PRINCESS NORA BINT ABDULRAHMAN UNIVERSITY
COLLEGE OF COMPUTER AND INFORMATION SCIENCES

Physics202 Project **Third semester 2023**

Fundamentals of Electromagnetism

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There is so much stuff in our universe made of different materials, some that electricity crosses through them so easily, some not much and some does not go at all.

One thing we can guarantee is that all the materials are made from atoms, and it is the main reason why the element can be Conductors or Insulators.

If we are talking about insulators, atoms will be like “strict parents” because they will not allow electron to travel to other atoms. On the other hand, Conductors will be like “cool parents” the electrons can travel between atoms.

We will test the following 6 items to determine is it conductors, or insulators?

-Coin

-cotton buds

- Rubber band

-tinfoil

-string

- Spoon

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Materials:

to create device that can test the elements the following tools will be needed :

- Batteries

-Wires

-led

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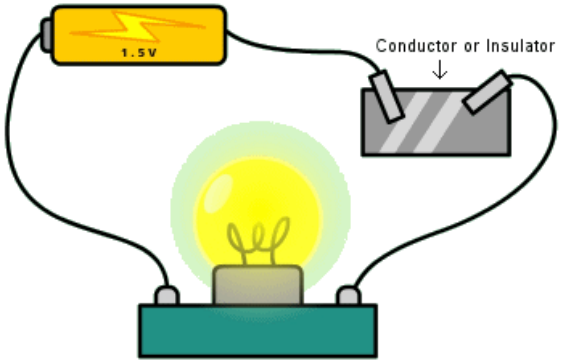
Procedure:

1- connect the battery with the led from one end by wire

2-connect another wire by the other end of the battery

3- this will result a circuit looking like this:



We will put the items we want to test in the place of the silver box.

4-we will test each object by inserting it in the other end of the led

There are 6 items and here is the result of each one:

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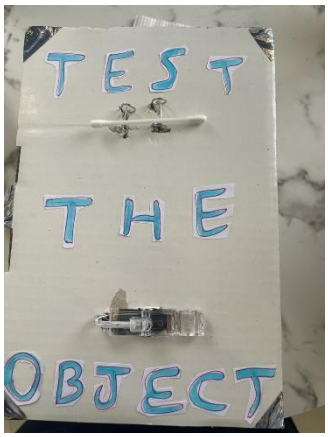
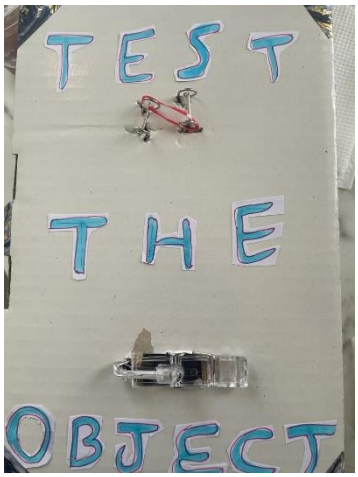
1-coin

2-Cotton buds:



3-Rubber band



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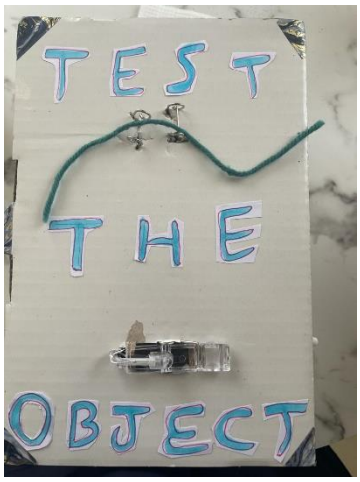
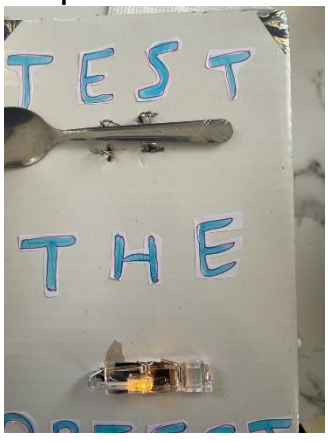
4-tinfoil

5-string



6-Spoon



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Conclusion:

- an electrical conductor is defined as materials that allow electricity to flow through them easily.

- Insulators are materials that hinder the free flow of electrons from one particle of the element to another.

-We found out that:

- Coin, tinfoil, and spoon are conductors.
- cotton buds, rubber band, and string are Insulators.