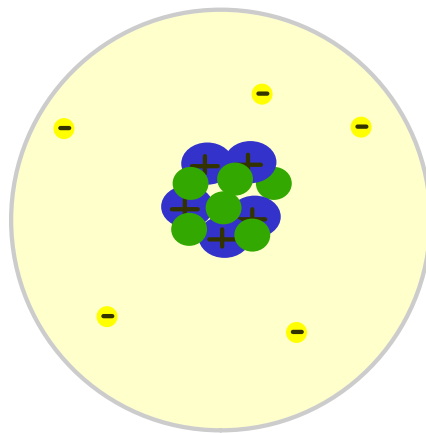


## How are Biology and Chemistry related?

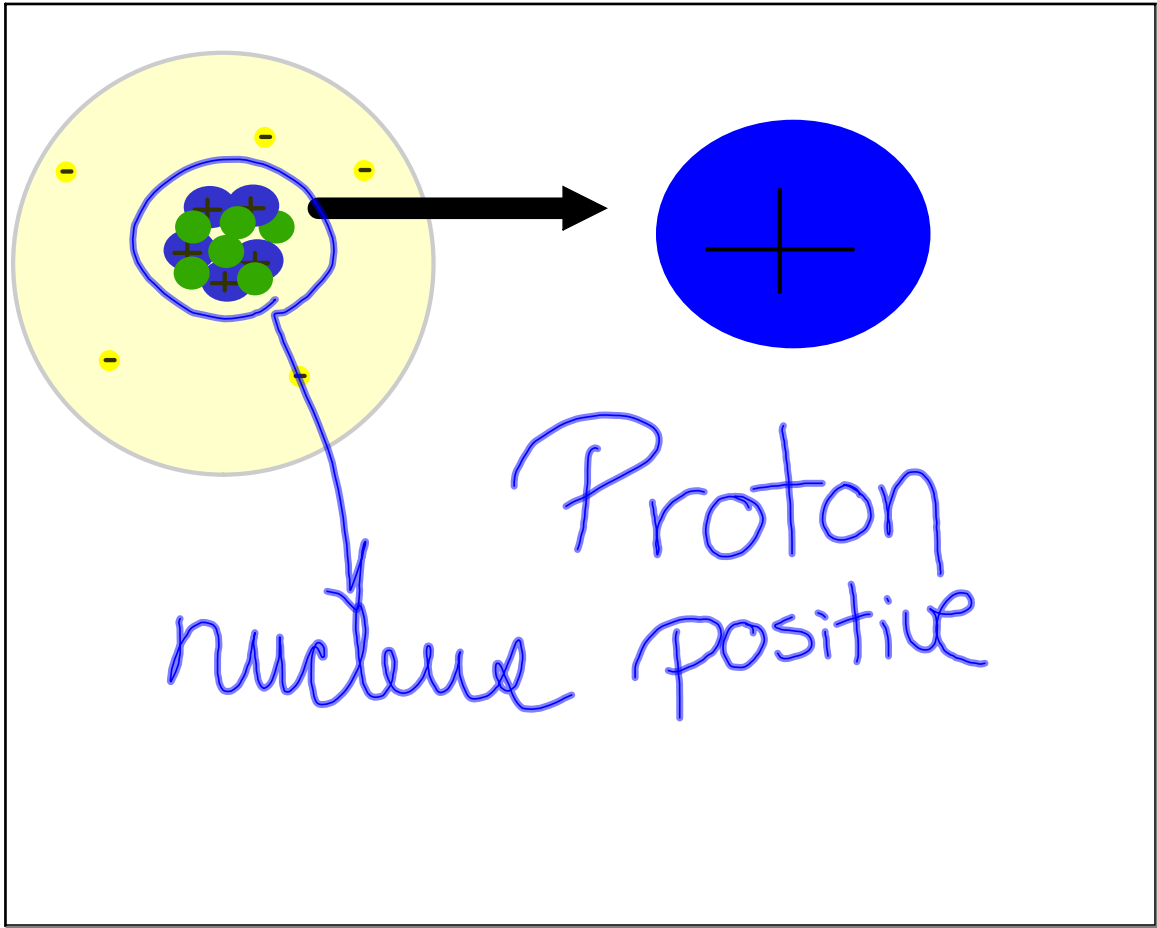
Potassium  
Calcium  
iron  
H<sub>2</sub>O inside  
NaCl  
HCl

