

Name: _____

Date: _____ Period: _____



TRENDS OF THE PERIODIC TABLE

DIRECTIONS: Your assignment is to add much more detail to the plain white periodic table that you've been given. In class, we've talked about trends of the periodic table on multiple occasions and you will now diagram those trends with color borders, shading, and labels.

Read through the steps below and complete each one *in order* to create a much more comprehensive and useful version of the Periodic Table. When shading in boxes, do so lightly.

STEPS:

1. Number each *horizontal row* (known as _____) starting at the top with "1" to the left of the Hydrogen box and working your way down, ending with 7 to the left of Francium.
2. Number each *vertical column* (known as _____) starting at the far left with 1 and working your way to the right, ending with 18.
3. Color a narrow, dark red border around these elements that are gasses: *Hydrogen, Helium, Nitrogen, Oxygen, Flourine, Neon, Chlorine, Argon, Krypton, Xenon, and Radon.*
4. Color a narrow, dark blue border around these elements that are liquids: *Mercury, Bromine.* All the rest left with no border are solids.
5. Lightly shade the box for *hydrogen yellow.*
6. Shade the **Alkali Metals** (the rest of Group 1) pink. (These all have one valence electron).
7. Shade the **Alkaline-Earth Metals** (Group 2) purple. (These all have two valence electrons)
8. Shade the **Transition Metals** orange. The transition metals are *Boron, Silicon, Germanium, Arsenic, Antimony, and Tellurium.*
9. Shade the **Noble Gasses** (Group 18 – also known as group 8A) blue. (Outer shells are full)
10. Shade the **Halogens** (Group 17) brown. (These need one more valence electron to be full)
11. Shade the **Metals** (everything that hasn't been colored left of the transition metals) red.
12. Shade the **Nonmetals** (all boxes not yet shaded in groups 14, 15, and 16) green.
13. Add an arrow & label at the bottom indicating the change in **atomic size** as you progress from left to right. Add a similar label on the left side indicating increasing size as you move down.
14. In a location of your choice, add a key describing the # **of valence electrons** in each group.
15. Construct a detailed "Legend" for your periodic table in the empty space in the middle showing what each color of border and shading represents.