

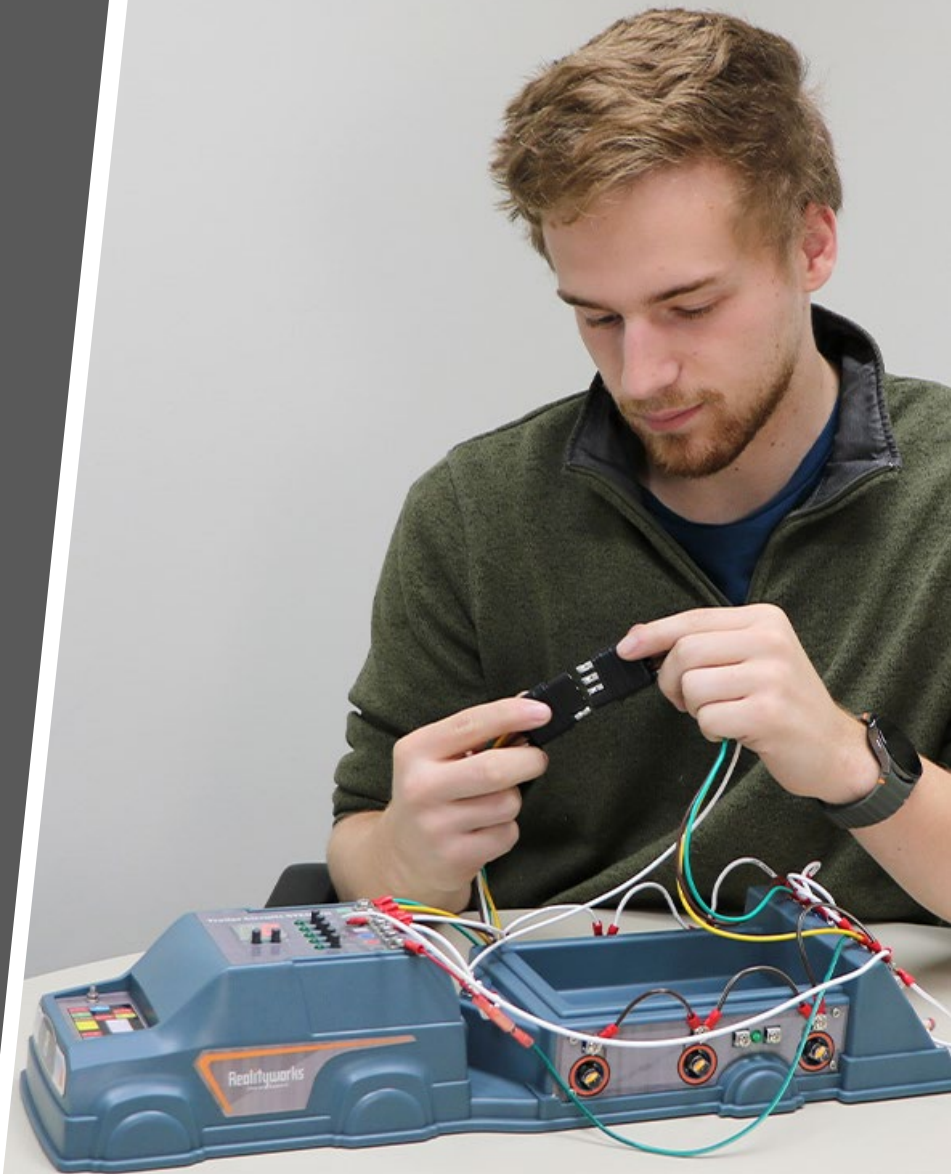


Lesson 8: Practice Troubleshooting with Scenarios 2-10

Trailer Circuits STEM Kit Curriculum

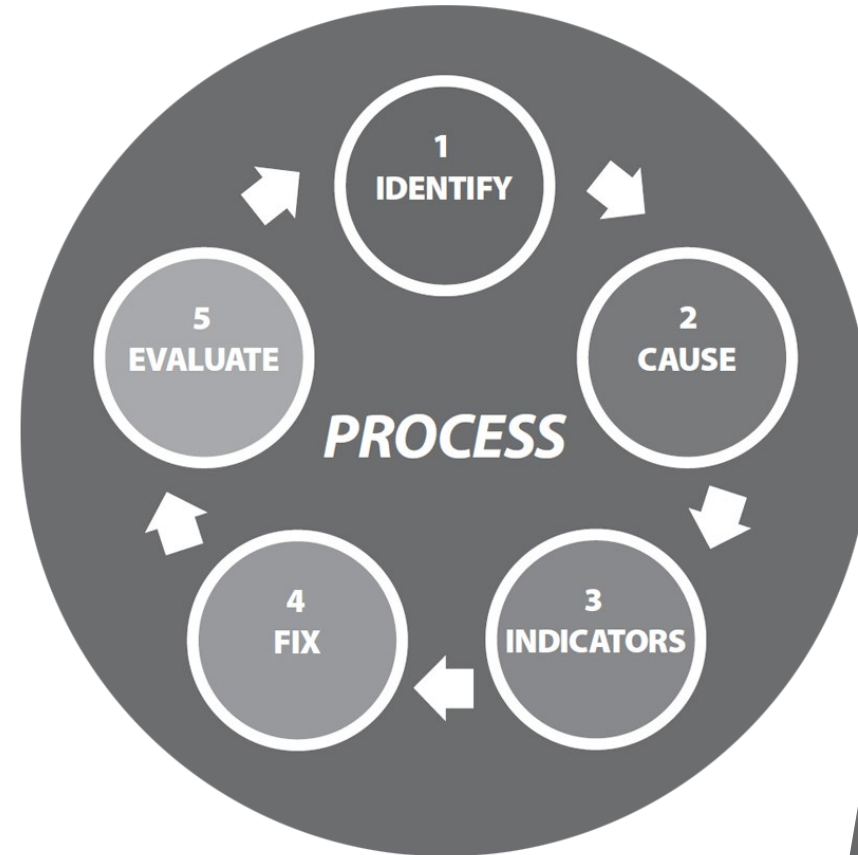
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Review: What Is Our Troubleshooting Process?

1. **Identify** the problem.
