

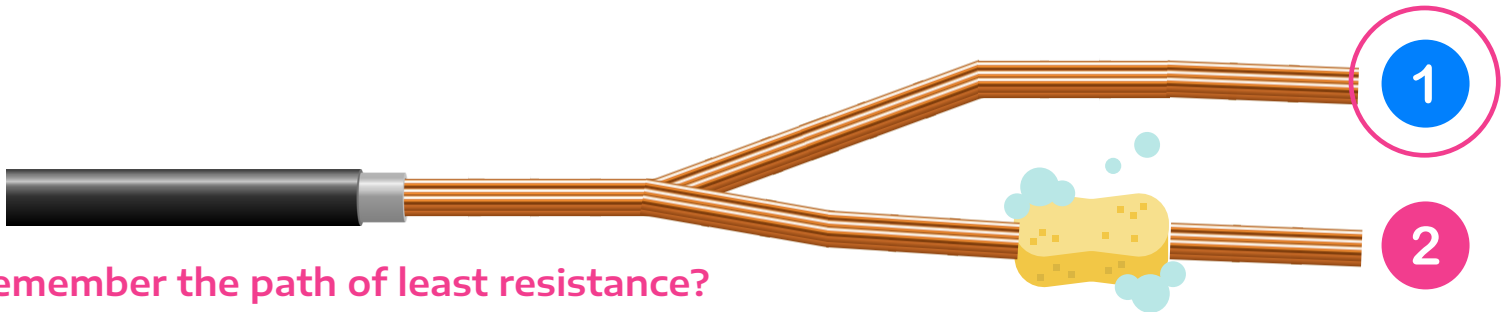
Flashlight - Activity Guide



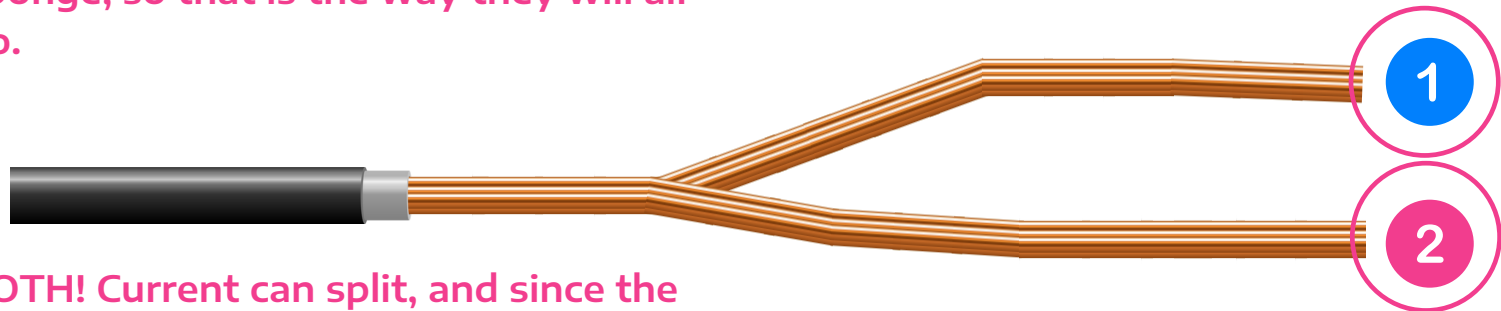
What are a few items that rely on circuits to function?

Cell Phones, Refrigerators, Laptops, Cars, Televisions, Air Conditioning units, Lights, & TONS MORE.

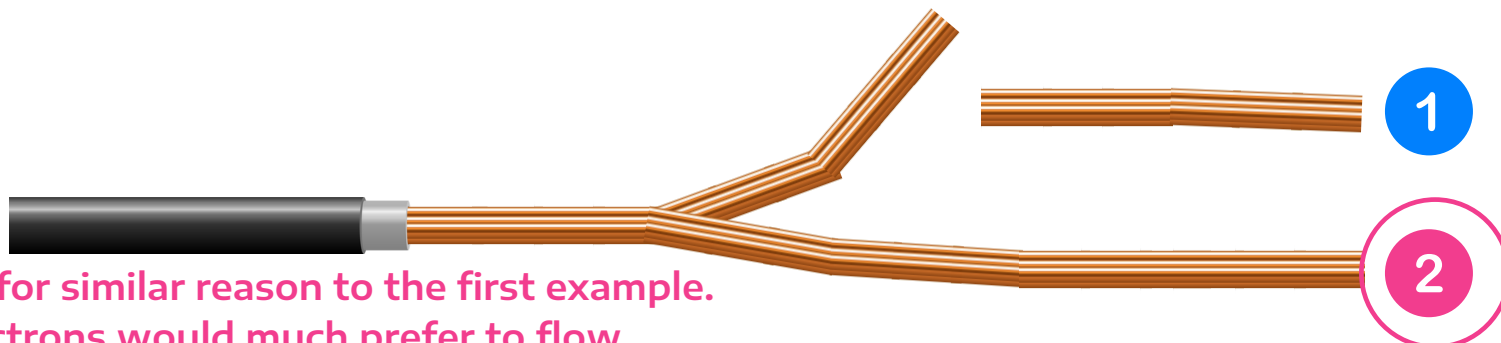
Circle which way (or both) that the electrical current will flow?
Remember, it takes the path of least resistance.



Remember the path of least resistance?
Well it is much easier for electrons to flow through a copper wire than a sponge, so that is the way they will all go.



BOTH! Current can split, and since the two wires are made of same material, it will travel through both.



#2, for similar reason to the first example.
Electrons would much prefer to flow through copper wire than dry air.



Quiz



1. Why are we tasked with building a flashlight in the first place?

~Power has gone out in STIIX-Ville. Before the backup generators come on, families need flashlights to be able to see in the dark!

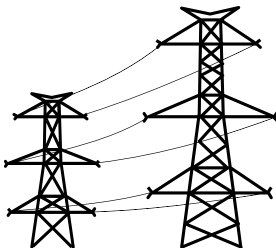
2. Who is Benjamin Franklin?

~Benjamin Franklin is the inventor who is credited with discovering electricity. He performed the famous kite and key experiment.

3. Name at least two things you do / rely on every day that are powered by electricity:

Turn on lights, talk on the phone, watch tv, cooking, charge a device, etc.

4. What is the purpose of these tall wires you see around town?



~These wires are used to transfer electricity from where it is produced to cities where it is used.

5. What is the difference between a conductor & an insulator?

~Conductors do a good job transporting electrons / electricity while insulators are not a good material for electrons to travel through.

6. Describe how a light bulb works in your own words?

~Attached to wires that electrons flow through...as electrons travel through bulb, it is transferred to heat energy which then glows nice and bright towards the top!

7. What do you think about a career as an electrician or electrical engineer?