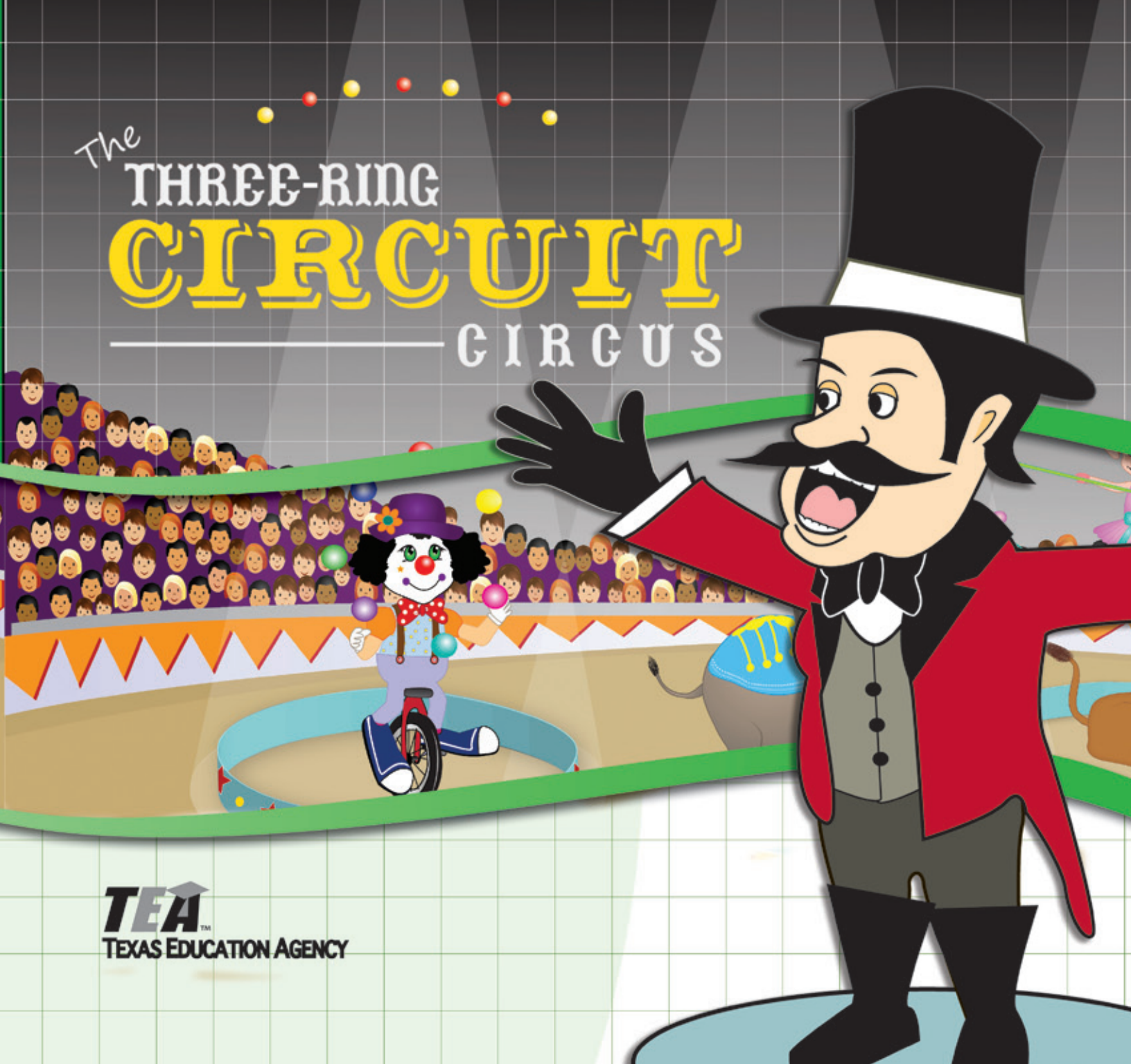
The THREE-RING CIRCUIT CIRCUS



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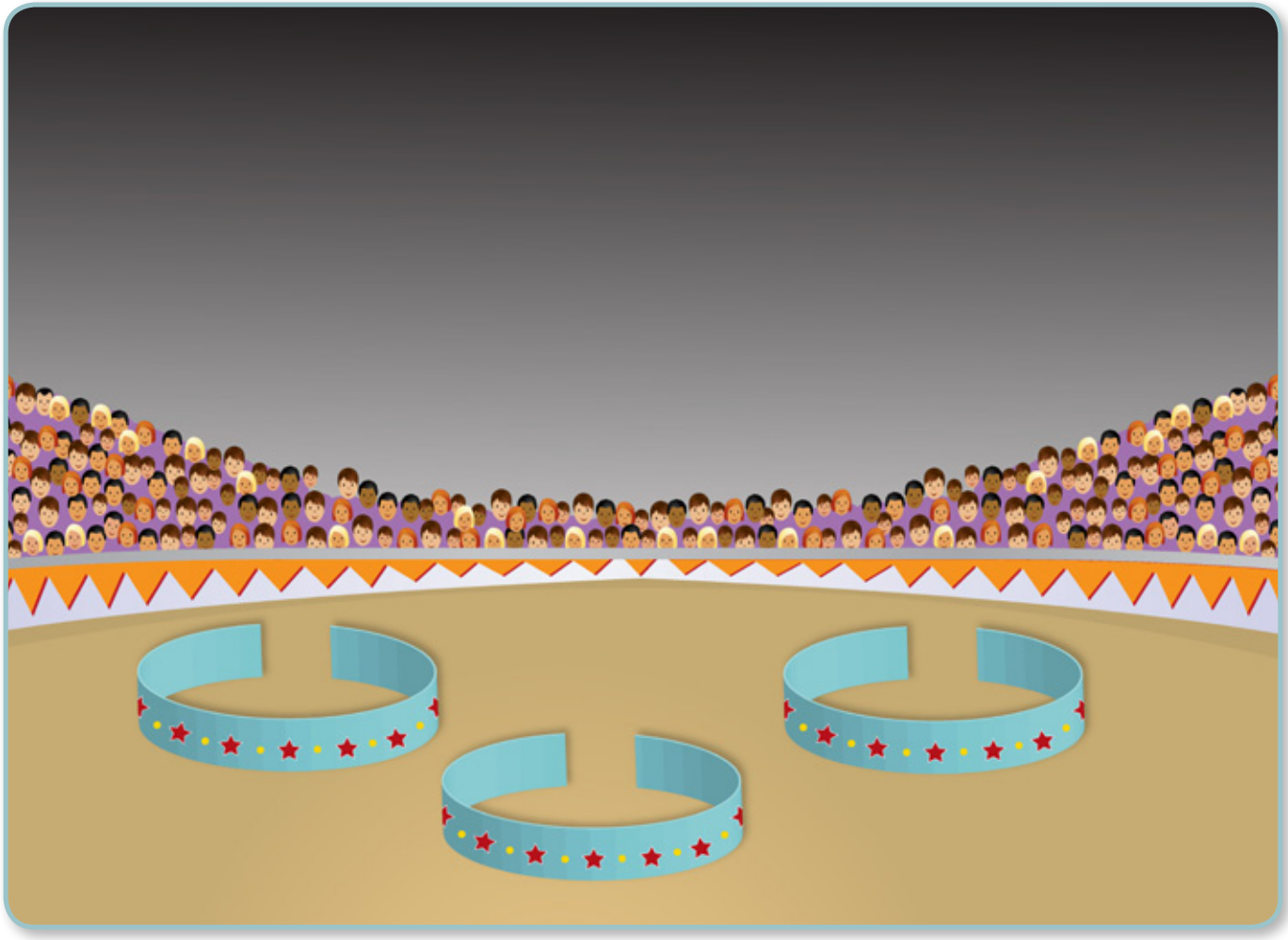
This book was developed in collaboration with Region 4 Education Service Center, Houston, Texas.

The Three-Ring Circuit Circus presents Clarence the Clown, Elmer the Elephant with Marvin the Magnificent Monkey, and Penelope the Pig!

Oh yes, and Leo the Lazy Lion!