2. Examine likely **Causes**.
3. Look for **Indicators**.
4. Try different ways to **Fix** it.
5. **Evaluate**... is it still a problem?



Review: What Are our Troubleshooting Tools?

Auto Light Tester:

- Can tell you if power is flowing in circuit section

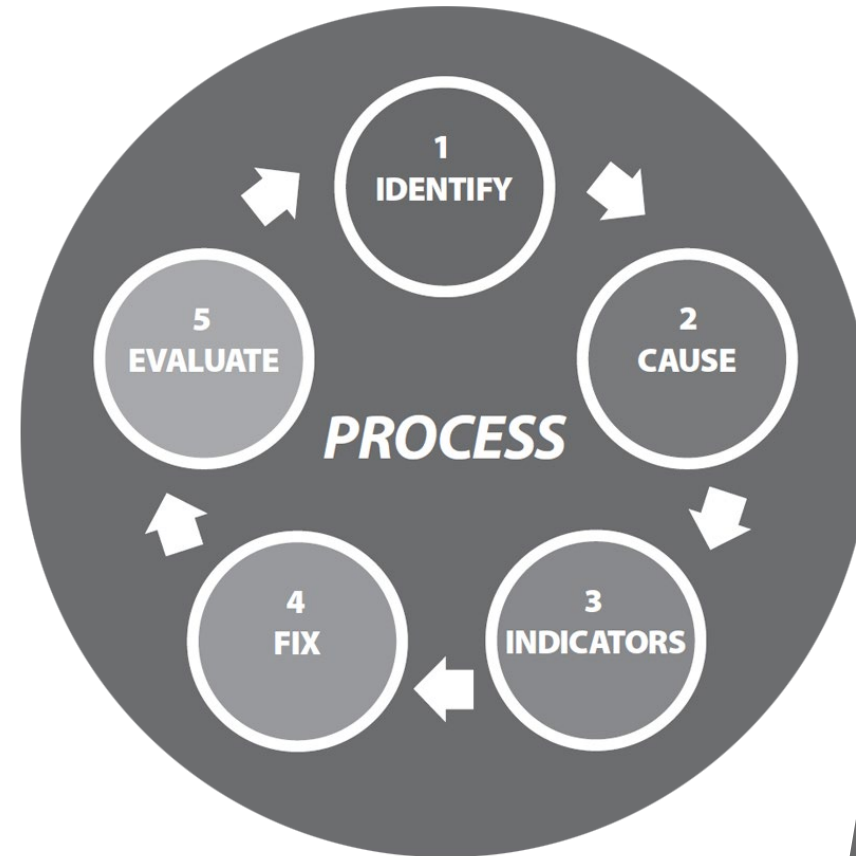
Multimeter can check...

