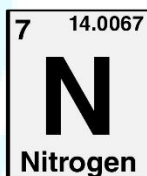
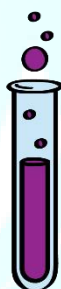
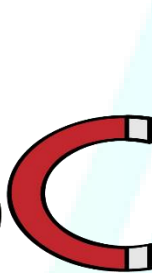
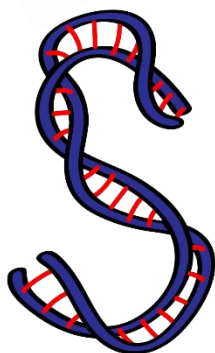




ASPIRE
INTERNATIONAL SCHOOL



Science Department

2023/2024

Year 2

Summary notes

Term 3

ASPIRE

INTERNATIONAL SCHOOL

Name:

Class:

Term 2 Topics that have been covered

Unit 6 **Electricity**

- 6.1 Where do we use electricity?**
- 6.2 Keep safe with electricity**
- 6.3 Making circuits**

Objectives of unit 6

- Identify how we use electricity and describe how to be safe with it.
- Sort and group objects, materials and living things based on observations of the similarities and differences between them.
- Recognise the components of simple circuits (limited to cells, wires and lamps).
- Explore the construction of simple series circuits (limited to cells, wires and lamps).
- Make predictions about what they think will happen.

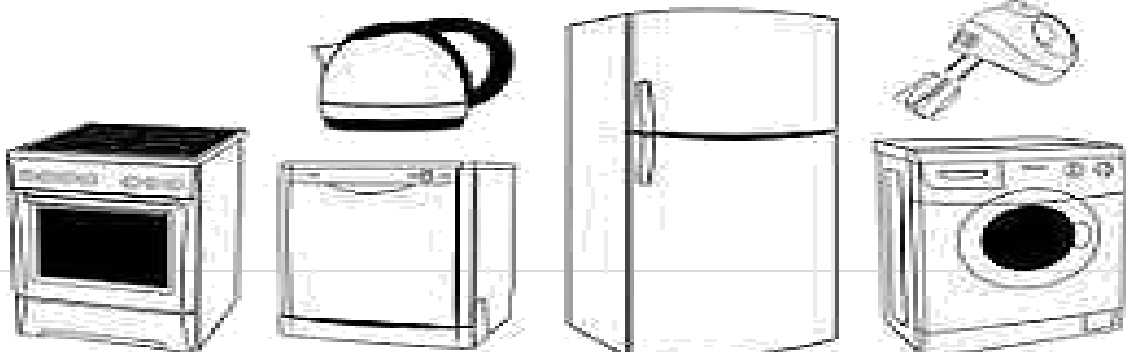
➤ This is the Mars Curiosity Rover. It is a robot on planet Mars.



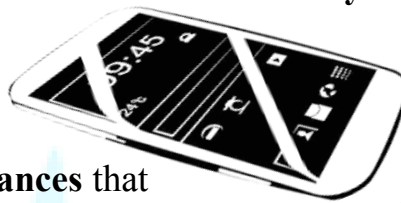
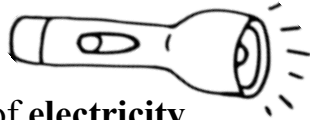
It is looking for water on **Mars**.

- The robot uses **electricity** to move, it moves on its wheels and has arms it can move. It uses **electricity** to test for water, look for rocks and take photographs.
- We use **electricity** to do lots of things.
- **Electric appliances** (machines) help us in our daily lives, to make light, make sound, heat things up, cool things down and make things move.
- Some appliances use **mains electricity**. We call these things machines (**appliances**).

These are the machines that have a **wire** and **plug**.

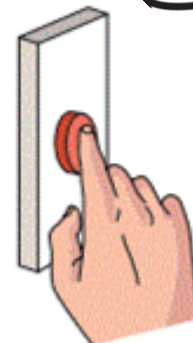


- Only adults should move, plug in and unplug **mains electrical appliances**.
- **Mains electricity** is made in a **power station**. The **electricity** travels along the **wires**, high in the air, so that we are safe. The **wires** take the **electricity** to all the places we need it.

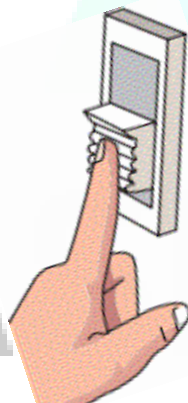


- A **cell** is a source of **electricity**.
- **Cells** are used to power **electrical appliances** that people carry around like **flashlights, watches** or **mobile phones**.

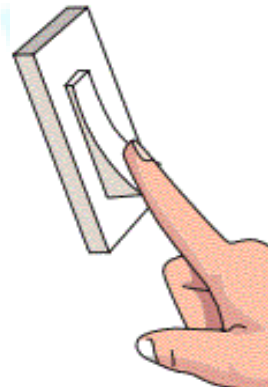
- Electrical appliances have **on/off switches**.
- Some switches can be pressed (**Press switch**).
- Some switches can slide (**Slide switch**).
- Some switches can be rocked (**Rocker switch**).



Press switch

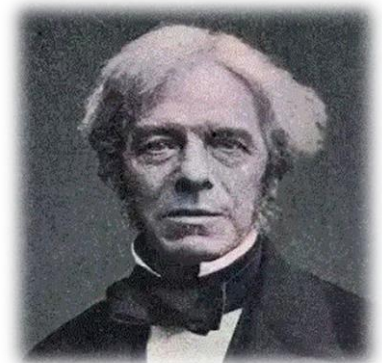


Slide switch



Rocker switch

- The scientist, **Michael Faraday** found out many things about **electricity**.
- One discovery was that **electricity** could **move things**.
- We now use his science in all the **electrical appliances** we use today.
- **Faraday's** inventions made **electricity** very useful to us.



