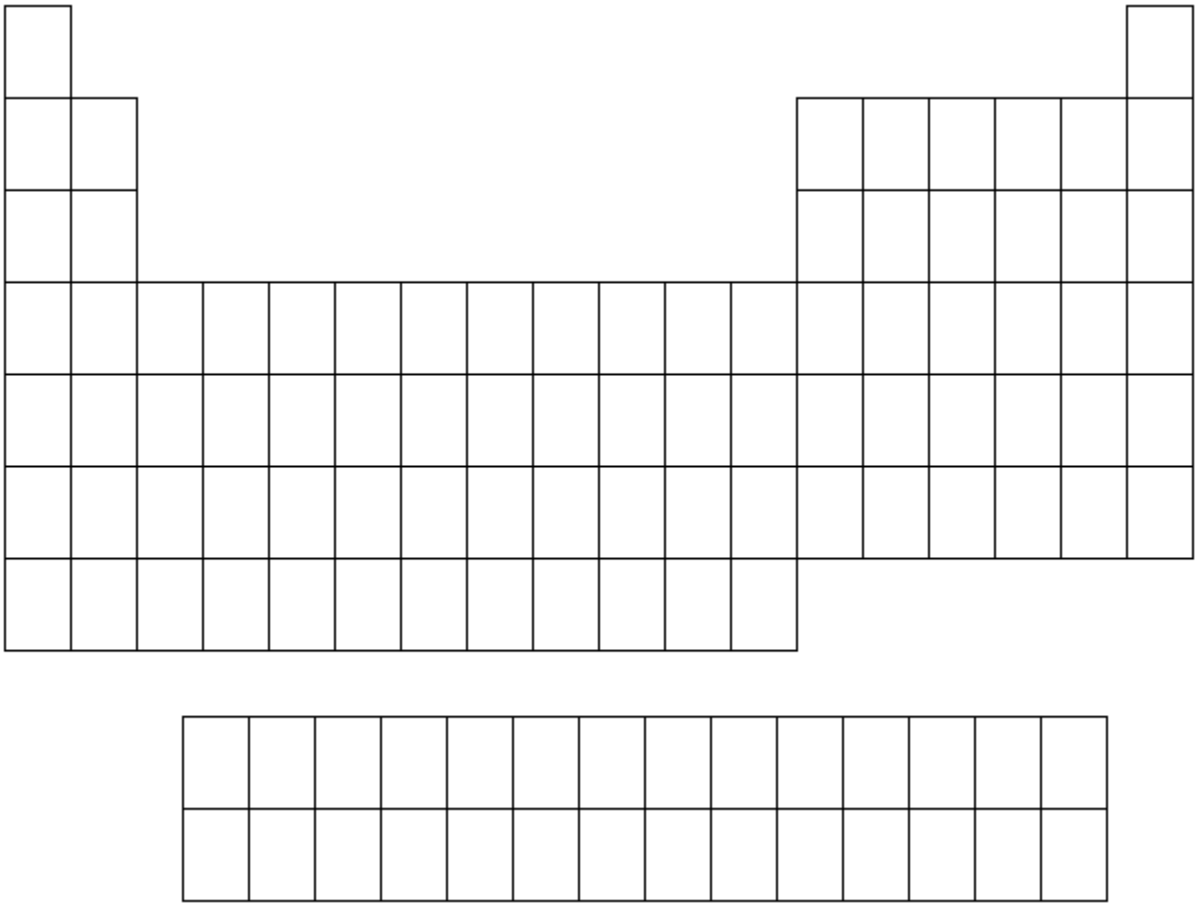
5.) Color the inner transition elements purple. (The inner transition elements are the two rows at the bottom – seemingly separated from the rest of the Periodic Table.)

6.) Color the alkali metals red. (Hydrogen is not considered an alkali metal.)

7.) Write the number of each group at the top of the column (1 – 18).

8.) Draw diagonal lines (from the lower left to the upper right - /) in the boxes of the elements in the Lanthanide Series. (NOTE: The boxes that you will draw these lines in will already be colored.)

9.) Draw diagonal lines (from the upper left to the lower right - \) in the boxes of the elements in the Actinide Series. (NOTE: These boxes will also already be colored.)



Name: Date:

OBSERVING A CHEMICAL REACTION (REACTION IN A BAG)

PURPOSE: To learn how to make careful observations during a laboratory experiment and to illustrate several common indicators of a chemical reaction

MATERIALS: zip-lock bag, sodium bicarbonate, calcium chloride, spoon, dropper pipet, balance, phenol red solution

PROCEDURE:

PART ONE

1.) Open a zip lock bag. Add about 1 spoonful of sodium bicarbonate to the bag.
2.) Completely fill a plastic pipet with phenol red solution. (Pay close attention to your instructor's demonstration of this technique.)
3.) Place the filled dropper pipet inside the zip lock bag and seal it completely.
4.) Fold the zip lock bag in thirds.
5.) Place your zip lock bag and all of its contents on the balance. Record the mass on your paper.
6.) Unfold the zip lock bag and squeeze the phenol red solution into the sodium bicarbonate. (Be sure to empty the dropper pipet of all of the phenol red.) Record your observations.
7.) Place the zip lock bag on the balance again. Record this mass on your paper.
8.) Pour the contents of your zip lock bag down the sink. Rinse and dry your bag.

PART TWO

1.) Open a zip lock bag. Add about 1 spoonful of calcium chloride to the bag.
2.) Repeat steps 2 – 8 from Part One.

PART THREE

1.) Open a zip lock bag. Add about 1 spoonful each of sodium bicarbonate and calcium chloride to the bag.
2.) Repeat steps 2 – 8 from Part One.
3.) Clean up your lab station and return to your seat.

DATA TABLE:

TRIAL	OBSERVATIONS	MASS BEFORE	MASS AFTER
sodium bicarbonate			
calcium chloride			
sodium bicarbonate & calcium chloride			

CONCLUSIONS:

1.) The Law of Conservation of Mass states that matter cannot be created or destroyed. Did your observations agree with the Law of Conservation of Mass? Explain.

2.) Write a <u>paragraph</u> summarizing how chemists know when a chemical change occurs. Use examples from the lab.