STEM SCHOLARS HUB INC.

SNAP CIRCUITS® Jr.

Snap Circuits Jr. STEM Challenge

Series Circuit Engineering Challenge

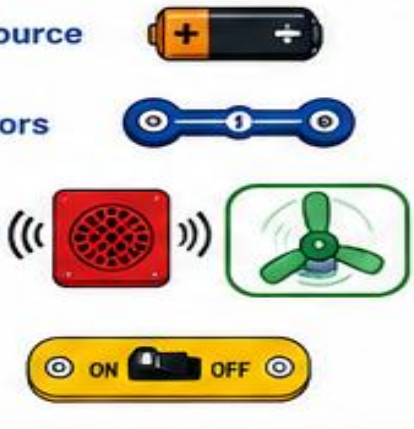
Group Members: _____ **Date:** _____

Objective

Build a working **SERIES CIRCUIT** where both the speaker and propeller work successfully using all four components of a circuit.

The Four Components of a Circuit

1. **Power Source**
2. **Conductors**
3. **Load(s)**
4. **Switch**



Materials

- Snap Circuits Jr. kit
- Battery pack
- Snap wires
- Switch
- Speaker
- Motor/Propeller
- Pencil

Challenge Instructions

Your Mission

Create a **SERIES CIRCUIT** where:

- The speaker produces sound
- The propeller spins
- All four components of a circuit are included

Before You Build

Predict:

What do you think will happen when the switch is turned on?

_____

_____

_____

_____

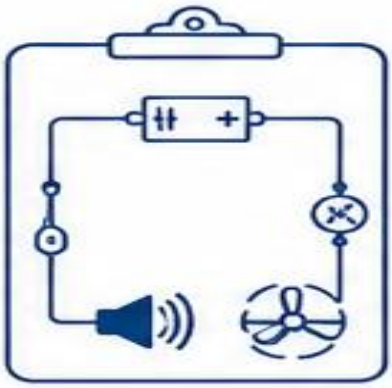
Build Your Circuit

Remember:

A series circuit has **only ONE path** for electricity to travel.

Make sure your circuit includes:

- Power Source
- Conductors
- Load(s)
- Switch



Observation Questions

1. What happened when you turned the switch ON?

_____

_____

_____

_____

2. What happened when you turned the switch OFF?

_____

_____

_____

_____

3 Why is the battery important in the circuit?

4 Which parts of your circuit are the loads?

5 What would happen if one conductor was removed?

Illustrate Your Final Circuit

Draw your final working **SERIES CIRCUIT** below.

Be sure to LABEL:

- Power Source (red)
- Conductors (blue)
- Load(s) (green)
- Switch (orange)

Reflection

What was the hardest part of building your circuit?

What did you learn about electricity and circuits from this activity?

Teacher Check

Circuit Complete: _____

Speaker Working: _____

Propeller Working: _____

All 4 Components Identified: _____

Student Explanation Complete: _____