Periodic Table Scavenger Hunt

Directions
Using your computer, tablet or mobile device, navigate to the website: www.ptable.com
You will interact with this periodic table to find the answers to the questions below.

1. What color element symbol designates elements that are a gas at a given temperature?

2. What family of elements does the light pink color indicate?

3. Hover the cursor over Magnesium, Mg, what type of specific information is given about the element in the enlarged information area?

4. Now click on the element symbol for Magnesium, Mg. What information are you presented with?

5. What are the element symbols for the Metalloid elements?

6. What is the symbol and atomic number of the element with the most protons according to this periodic table? Click on its symbol to find out what year it was discovered.

7. If an element’s symbol is written in blue, what information does this tell you?

8. Reduce the temperature value to 0K, using the control (shown in the upper right hand side of the screen). How many gaseous elements exist at 0K according to the table? How many liquid elements exist? List the symbol of any elements that fall in these categories.

9. Change the temperature value to room temperature, 298K. At the top of the screen, choose the “Properties” tab. How does this view differentiate between solid, liquid and gas element states?
10. Using your cursor, choose Iron, Fe. Determine the following values for Iron:
   a. Melting Point =
   b. Boiling Point =
   c. Atomic Radius =
   d. Density =

11. A large value for thermal conductivity means that the element is a strong conductor of heat, whereas a small value means the element is a weak conductor. Find the elements that are the strongest and weakest conductors of heat; List their symbol and conductivity value below. (Select “Thermal Conductivity” to make this easier).

12. By specifically selecting any of the properties at the top of the periodic table, you can sort the table by individual details. Highlight the “discovered” option from the list. Can you find an element that was discovered in each of the following years? (Use the slider to help move through time!)
   a. 1772 =
   b. 1803 =
   c. 1900 =
   d. 2004 =

13. At the top of the screen, choose the “Orbitals” tab. The periodic table is now identified by only four specific sections, what do each of the colors represent?

14. As you move the cursor over the elements, you should see the correct orbital diagram at the top center of the screen for each element, as well as the electron configuration for each element displayed at the top right. What is the electron configuration for Selenium, Se, atomic #34?

15. At the top of the screen, choose the “Isotopes” tab. Click on Copper, Cu, atomic #29. How many isotopes are shown for Copper and what are the abundancies of each?

16. Click on Tellurium, Te, atomic #52. How many isotopes are shown for Tellurium?
*Click the “Wikipedia” tab in the top left of the screen, it should produce a drop down menu for you to choose from. Select “Videos.”

17. Choose element #10, neon and watch the short video.
   a. What color is a “neon light”?
   
   b. Where would you see neon used this way in your everyday life?

18. Choose element #37, Rubidium and watch the short video.
   a. What reaction is conducted with Rubidum?
   
   b. What are the results of the reaction?

19. Choose element #16, Sulfur and watch the short video.
   a. What is the “Barking Dog Experiment?”
   
   b. What was a historical use for this reaction years ago?

20. Choose your favorite element, or the element symbol that appears in your written name the most often and watch the short video for it.
   a. What element did you choose?
   
   b. What did you learn about this element?