- Electricity can be very dangerous if you don't take care.
- Electricity is safe if you follow the rules.



Electricity Safety Rules

- Children should not move or touch mains appliances, wires or plugs.
- Children should not touch mains wall sockets.
- Keep water away from electrical appliances.
- Keep dirt away from electrical appliances.
- Keep away from damaged wire and damaged electrical appliances.
- Do not open or burn electrical cells.

- **Electricity** moves through the **metal** part of a **wire**.
- The **metal** should be covered by **plastic**.
- The **plastic** part that covers the wire is to **protect** you.



- Never touch **damaged wires**. They could give you an **electric shock**.
- **Electricity** could **burn** or **kill** you if you touched damaged **wires**.

- Never stick anything into an **electric wall socket**. The **metal** parts inside could give you an **electric shock**.



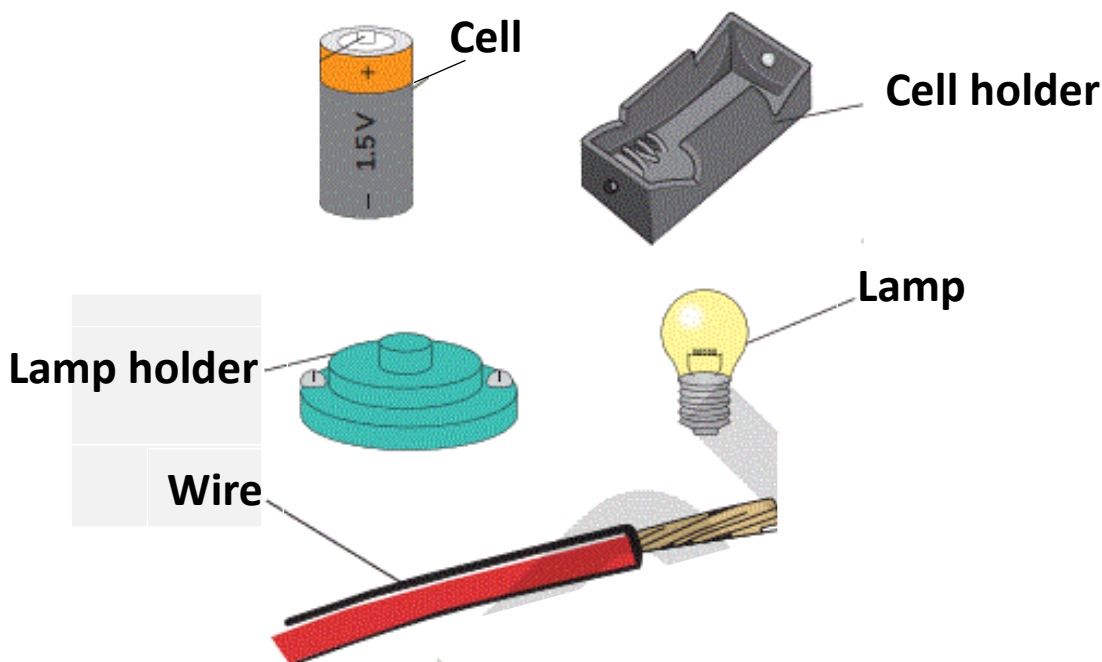
- **Mains electricity** can move through **water**.
- **Never touch** anything that uses **mains electricity** with **wet hands**.
- **Electricity** can move through **dust and dirt**.
- Keep **dust** or **dirt** away from **wall sockets** and **mains electricity**.
- **Never touch** **dirty** or **damaged** electrical things.



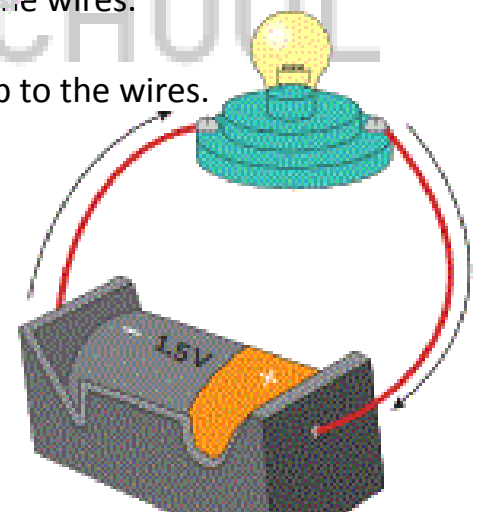
- **Broken cells** (batteries) can **burn** your skin and **hurt** your eyes.
- **Never** put a **cell** (battery) on fire. **Never** touch an **open cell**, it's **dangerous**.

Circuits

- A **circuit** is a **path** for the **electricity** to **move** along and make things **work**.
- A **circuit** should have some **parts** that's been put together to form a **circuit**.



- Each **cell** (battery) has **two connections** and **both** are used in a **circuit**.
- The **cell holder** holds the **cell** and **connects** the cell to the wires.
- The **lamp holder** holds the **lamp** and connects the lamp to the wires.
- The **lamp** will **shine** when it is in a **complete circuit**.
- This picture shows an **electrical circuit**.
- The **metal** part of the **wire** will carry **electricity**.



A Complete Circuit