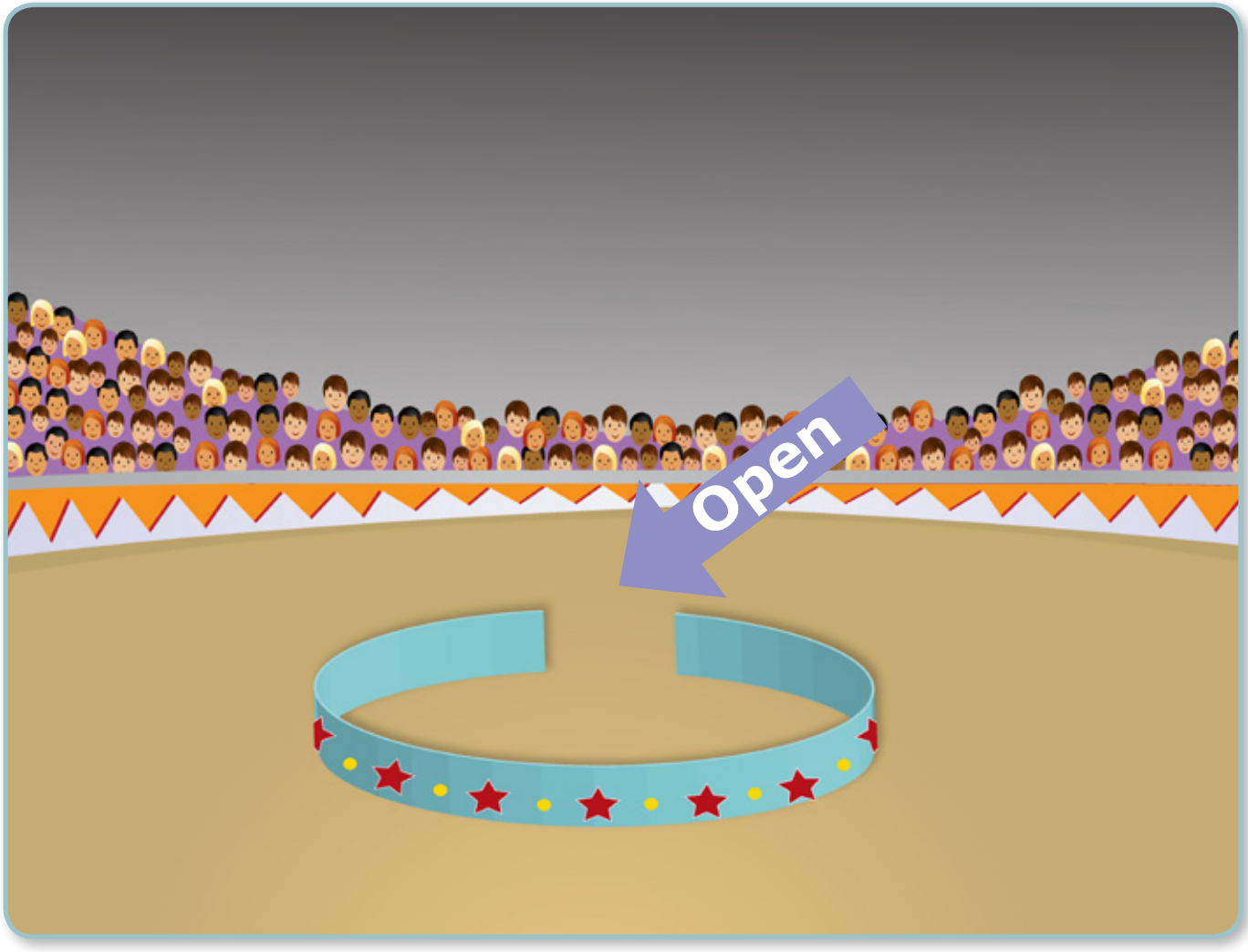
People are coming to the circus and finding a seat. The show has not started. Nothing is going on in any of the three rings.



