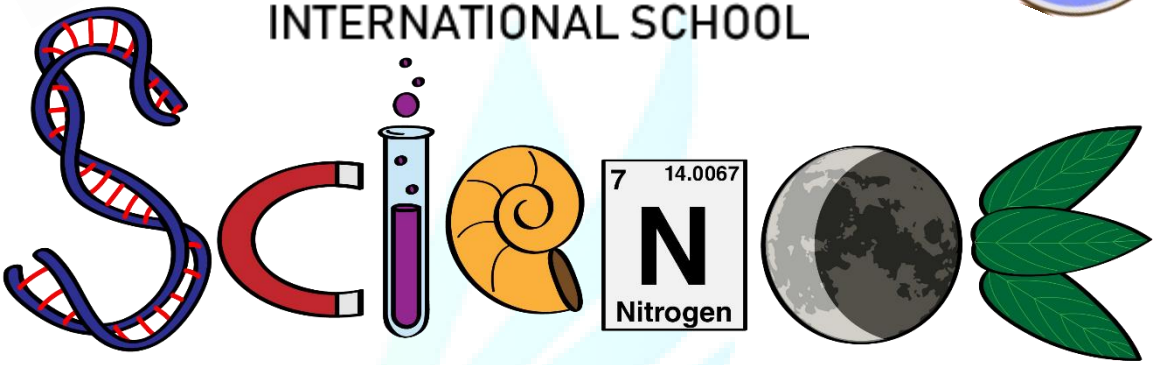
ASPIRE
INTERNATIONAL SCHOOL




**Science Department**

**2023/2024**

**Year 4**

**Term 3, Week 4**



**Name: ……**

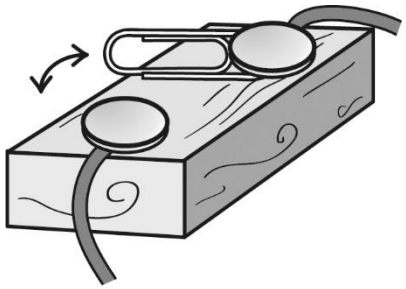
**Class: ……**

Aspire International School Year4

Science Department 2023/2024

ASPIRE INTERNATIONAL SCHOOL

1) Here is a picture of the switch you have used in the circuits you have made.



1 Why do we use a metal paper clip and metal drawing pins to make the switch?

_____ Metal conducts electricity _____

2 Why do we use a wooden base to make the switch?

_____ Wood is an insulator _____

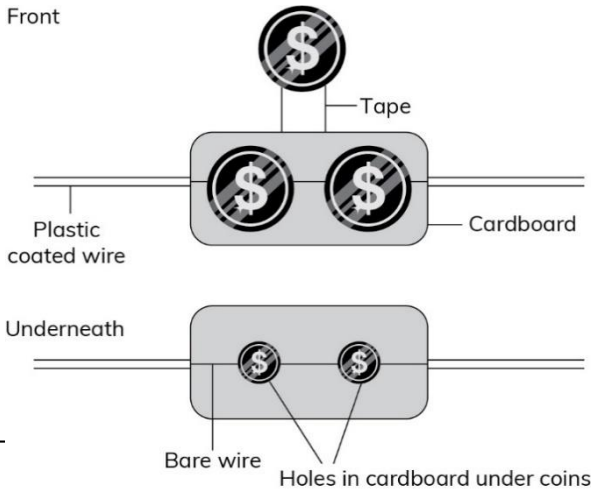
3 Suggest another material we could use for the base.

_____ Plastic or cork _____

4 How do you close the circuit with this switch?

___ Push the paper clip so that it is touching both drawing pins. This completes the circuit___

2) Ahmad and Umar are making a switch. Look at the materials they used.



1 Why did they use coins to make their switch?

____ Coins are made of metal which is a good conductor of electricity ____

2 Why did they use cardboard as a base?

_____ Cardboard is an electrical insulator _____

3 How do you close the circuit with this switch?

_____ Move the taped coin down to touch the other two coins _____

3) What must you do to close the circuit?

_____ Close the switch_____

4) Oliver places a copper coin in the circuit.

Predict what will happen to the lamp.

Explain your answer.

The lamp will ..... the lamp will light .....

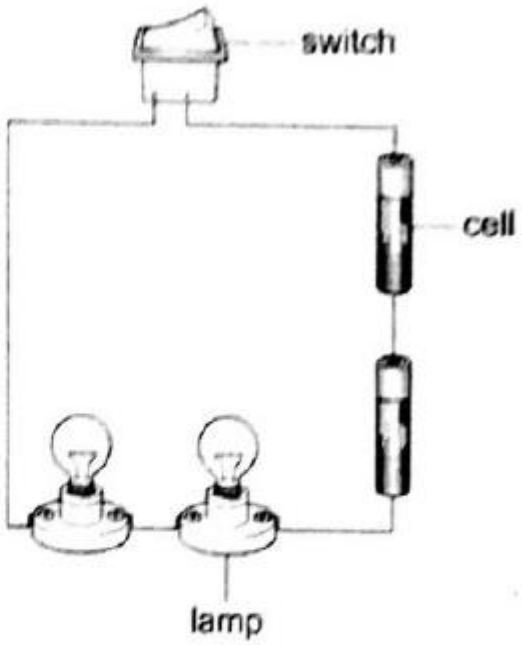
This is because ..... Copper conducts electricity .....

