**Lesson 1: Circuit Loops**

**—**

**TASK 1: WHAT DOES A ROPE LOOP TELL US ABOUT A CIRCUIT?**

1. We can use a loop of rope to model an electric circuit. Match the boxes on the left with the boxes on the right to show how each part of a circuit is represented. Not all boxes will match!

|  |  |
| --- | --- |
| **In a rope loop, the...** | **represents a real circuit’s...** |
| Warming of the gripping hand  Moving rope  Gripping hand  Pushing hands | Electric current  Electricity  Battery  The bulb heating up and glowing  Bulb |

1. Copy and complete the paragraph using the words in the box.

**pushing hands electric current battery**

**gripping hand heat up and glow bulb**

In the rope loop model, the \_\_\_\_\_\_\_\_ get the rope loop moving. The \_\_\_\_\_\_\_\_ resists the flow of the rope and warms up.

Similarly, in a real electric circuit, a \_\_\_\_\_\_\_\_ makes \_\_\_\_\_\_\_\_ flow around a complete loop. A \_\_\_\_\_\_\_\_ will resist the electric current and \_\_\_\_\_\_\_\_.

**TASK 2: WILL IT LIGHT UP?**

|  |  |
| --- | --- |
| A torch battery has two contact points. It has one at each end. | A torch bulb has two contact points. One is at the tip and the other is on the screw thread. |
|  |  |

1. The pictures show a bulb connected to a battery. Decide which bulbs will light up.

Put a **tick** next to those that will, and a **cross** next to those that won’t.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | 2. | 3. | 4. |
| 5. | 6. | 7. | 8. |

1. For the bulbs that won’t light up, draw wires to fix the circuit.