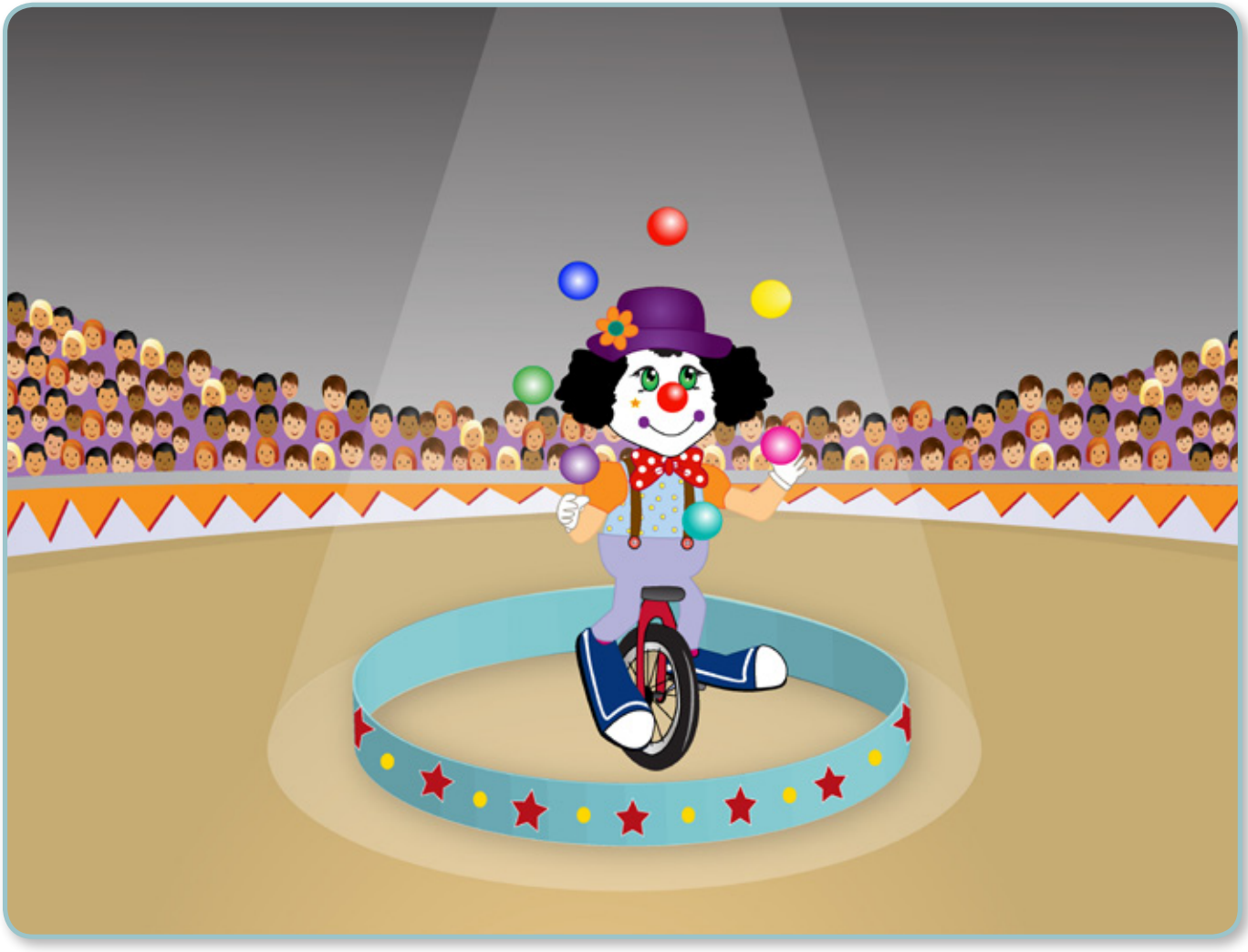
Ladies and gentlemen! Welcome to the most exciting show in the world! Come one! Come all! The Three-Ring Circuit Circus is about to begin! The doors are open. Take your seat.

Hurry, ladies! Hurry, gentlemen! The show is about to begin. When the doors close, no one can enter the circus. The show will not begin until the doors are closed!

