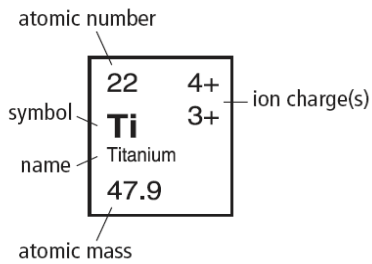


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**Science 9**  
**Notes on the Periodic Table of Elements**

The Periodic Table provides information on the **physical and chemical** properties of elements



**Atomic Mass - mass of average atom**

**Atomic Number - number of protons**

**Ion Charge - electric charge that forms when an atom gains or loses electrons**

**Periodic Table**

**Metals, Non-metals, Metalloids**

Period table has interesting **patterns**

Due to Mendeleev's organization, interesting patterns are created, such as the groups: metals, non-metals and metalloids.

	<b>State at Room Temperature</b>	<b>Appearance</b>	<b>Conductivity</b>	<b>Malleability and Ductility</b>
<b>Metals</b>	<ul style="list-style-type: none"> <li>solid except for mercury (a liquid)</li> </ul>	<ul style="list-style-type: none"> <li>shiny lustre</li> </ul>	<ul style="list-style-type: none"> <li>good conductors of heat and electricity</li> </ul>	<ul style="list-style-type: none"> <li>malleable</li> <li>ductile</li> </ul>
<b>Non-metals</b>	<ul style="list-style-type: none"> <li>some gases</li> <li>some solids</li> <li>only bromine is a liquid</li> </ul>	<ul style="list-style-type: none"> <li>not very shiny</li> </ul>	<ul style="list-style-type: none"> <li>poor conductors of heat and electricity</li> </ul>	<ul style="list-style-type: none"> <li>brittle</li> <li>not ductile</li> </ul>
<b>Metalloids</b>	<ul style="list-style-type: none"> <li>solids</li> </ul>	<ul style="list-style-type: none"> <li>can be shiny or dull</li> </ul>	<ul style="list-style-type: none"> <li>may conduct electricity</li> <li>poor conductors of heat</li> </ul>	<ul style="list-style-type: none"> <li>brittle</li> <li>not ductile</li> </ul>

## Periods and Families

Each horizontal row in the periodic table is a **period**

Vertical columns form groups or **chemical families**

**Alkali metals** - highly reactive group 1

**Alkaline earth metals** - group 2, burn in air if heated

**Halogens** - group 17, highly reactive non-metals

**Noble gases** - group 18, stable and unreactive non-metals

1 H								2 He
3 Li	4 Be	5 B	6 C	7 N	8 O	9 F	10 Ne	
11 Na	12 Mg	13 Al	14 Si	15 P	16 S	17 Cl	18 Ar	
19 K	20 Ca	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr	
37 Rb	38 Sr	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe	
55 Cs	56 Ba	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn	

alkali metals      alkaline earth metals      halogens      noble gases