

Reactivity

Lesson 2 - Ions

Chemistry - Key Stage 3

Miss Fenner





**Why are the group 0 elements
unreactive?**

Their outer shell...

So they are...





**Why are the group 0 elements
unreactive?**

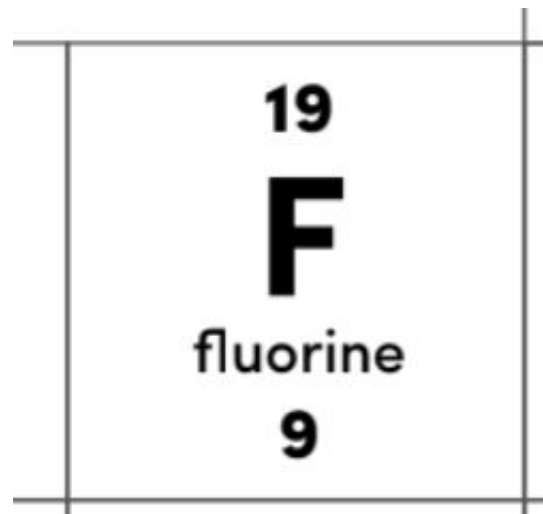
Their outer shell is full of electrons.

So they are stable.



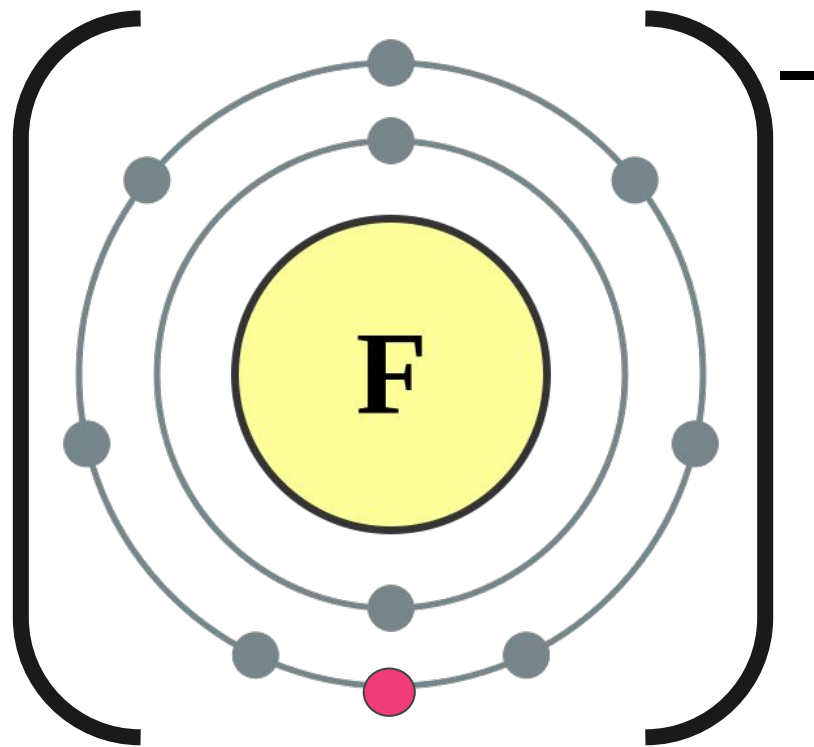
Independent Practice

1. A magnesium atom loses 2 electrons. State the charge of the ion it forms.
2. Explain how sodium forms an ion with a charge of +1.
3. Draw the ion that forms when fluorine reacts.



Independent Practice

1. The magnesium ion will have a charge of **2+**.
2. **When sodium reacts it loses 1 electron to have a full outer shell. So it has one extra positive proton than negative electron and has an overall charge of +1.**
- 3.





How does a chemical bond form in sodium chloride?

Sodium atoms _____ an electron to form a sodium ion with a charge of _____.

Chlorine atoms _____ an electron to form a chloride ion with a charge of _____.

There is an attraction between...





How does a chemical bond form in sodium chloride?

Sodium atoms **lose** 1 electron to form a sodium ion with a charge of **+1**.

Chlorine atoms **gain** 1 electron to form a chloride ion with a charge of **-1**.

There is an attraction between **Na⁺** and **Cl⁻** which creates the chemical bond.