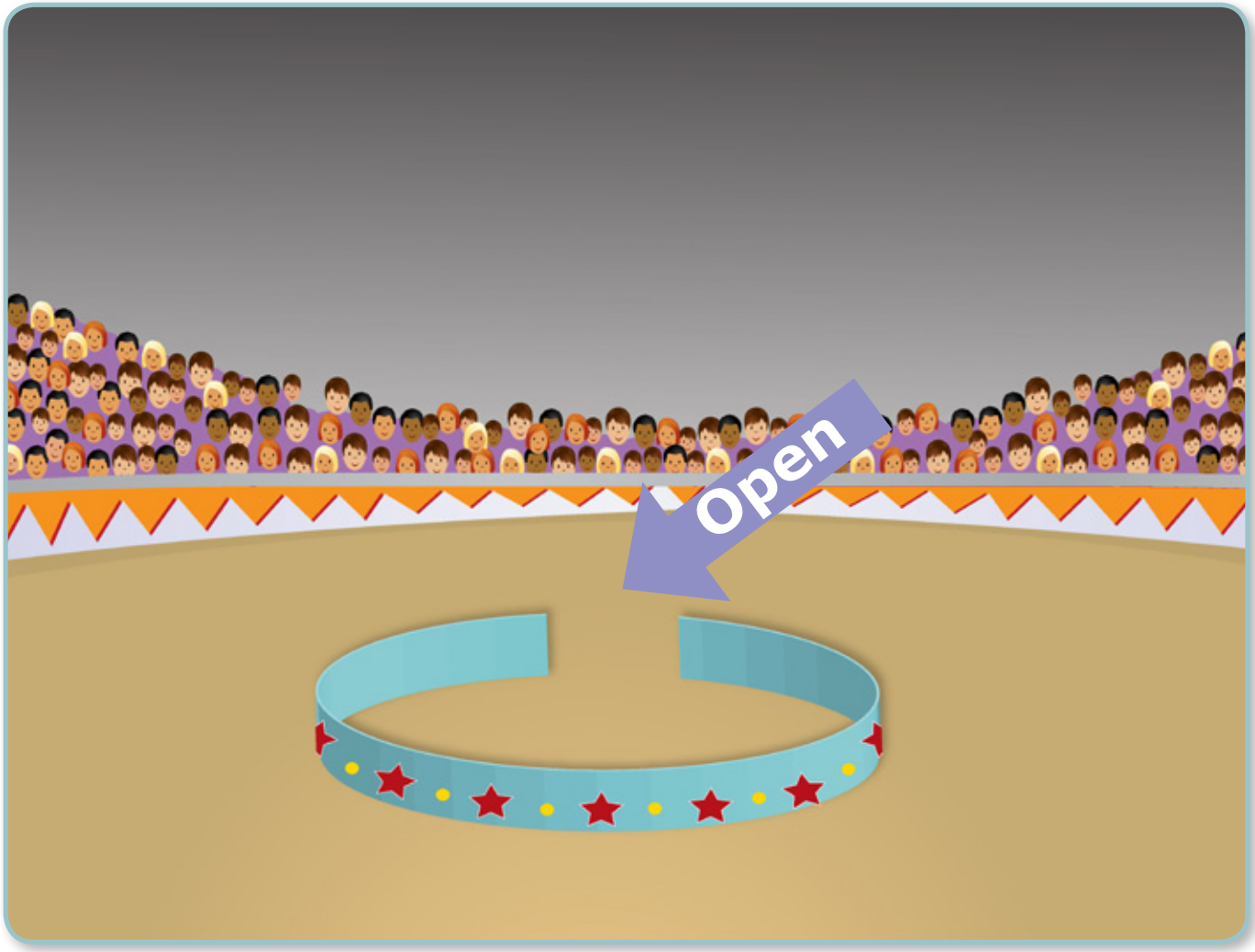
Here, Circus Ring 1 is open. Clarence the Clown cannot perform until the ring is closed.



When the ring is closed, Clarence the Clown performs his act in Circus Ring 1.