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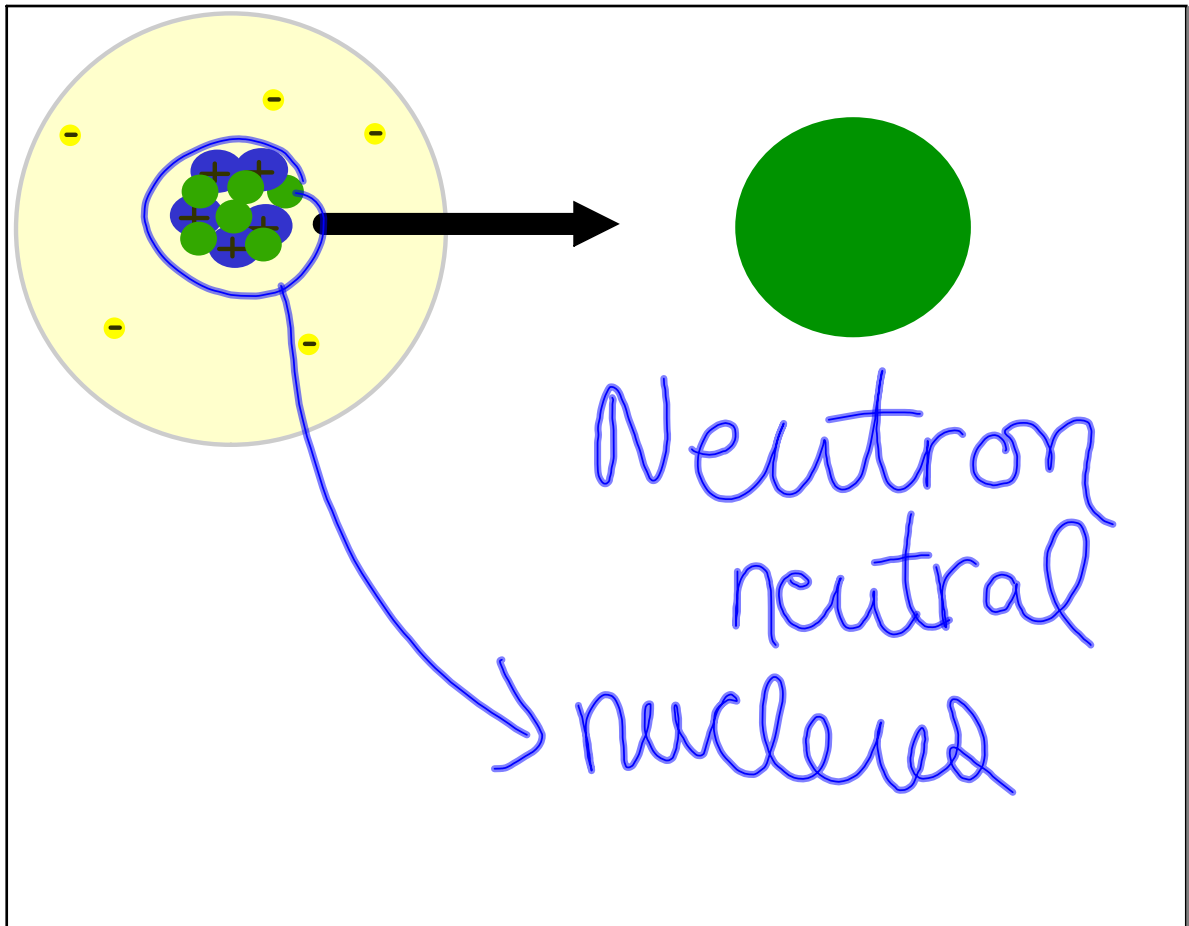
Atom- the smallest  
unit of matter



