|  |  |
| --- | --- |
| What are the main categories of elements?What are the physical properties of Metals?What are the properties of Nonmetals?Why is hydrogen with the metals?What are the properties of Metalloids?Check for UnderstandingIdentifying the groups/families on the table activity | Elements can be grouped into 3 large categories based on their properties: metals, metalloids and non-metals.The metals in the periodic table.**Metals** - **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ side of the Periodic Table****Largest Category of Elements****Physical Properties:**1. Luster - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Ductile - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Malleable - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Conductors - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. State of Matter at room temperature – \_\_\_\_\_\_\_\_

 except \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Nonmetals - \_\_\_\_\_\_\_\_\_\_\_\_\_ side of the Periodic Table**The nonmetals in the periodic table.**Second Largest Category of Elements**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_have the properties of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!1. Luster -\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Ductile - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Malleable - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Conductors - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. State of Matter at room temperature – Some are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ some\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

  Examples - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hydrogen is a \_\_\_\_\_\_\_ and therefore a nonmetal but it is put in Column 1 because of its electron structure.**Metalloids (Semimetals) – on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\*Smallest category – 7 elementsHave properties of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_All \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Some are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Important in the semiconductor and computer chip industryHow would you categorize a material that has no luster and does not conduct electricity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ How would you categorize a material that can be made into wire and does conduct heat? \_\_\_\_\_\_\_\_\_\_\_\_\_ Why is it best not to use cooking pans with a metal handle?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ You will be color coding your periodic table according to the following:Group (Column #) Family Name Color 1 Alkali Metals dark blue \*\*Very reactive –  draw a bomb over column 2 Alkaline-earth Metals light blue 3 -12 Transition Metals light green  13 Boron Family yellow 14 Carbon Family light brown 15 Nitrogen Family dark brown 16 Oxygen Family orange 17 Halogen Family light red 18 Noble Gases dark red or purple  \*\*Royal Family- Draw a crown over the column  |