UNIT: CIRCUITRY GAME

ACT-Based English: Jumbled Circuit Descriptions

### Here are ACT-aligned English activities for the Build Your Own Circuitry Game that help students develop real-world skills in editing technical writing, improving sentence clarity, and revising instructions for accuracy and logical flow in circuit design tasks.

### Objective:

Students rearrange mixed-up technical descriptions for logical flow.

MATERIALS NEEDED:

* Jumbled sentences about circuitry
* Worksheet

Students Directions:

**Goals:**  
You will develop your ability to recognize sentence structure, improve logical flow, and apply ACT-style English skills by rearranging jumbled technical statements into clear and accurate descriptions of circuit concepts.

**Step 1: Read the Jumbled Sentences Carefully**

* Look at each set of jumbled words or phrases provided on the worksheet.
* Read them aloud or silently to get a sense of what they are trying to communicate.
* Identify **key terms** (e.g., *circuit, resistor, current, LED, forward-biased*) that give clues to the subject and structure of the sentence.

**Step 2: Rearrange the Words to Form a Clear Sentence**

* Use your knowledge of sentence structure and technical vocabulary to rearrange each jumbled sentence into one that is:
  + **Grammatically correct**
  + **Logically ordered**
  + **Scientifically accurate**

*Tip: Start by finding the subject and verb, then build around them with modifiers and prepositional phrases.*

Example:  
Jumbled: in / circuit / flows / current / a / closed / only  
Rewritten: ✅ *Current flows only in a closed circuit.*

**Step 3: Add or Identify Transitional Words**

* After reconstructing each sentence, check whether it flows logically with others around it.
* Identify or add **transition words** (e.g., *first, next, therefore, as a result*) that could connect the sentence to a larger explanation or paragraph.
* Explain how these transitions help make the description smoother and more coherent.

**Step 4: Compare with a Correct Version**

* After you’ve completed your sentence reconstructions, compare them with the correct or teacher-provided versions.
* Reflect on:
  + What differences you notice in word order, clarity, or grammar
  + How those differences improve readability and technical accuracy

Use the worksheet space to write a **short reflection** on what made a sentence more effective.

**Step 5: Group Discussion**

* In pairs or small groups, share your rearranged sentences and reasoning.
* Discuss:
  + What strategies helped you figure out the correct order?
  + How does good sentence structure support understanding in STEM instructions?

**Jumbled Sentences**

•  in / circuit / flows / current / a / closed / only 

•  resistors / the / electric / reduce / flow / of / current 

•  pathways / electricity / multiple / circuits / travel / in / parallel / has 

•  a / device / LED / emits / when / forward-biased / light 

•  power / connected / is / the / game / before / the / ensure

## ACT-Style Question:

## Which sentence logically follows: "A resistor limits current in a circuit."

## "The circuit is complete when the power is turned off."

## "It prevents components from overheating due to excessive current."

## "Parallel circuits share the same voltage."

## "Electrical engineers use software to simulate circuits."

## **⚡ Why These Activities and Questions Matter**

By engaging in English-based activities connected to the Build Your Own Circuitry Game, students:

✅ Practice revising technical writing for clarity, conciseness, and grammatical accuracy.  
✅ Strengthen their ability to edit instructions, descriptions, and troubleshooting steps in circuit design.  
✅ Develop communication skills essential for explaining complex ideas with logical flow and precision.

These skills mirror the ACT English requirements—helping students become confident, effective communicators, prepared for college-level writing and STEM-related documentation.