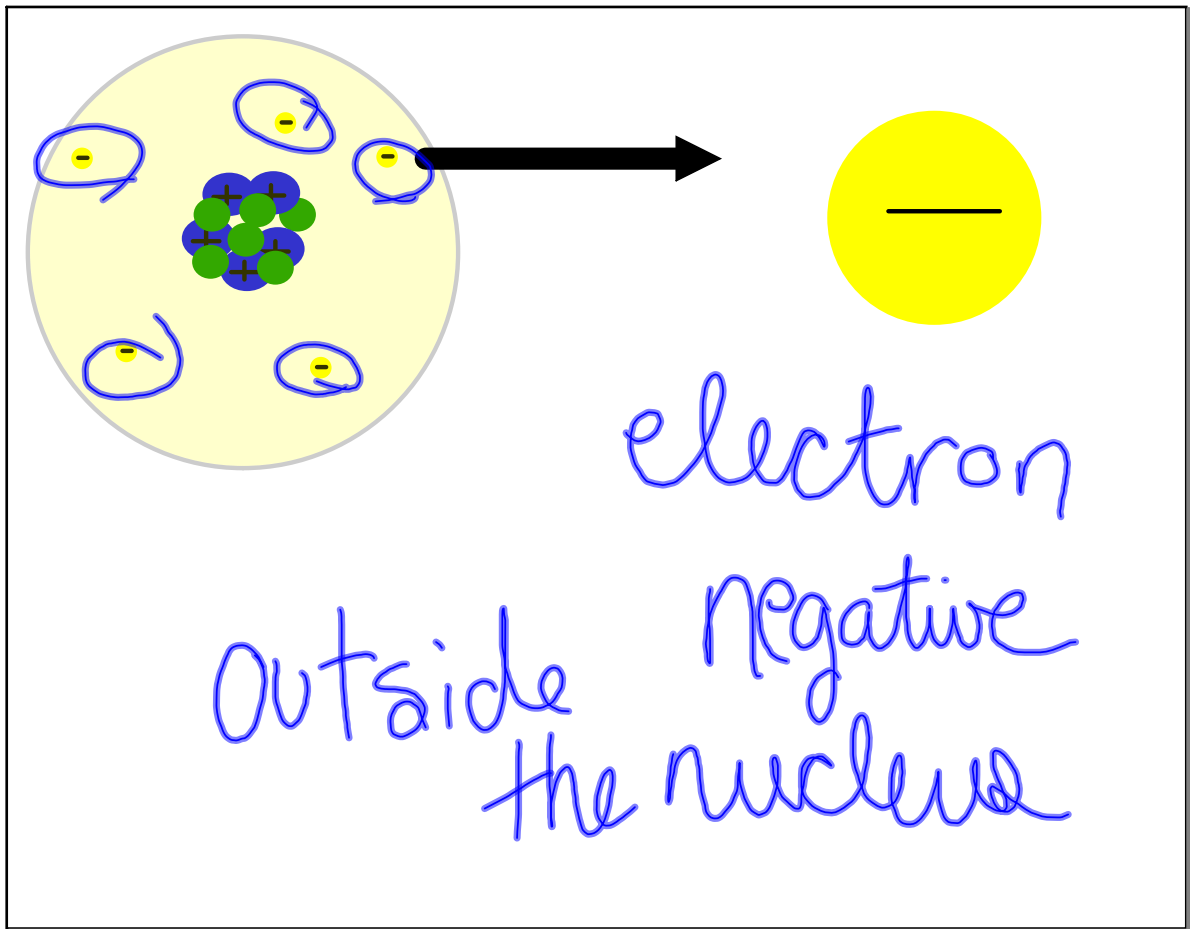
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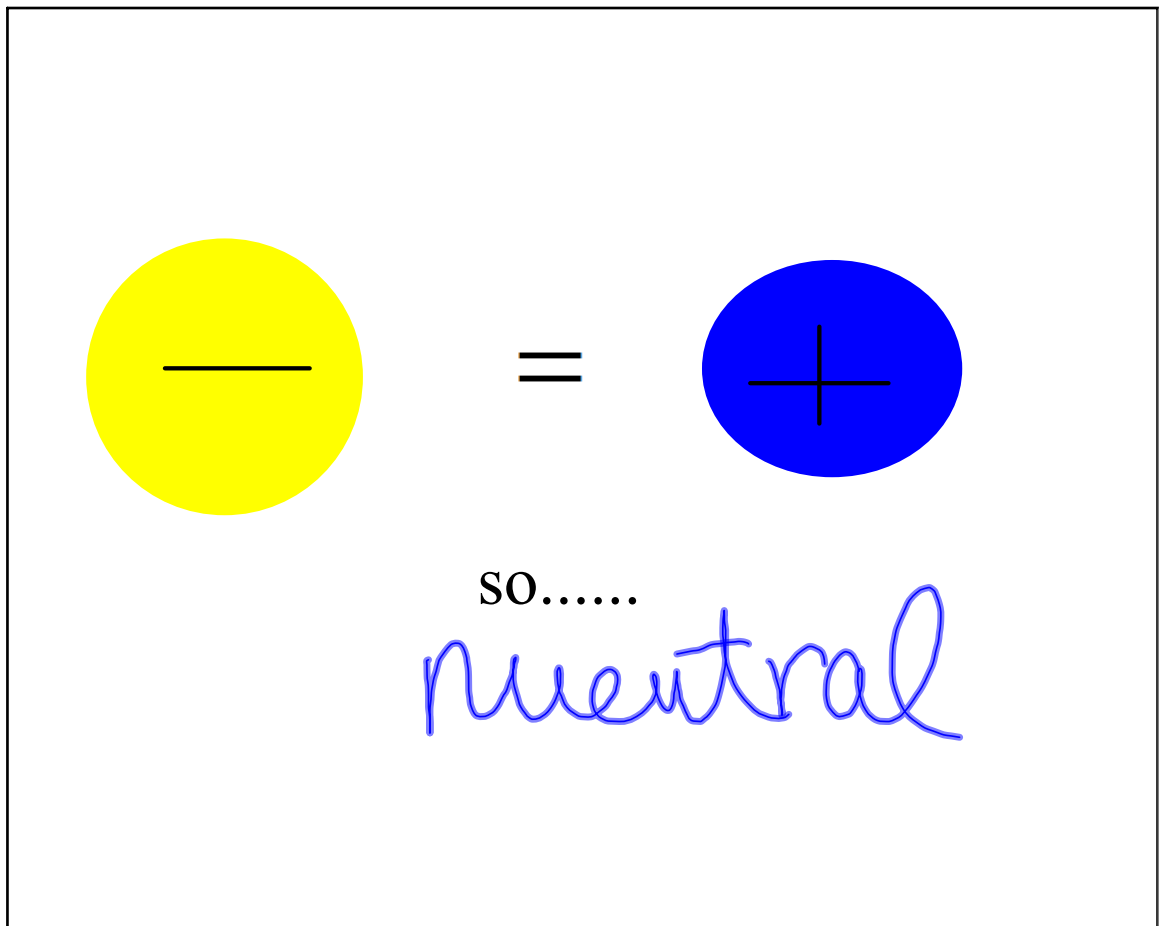
Sep 6 - 3:19 PM



