## Polyatomic Ions

Polyatomic ions are ions which involve more than one element. The example in the video,  $CO_3^2$ . The carbon and the oxygen atoms are covalently bonded together.

Have a go at drawing dot cross diagrams for the following ions:

a) NO<sub>2</sub>+

b) NO<sub>2</sub>-

c) OH

d)  $NO_3$ 

e) PO<sub>4</sub><sup>3-</sup>

f) SO<sub>4</sub><sup>2</sup>-

g) NH<sub>4</sub><sup>+</sup>

h) CIO<sub>3</sub>

i) CH<sub>3</sub><sup>+</sup>

j) C<sub>2</sub>O<sub>4</sub><sup>2</sup>-

## Remember:

1. Identify central atom

- 2. Decide which atom has lost/gained e due to charge
- 3. Use bonds (pairs of electrons) to ensure the outer atoms have a full outer shell
- 4. The central atom can have more than 8 in outer shell provided it is after period 2