# Do you want to make a battery?

## Prepare the battery

1. Cut out 6 disks of aluminium foil.
2. Create 6 small balls of play-dough
3. Stack the coin, play-dough & aluminium in the correct order to create a battery.

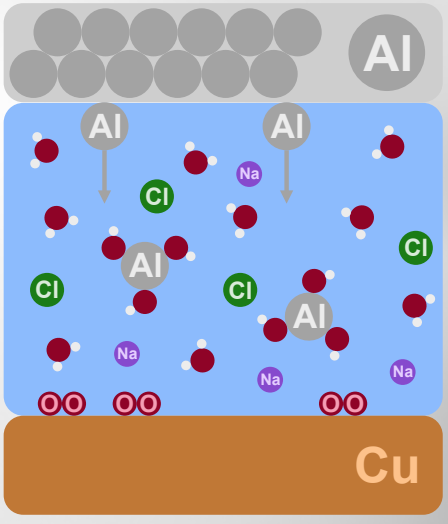
## Light it up!

1. Hold the *long leg* of the LED to the furthest coin electrode.
2. Hold the *short leg* of the LED to the furthest aluminium electrode.
3. What is the fewest number of cells needed?

## How does it work?

The aluminium foil will oxidise into $Al^{3+}$ ions. The electrolyte (play-dough) helps to move the charge. The coin acts as an inert conductor for the oxygen reduction reaction to complete the circuit. Play-dough is an excellent electrolyte because it contains a lot of salt and water, which helps move the charge.


## The Chemistry




$$4Al + 3O_2 + 6H_2O \longrightarrow 4Al(OH)_3$$

CCI
Current Chemistry Investigators

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