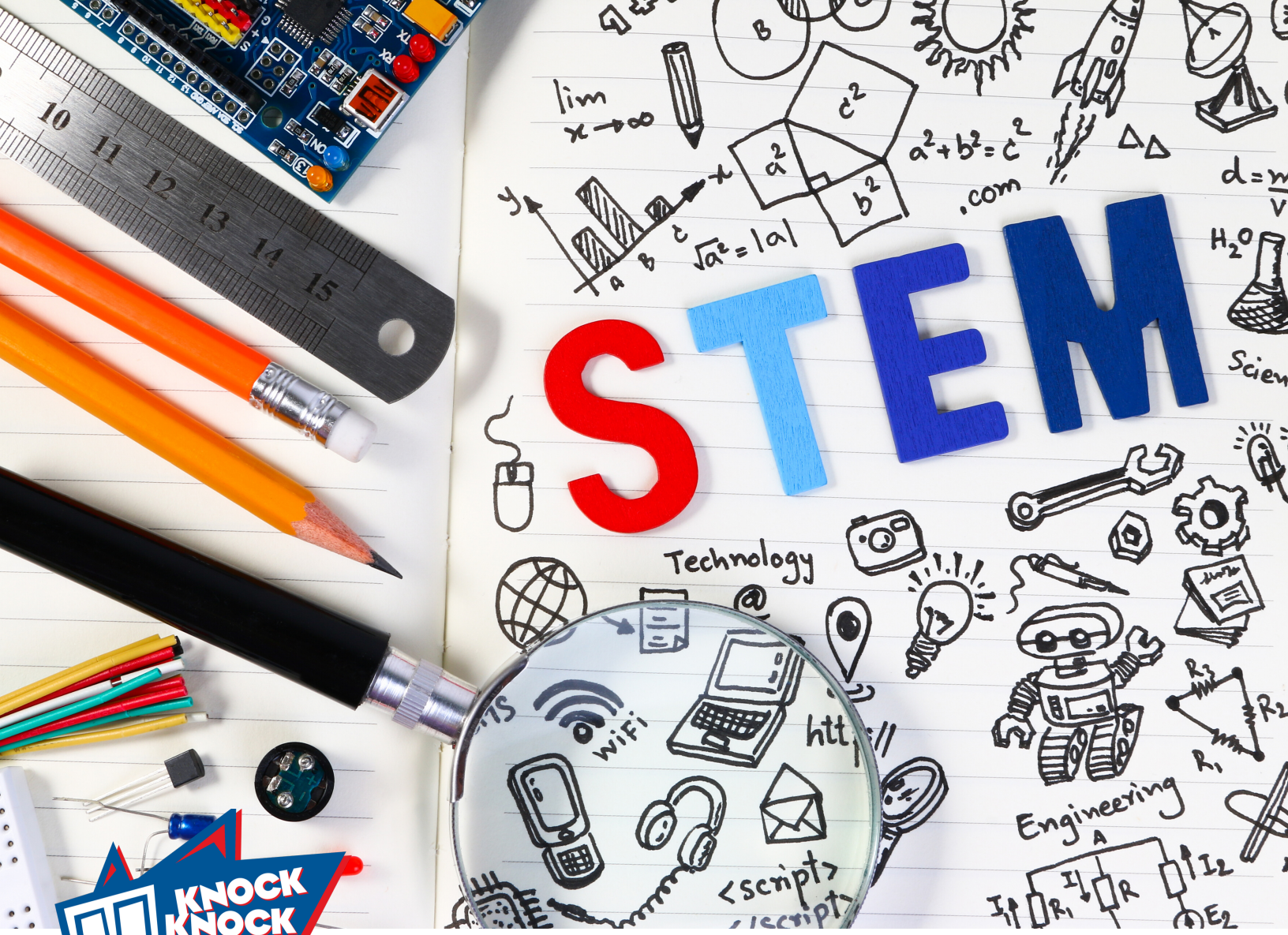

KNOCK KNOCK at YOUR DOOR!

Circuit Kit

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1900 Dalrymple Drive
Baton Rouge, LA 70808

Knock Knock Children's Museum is a community spark for engaging, playful learning experiences that inspire and support lifelong learning.

Circuit Kit

Age Level: 5 and older
Learning Zone: FYM STEM kit | Subject: STEM - Circuits

WATCH THE VIDEO LESSON HERE!