Sep 6 - 3:19 PM



Sep 6 - 3:19 PM



Sep 6 - 3:21 PM

1																	2										
3	4											5	6	7	8	9	10										
11	12											13	14	15	16	17	18										
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36										
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54										
55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86										
87	88	89	104	105	106	107	108	109																			
														58	59	60	61	62	63	64	65	66	67	68	69	70	71
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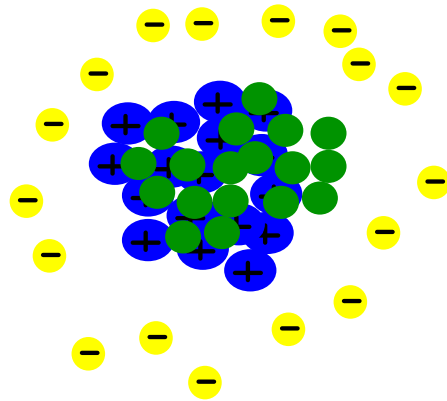
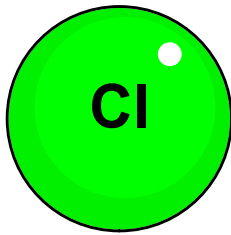
Periodic table - blank

<sup>1</sup> H Hydrogen																	<sup>2</sup> He Helium										
<sup>3</sup> Li Lithium	<sup>4</sup> Be Beryllium											<sup>5</sup> B Boron	<sup>6</sup> C Carbon	<sup>7</sup> N Nitrogen	<sup>8</sup> O Oxygen	<sup>9</sup> F Fluorine	<sup>10</sup> Ne Neon										
<sup>11</sup> Na Sodium	<sup>12</sup> Mg Magnesium											<sup>13</sup> Al Aluminium	<sup>14</sup> Si Silicon	<sup>15</sup> P Phosphorus	<sup>16</sup> S Sulfur	<sup>17</sup> Cl Chlorine	<sup>18</sup> Ar Argon										
<sup>19</sup> K Potassium	<sup>20</sup> Ca Calcium	<sup>21</sup> Sc Scandium	<sup>22</sup> Ti Titanium	<sup>23</sup> V Vanadium	<sup>24</sup> Cr Chromium	<sup>25</sup> Mn Manganese	<sup>26</sup> Fe Iron	<sup>27</sup> Co Cobalt	<sup>28</sup> Ni Nickel	<sup>29</sup> Cu Copper	<sup>30</sup> Zn Zinc	<sup>31</sup> Ga Gallium	<sup>32</sup> Ge Germanium	<sup>33</sup> As Arsenic	<sup>34</sup> Se Selenium	<sup>35</sup> Br Bromine	<sup>36</sup> Kr Krypton										
<sup>37</sup> Rb Rubidium	<sup>38</sup> Sr Strontium	<sup>39</sup> Y Yttrium	<sup>40</sup> Zr Zirconium	<sup>41</sup> Nb Niobium	<sup>42</sup> Mo Molybdenum	<sup>43</sup> Tc Technetium	<sup>44</sup> Ru Ruthenium	<sup>45</sup> Rh Rhodium	<sup>46</sup> Pd Palladium	<sup>47</sup> Ag Silver	<sup>48</sup> Cd Cadmium	<sup>49</sup> In Indium	<sup>50</sup> Sn Tin	<sup>51</sup> Sb Antimony	<sup>52</sup> Te Tellurium	<sup>53</sup> I Iodine	<sup>54</sup> Xe Xenon										
<sup>55</sup> Cs Cesium	<sup>56</sup> Ba Barium	<sup>57</sup> La Lanthanum	<sup>72</sup> Hf Hafnium	<sup>73</sup> Ta Tantalum	<sup>74</sup> W Tungsten	<sup>75</sup> Re Rhenium	<sup>76</sup> Os Osmium	<sup>77</sup> Ir Iridium	<sup>78</sup> Pt Platinum	<sup>79</sup> Au Gold	<sup>80</sup> Hg Mercury	<sup>81</sup> Tl Thallium	<sup>82</sup> Pb Lead	<sup>83</sup> Bi Bismuth	<sup>84</sup> Po Polonium	<sup>85</sup> At Astatine	<sup>86</sup> Rn Radon										
<sup>87</sup> Fr Francium	<sup>88</sup> Ra Radium	<sup>89</sup> Ac Actinium	<sup>104</sup> Rf Rutherfordium	<sup>105</sup> Db Dubnium	<sup>106</sup> Sg Seaborgium	<sup>107</sup> Bh Bohrium	<sup>108</sup> Hs Hassium	<sup>109</sup> Mt Meitnerium																			
														58	59	60	61	62	63	64	65	66	67	68	69	70	71
														Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
														Cerium	Praseodymium	Neodymium	Promethium	Samarium	Europium	Gadolinium	Terbium	Dysprosium	Holmium	Erbium	Thulium	Ytterbium	Lutetium
														90	91	92	93	94	95	96	97	98	99	100	101	102	103
														Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
														Thorium	Protactinium	Uranium	Neptunium	Plutonium	Americium	Curium	Berkelium	Californium	Einsteinium	Fermium	Mendelevium	Nobelium	Lawrencium

Chemistry WebElements Periodic Table

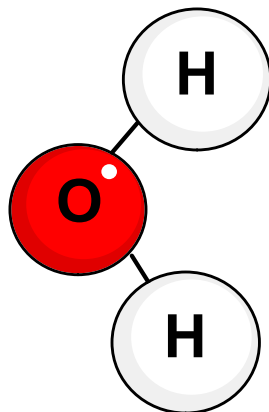
Periodic table

Element- a substance made of only one kind of atom and therefore pure



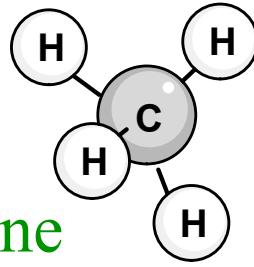
Sep 6 - 3:22 PM

Compound- a substance made of two joined atoms of one or more elements

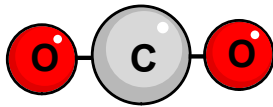


$H_2O$   
water

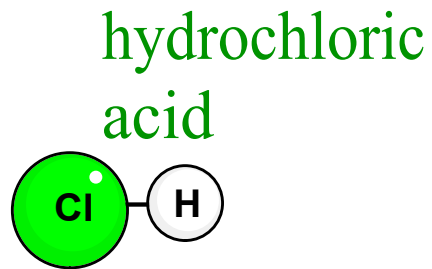
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Methane