5) Which component is added to open and close an electrical circuit?

Switch

.....

6) Kofi has built an electrical circuit.




(a) The lamps are **off**.

What does Kofi do to turn the lamps **on**?

Press the switch

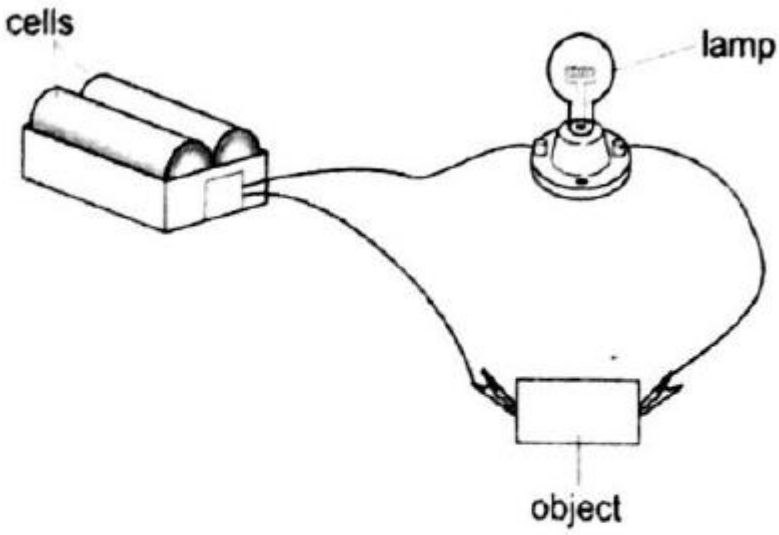
7) When the switch is closed the circuit does **not** work.

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) Lily puts different objects in this electrical circuit.




Predict what will happen if the object is a **good** conductor.

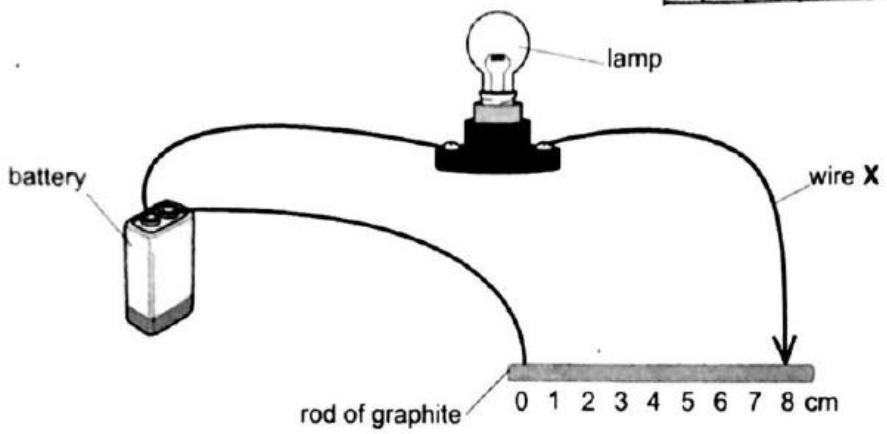
Lamp will light up

Predict what will happen if the object is a **bad** conductor.

Lamp won't light up

9) Hassan and Mike connect an electrical circuit.

AM/18/02/6




Hassan moves the wire **X** from 0 cm to 8 cm.

Mike writes down how bright the lamp is for each distance.

He uses a scale from 0 to 100.

100 is the brightest on the scale.

Here are the first three results.

| distance in cm | brightness of lamp |
|---|---|
| 0 | 100 |
| 2 | 80 |
| 4 | 60 |
| 6 | |
| 8 | |

**(a)** Complete the sentence.

As the distance increases the brightness of the lamp decreases .

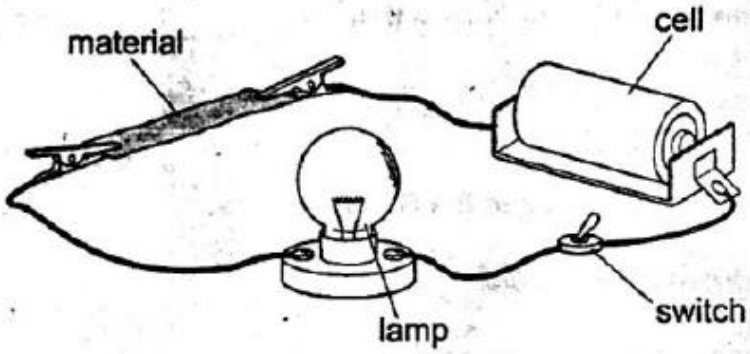
**(b)** Predict the brightness of the lamp for the distance of **6 cm**.

Circle the correct answer.

**0** **20** **40** **60** **80**

10) Tomas and Jakub investigate electrical conductors.

They put different materials in an electric circuit.




**(a)** They keep the length of the material the same each time.

Why do they do this? Because it's a fair test