- **Continuity:** Is the circuit path complete?
- **Voltage:** Is there voltage in a circuit section?
- **Current:** Is current flowing through this part of the circuit?



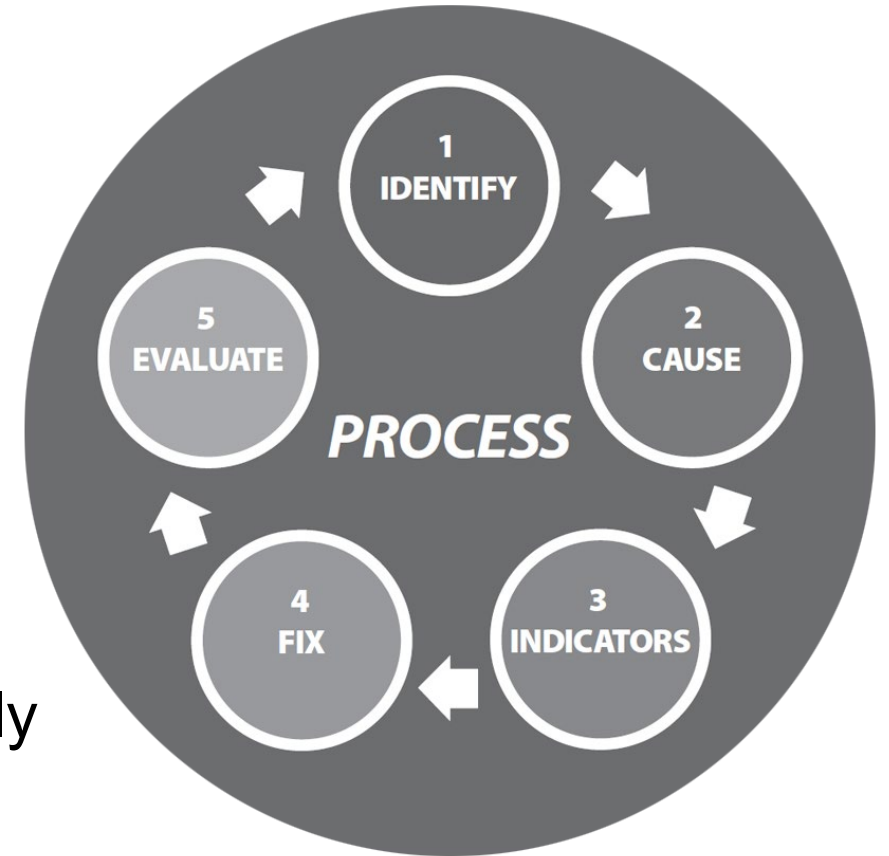
When a Circuit Does Not Work...

