

## Trends in Groups – The Halogens

### General Properties

|                  |                 |                 |                     |
|------------------|-----------------|-----------------|---------------------|
| <b>Halides</b>   | <b>Diatomic</b> | <b>Reactive</b> | <b>Similarities</b> |
| <b>Poisonous</b> | <b>Negative</b> | <b>Single</b>   |                     |

(Complete the following paragraph by using some words above)

Halogens or Group VII elements are the most \_\_\_\_\_ non-metals in of the Periodic Table. They show clear \_\_\_\_\_ between the elements of the group. They are all \_\_\_\_\_ and have a similar strong smell. They can be found as \_\_\_\_\_ molecules in our nature (e.g. Cl<sub>2</sub>, Br<sub>2</sub> and I<sub>2</sub>). When they react with another elements, they will form \_\_\_\_\_ e.g. chlorides, bromides and iodides. They all form \_\_\_\_\_ ions carrying \_\_\_\_\_ charge.

### Chemical Properties and Reactivity of Halogens

| Properties               | Fluorine | Chlorine | Bromine | Iodine |
|--------------------------|----------|----------|---------|--------|
| Colour of gas            |          |          |         |        |
| State (solid/liquid/gas) |          |          |         |        |
| The diatomic molecules   |          |          |         |        |
| Reaction with iron wool  |          |          |         |        |
| Reaction with charcoal   |          |          |         |        |
| Reaction with hydrogen   |          |          |         |        |
| Reaction with aluminium  |          |          |         |        |

**Trends in Halogen Group**

(Please complete the following sentences by using **increase** or **decrease**.)

Based on the video and the resource from coursebook, we can conclude that:

- Melting points and boiling points of halogens \_\_\_\_\_ as we go down the group.
- The elements change from gases to solids as the atomic number \_\_\_\_\_.
- The reactivity of halogens \_\_\_\_\_ as we go down the group.

::::: Good luck :::::

**Group Members:**

- 1.
- 2.

**Class:**