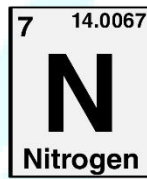
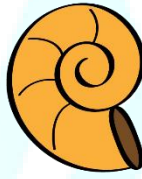
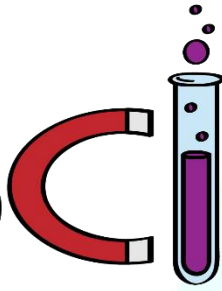
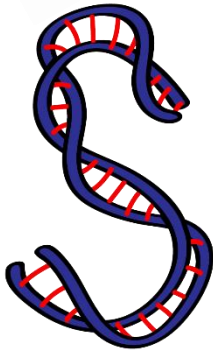




ASPIRE
INTERNATIONAL SCHOOL



Science Department

2023/2024

Year 4

Term 3, Week 3

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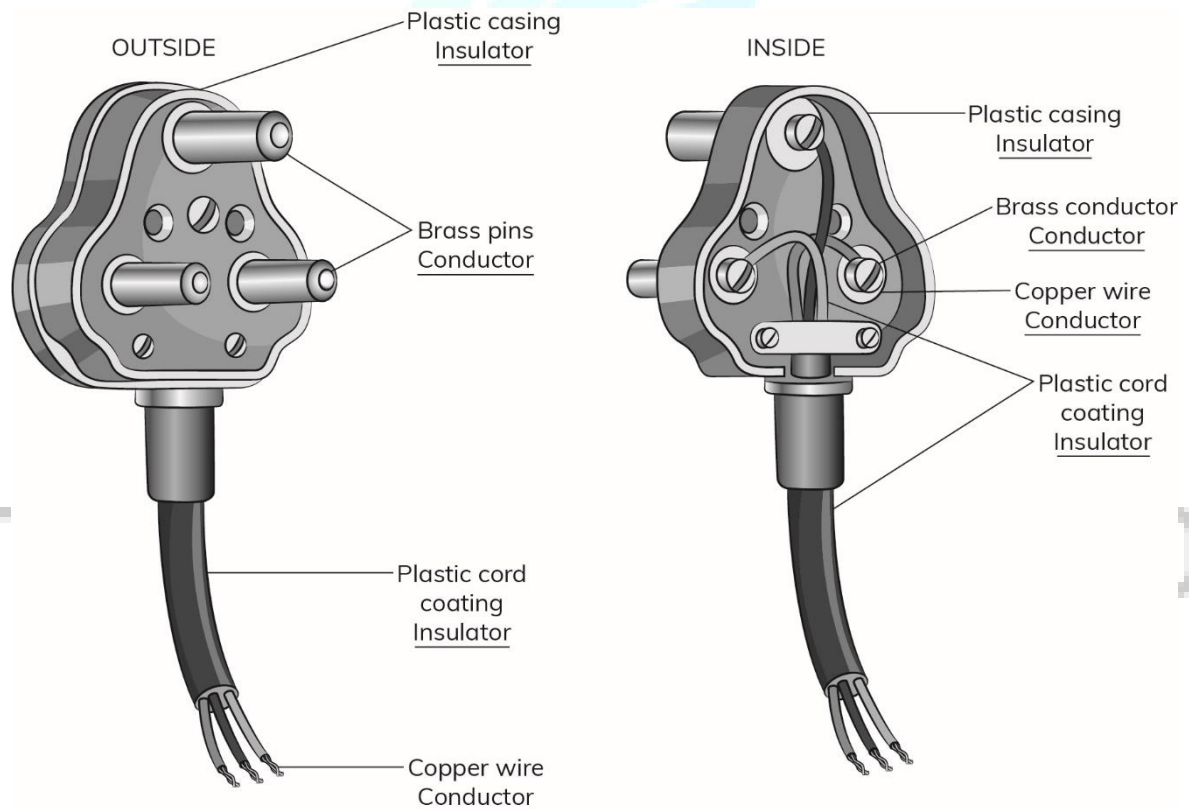
Name:

Class:

1 Draw lines linking the words on the left with their meanings on the right.

Word	Meaning
Plug	A circuit where electricity flows all the way round.
Electric shock	The connection between the plug and the electricity supply.
Wall socket	A device to connect electric wires or cables to an electricity supply.
Complete circuit	The effect of high voltage electricity passing through your body.