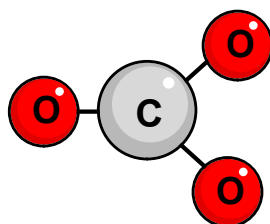
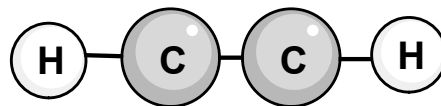
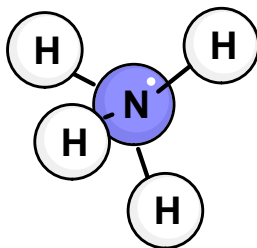


carbon dioxide



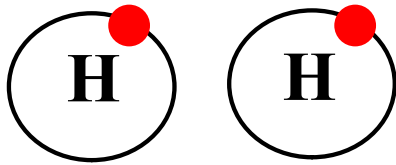
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**Molecule- a groups of  
atoms held together by  
covalent bonds**

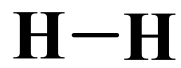
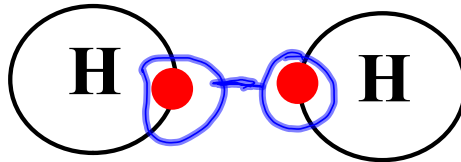


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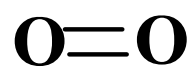
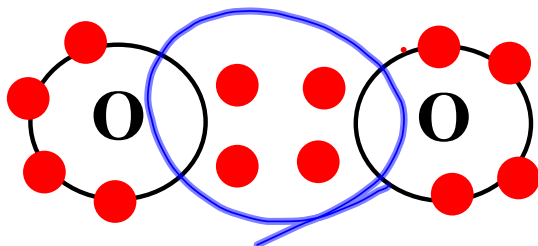
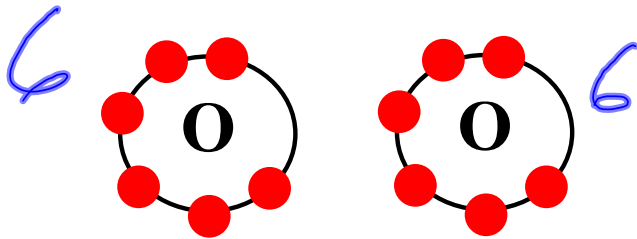
# Covalent bond