Materials Needed:

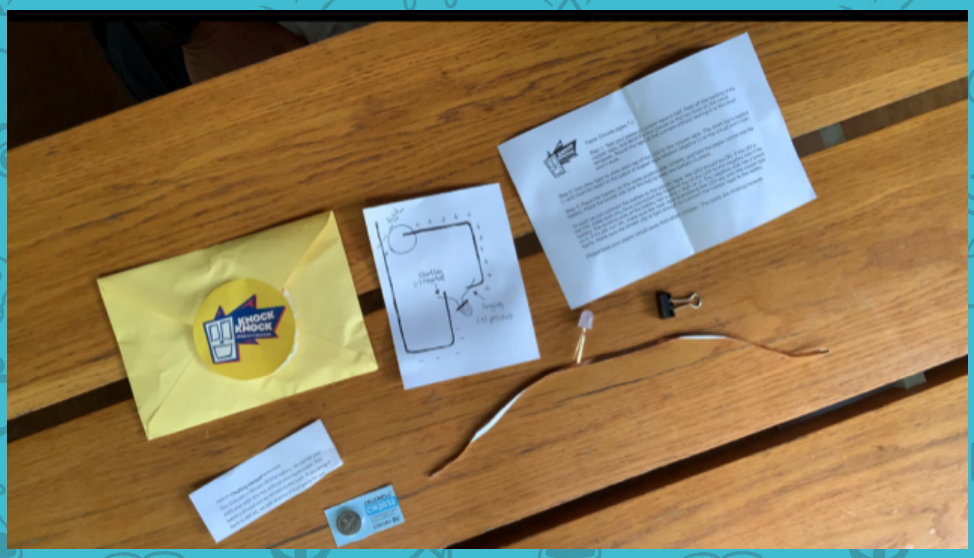
- Card with pattern or template of the circuit
- Copper tape
- Battery
- LED light
- Binder clip

Louisiana Standards:

SI-E-B3, SI-E-A2, PS-E-A1, PS-E-B3, K-PS2-1, 3-PS2-3

Learning Objectives:

To learn how an electric circuit works - using simple materials that work together to power a light. Paper circuits are a tinkering activity which means you will need to be a creative problem solver. To figure it out, sometimes the activity won't work right away, but rather that giving up, try, try and try! This is how inventors invent.



Steps:

- Tear your copper tape in half, peel off backing of the tape and stick the tape down following the pattern on the card (the solid black line)
- Follow the pattern rounding the copper tape around the corners by bending it and pushing it down. Don't tear the tape to form corners as it will break the circuit.
- Take battery out of package and place on the circle outline that is on the upper left-hand corner of the card. Look closely at the battery. You will see a + on one side, that is the positive side, turn the + side down so that it touches the copper tape that has the ++++++ lines around it. Be careful with this battery, it shouldn't be loose because it's a choking hazard for babies.
- Fold over the paper corner on upper left side and use binder clip to secure battery underneath the folded paper. Make sure that the battery is sandwiched between the + and - copper tape line.
- Take out your LED light. Look at it, notice that one leg is longer that the other. The longer leg is the positive (+) side, the shorter leg (-) is the negative side. looking at the pattern card you will see ++++ around the right side of your copper tape and - - - - - - around the left side.
- If you have clear tape at home, tape down the legs of the LED on top of copper tape matching the + side of LED leg to + side of pattern. Do the same with the - side. If you don't have clear tape, ask a sibling, parent, or friend to help you hold down the legs on top of the copper tape. Remember to match the positive + and negative - sides of the LED to the positive + and negative - sides of the tape. You may need to flip the legs around.
- If your circuit is complete, the LED light should turn on.
- Not Working? Try again, re-read directions. If you accidentally used the copper tape to tape the LED legs down, pull them out and hold them on top of the copper tape. The sticky side of the copper tape will not let electricity pass through. If you don't have clear tape at home for your LED light, you can hold the legs down on top of copper tape. It may take another set of hands, but don't give up.
- Still not working? Switch the legs. Make sure you are pressing the fold down on the battery. You will notice that the copper tape should be on the top (where paper is folded) as well as on the bottom of the battery. Keep holding down, hold legs of LED down, and light should be activated.
- Go to www.knockknockmuseum.org/learningresources to trouble shoot. Watch the lesson plan in action and look at other cool circuit activities!
- Totally frustrated? Call Ms. Lucy 575 613-0062.