2 Write the labels 'conductor' and 'insulator' in the correct spaces on the diagrams below.

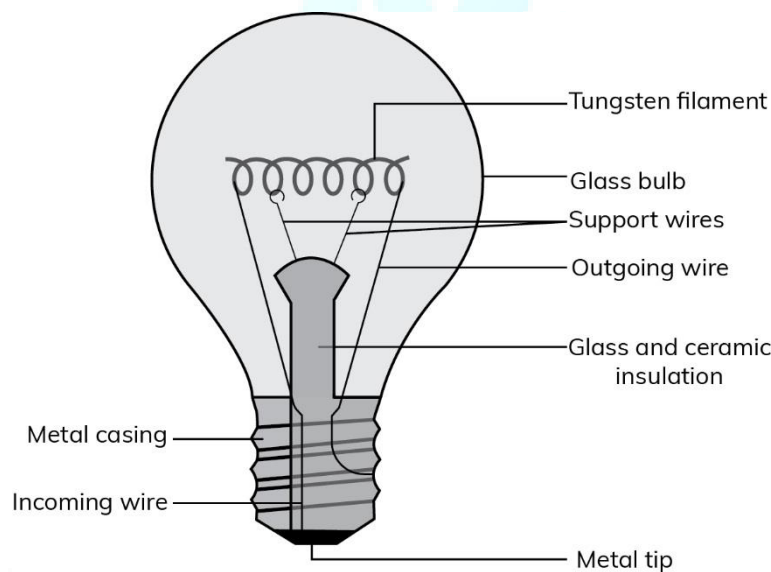


3 Why must you always pull out a plug from a wall socket by gripping the plastic cover of the plug, and not pull the cord?

1 _____ If you pull the cord you could damage it and some of the wires pull away and touch your hand. This can give you an electric shock. Pull the plug out by the plastic cover, which is an insulator. _____

4 Identify conductors and insulators in a light bulb

Electricity flows in a circuit in the light bulb. Electricity comes through the metal tip at the base of the bulb and flows through the wire on the left. Electricity flows through the tungsten filament and then down the wire on the right to complete the circuit. Tungsten is a type of metal. Part of the glass and ceramic insulation has been cut away so that you can see what is inside the metal casing.



a List **four** parts of the light bulb which are made of materials that conduct electricity.

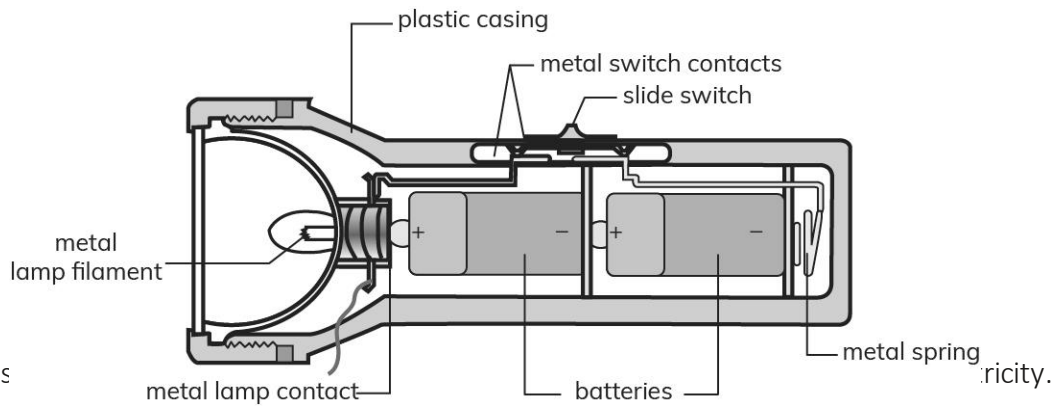
_____ **The metal tip, the metal casing, the wires and the filament.** _____

b Why do these parts have to conduct electricity for the lamp to work?

_____ **They all need to conduct electricity so that it flows round the circuit inside the bulb.** _____



5 Here is a picture of the inside of a flashlight.



a Lis

_____ **Metal spring, metal switch contacts, metal lamp filament, metal lamp contact.** _____

b Name one part of the flashlight that is made of a material that is an electrical insulator.

_____ **The plastic casing and/or the plastic switch.** _____

c Why does the part you have just named have to be an electrical insulator?

_____ **This is the part of the flashlight you hold/move to turn the flashlight on and off.** _____

6 Complete these sentences.

SP/14/01/Q5

Cables and wires need to be **good** electrical conductors.

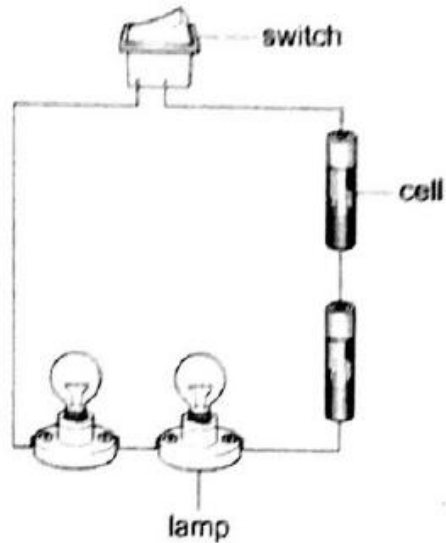
They are made of **metal**

For safety, wires are covered with materials that do not conduct electricity.

The wires are covered with **plastic**

Any material that is a non-conductor is an **insulator**

7 Youssef is building electrical circuit, when the switch is closed, the circuit doesn't work. Why is this?



Tick (✓) the correct box.

More than one lamp is needed.

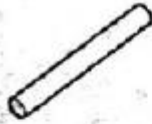




More than one switch is needed.

The cell is the wrong way round.

The circuit is not complete.

The switch must be open.

8 Hania removes the switch from her circuit; she replaces the switch with an object shown in the table. Tick \checkmark if the lamp works.

object to replace switch	lamps work
 a piece of chalk	
 plastic pen	
 an iron nail	\checkmark
 a coin	\checkmark
 wooden ruler	