share

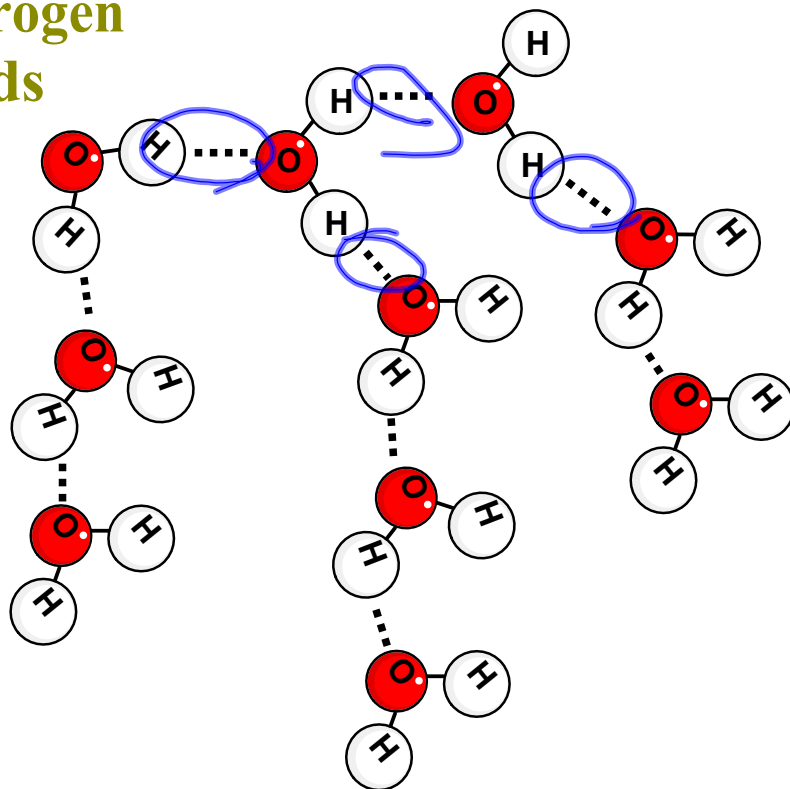


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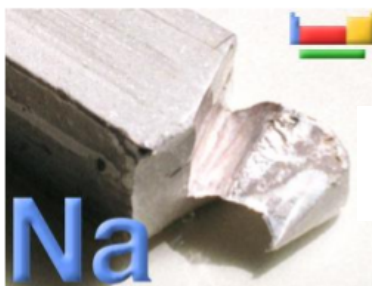
Sep 7 - 10:54 AM