- What are some common causes, indicators, and fixes?
- Knowing these will help you troubleshoot quickly
- Look back to lesson 7 as a resource when you troubleshoot



Review: Troubleshooting

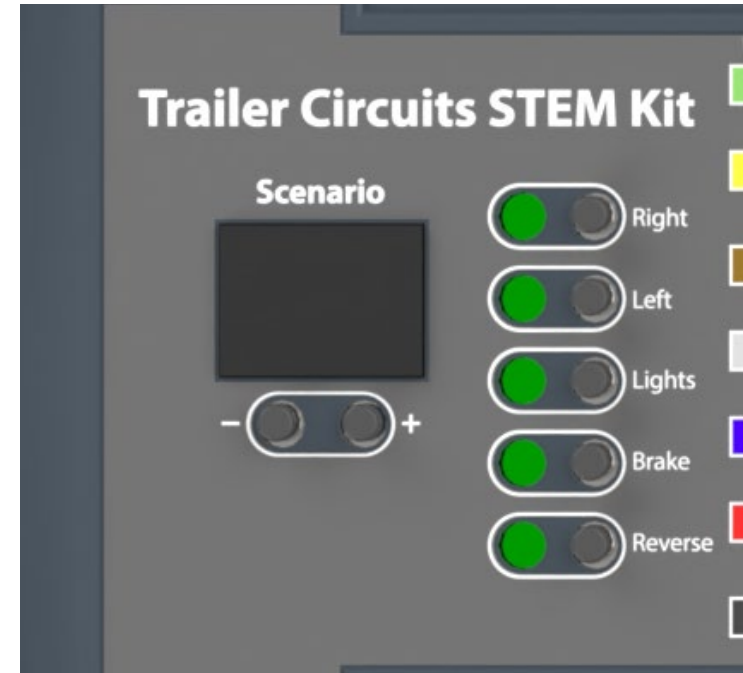
1. Notice and **Identify** a problem.
2. Consider the different **Causes** of that problem.
3. Look over and test the circuit for **Indicators**.
4. Attempt a **Fix**.
5. Power on the circuit and **Evaluate**...
Identify if the problem still exists.
 - **If the problem is gone**, you have successfully completed the troubleshooting process!
 - **If the problem is still there**, repeat the process



Scenario 2

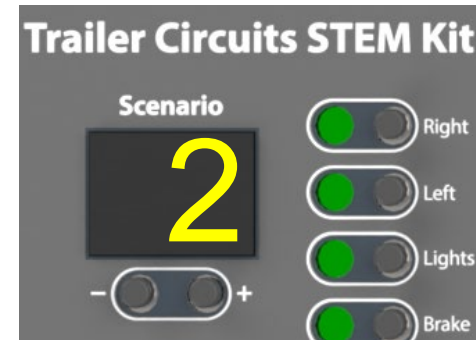
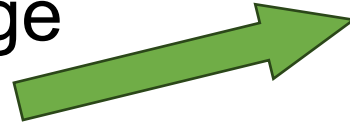
You will need:

- Trailer Circuits Truck with connected and correctly functioning 7-way round harness
- Auto light tester
- Multimeter



Scenario 2: Activate

1. Power on the Trailer Circuits Truck.
2. Ensure all light systems are powered off.
3. Push the + button to change the Scenario # to 2.
4. Systematically test all the different lights by activating each system one at a time.



Scenario 2

- Use your student workbook to guide your troubleshooting process
- Fill in the Troubleshooting Table for Scenario 2
- Go to the next slide once you think you know what the problem is in this scenario



Scenario 2: Check Your Troubleshooting

Identify

- Left brake light is not working

Causes

- Faulty bulb
- Loose connection
- Corrosion
- Broken wire
- Faulty ground
- Connector damage
- Blown fuse
- Short circuit

Indicators

- What did you notice when you answered the 5 test questions?

Fix

- Did you remove the bulb during testing, then put it back?
- Once you put it back, did it work?

Evaluate

- Why would the bulb not work, then start working after you removed it and put it back again?
- Which of the causes does this match?

Scenario 2 Troubleshooting Summary: The left brake light was not working because there was a bad connection in the light bulb's socket.

Scenarios 3-10

- Use your student workbook to guide your troubleshooting process
- Once you complete all the troubleshooting scenarios, see your instructor for the scenario key
- After reviewing the scenario key, tell your instructor you are ready for the troubleshooting test



For more information, please contact Realityworks, Inc.
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