STEM 101
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Name: _____
Period: _____

UNIT: ELECTRICAL CIRCUITS

# ACT-BASED ENGLISH: EDITING EXERCISE: IMPROVING TECHNICAL WRITING ANSWER KEY

Each sentence below contains an error or could be improved. Have students **rewrite** each sentence in a clearer, more concise, or grammatically correct way.

1. Wordiness & Clarity
   ✗ **Original:** The flow of electric current that moves through a conductor is something that happens when there is a voltage difference applied across the two ends of the conductor.
   ✓ **Edited:** Electric current flows through a conductor when a voltage difference is applied.

2. Sentence Fragment
   ✗ **Original:** When the circuit is open and the current cannot flow.
   ✓ **Edited:** When the circuit is open, the current cannot flow.

3. Subject-Verb Agreement
   ✗ **Original:** The voltage and the current in a series circuit **determines** the total resistance.
   ✓ **Edited:** The voltage and the current in a series circuit **determine** the total resistance.

4. Misplaced Modifier
   ✗ **Original:** The students observed the current with a multimeter, which was flowing through the circuit.
   ✓ **Edited:** The students used a multimeter to observe the current flowing through the circuit.

5. Parallel Structure
   ✗ **Original:** The engineer designed the circuit to be **efficient, reliable, and with low energy loss**.
   ✓ **Edited:** The engineer designed the circuit to be **efficient, reliable, and low in energy loss**.

## ACT-STYLE MULTIPLE CHOICE QUESTION:

**Question 1 (Conciseness & Clarity)**

**Original Sentence:**
*"Electric circuits are used in many types of technology that are commonly seen every day in life."*

- Which of the following is the **best** revision for conciseness?
  A. Electric circuits are used in everyday technology.
  B. Electric circuits are commonly used in technology that people see daily.
  C. Many different types of technology make use of electric circuits that are used daily.
  D. Electric circuits are a thing that many types of technology commonly use every day.

***(Correct Answer: A – This is the most concise and clear version.)***

**Question 2 (Grammar – Subject-Verb Agreement)**

**Original Sentence:**
*"The voltage in a parallel circuit, along with the current, determine the overall power consumption."*

- Which revision **corrects the subject-verb agreement error**?
  A. The voltage in a parallel circuit, along with the current, determines the overall power consumption.
  B. The voltage in a parallel circuit, along with the current, determining the overall power consumption.
  C. The voltage in a parallel circuit, along with the current, are determining the overall power consumption.
  D. The voltage in a parallel circuit, along with the current, have determined the overall power consumption.

***(Correct Answer: A – "determines" correctly agrees with "voltage.")***

**Question 3 (Transitions & Organization)**

**Passage:**
*"Series circuits and parallel circuits are two different ways to connect electrical components. In a series circuit, components share a single path for current flow. If one component fails, the entire circuit stops working. However, in a parallel circuit, each component has its own path. As a result, if one component fails, the others continue to function."*

- Which of the following **best connects the two circuit types**?
  A. Furthermore, both series and parallel circuits have advantages.
  B. Similarly, series and parallel circuits operate in the same way.
  C. However, the main difference between them is how current flows.
  D. Therefore, a series circuit is better than a parallel circuit.

***(Correct Answer: C – This transition clearly contrasts series and parallel circuits.)***

**Question 4 (Punctuation – Comma Usage)**

**Original Sentence:**
*"Ohm's Law states that voltage equals current times resistance but if resistance increases current decreases."*

- Which revision **corrects the punctuation error**?
  A. Ohm's Law states that voltage equals current times resistance, but if resistance increases, current decreases.
  B. Ohm's Law states that voltage equals current times resistance but, if resistance increases current decreases.
  C. Ohm's Law states that voltage equals current times resistance, but if resistance increases current, decreases.
  D. Ohm's Law states, that voltage equals current times resistance, but if resistance increases current decreases.

***(Correct Answer: A – Proper commas set off the contrast between resistance and current.)***

**Question 5 (Precision & Word Choice)**

**Original Sentence:**
*"The electrical engineer tested the circuit to make sure it was good."*

- Which of the following is the **best** revision for word choice and precision?
  A. The electrical engineer tested the circuit to ensure it functioned properly.
  B. The electrical engineer tested the circuit to make sure it was okay.
  C. The electrical engineer examined the circuit to see if it had problems.
  D. The electrical engineer looked at the circuit to make sure it was good.

***(Correct Answer: A – "Ensure it functioned properly" is precise and formal.)***