## Hydrogen Bonds



Sep 6 - 3:21 PM

**Ion- an atom or a molecule that has gained or lost one or more electrons**

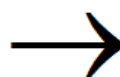


Chemistry Periodic Table sodium key information

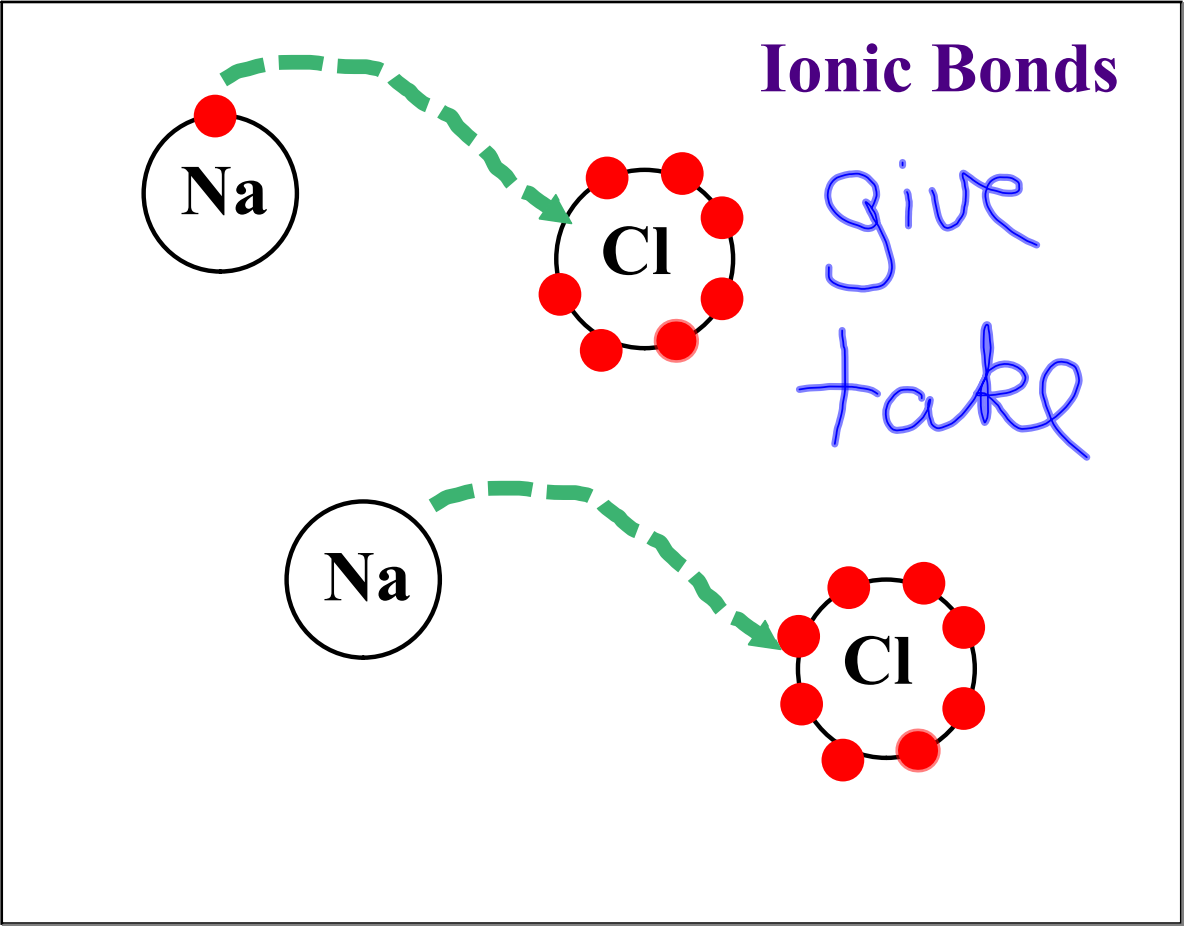
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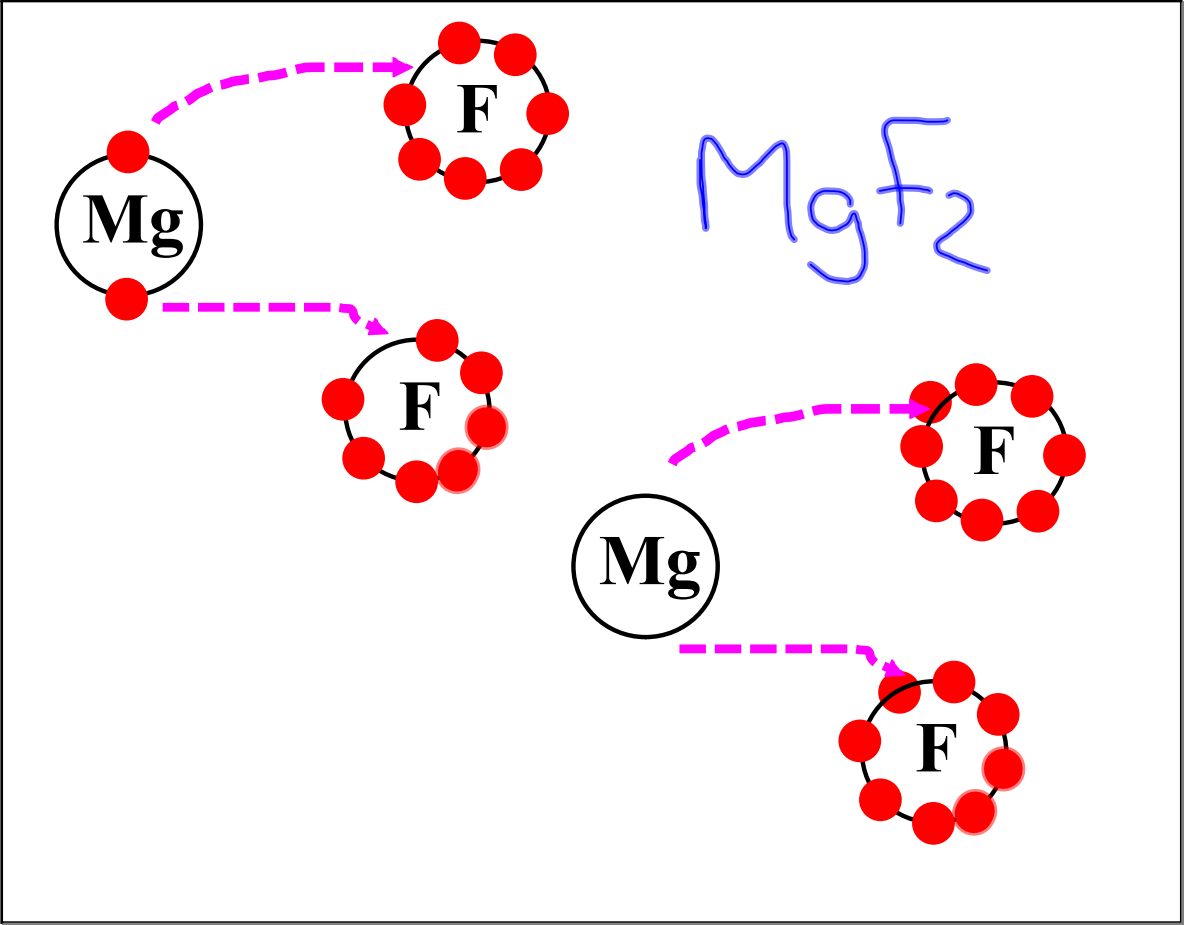
Image adapted with permission from Prof. James Marshall's (U. North Texas, USA) leading Tour of the elements CD.  
Chemistry Periodic Table chlorine key information



Sep 8-10:20 AM



Sep 7 - 11:00 AM



Sep 7 - 11:00 AM