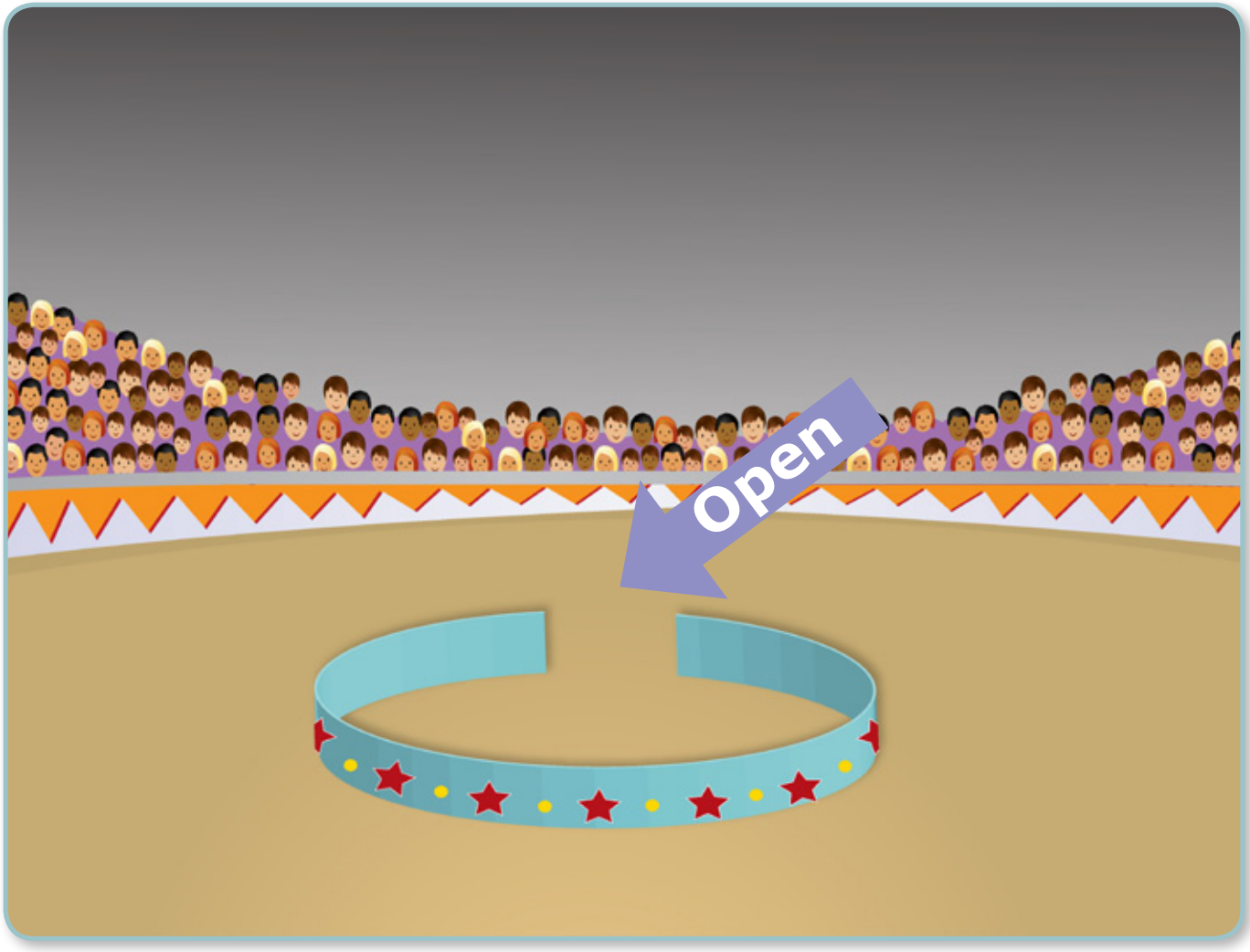


Here, Circus Ring 2 is open. Elmer the Elephant and Marvin the Magnificent Monkey cannot perform until the ring is closed.



Now the ring is closed! Look at the daring acts performed by Elmer the Elephant and Marvin the Magnificent Monkey in Circus Ring 2! The crowd is going wild!

Here, Circus Ring 3 is open. Penelope the Pig cannot perform her sensational tightrope act until the ring is closed.



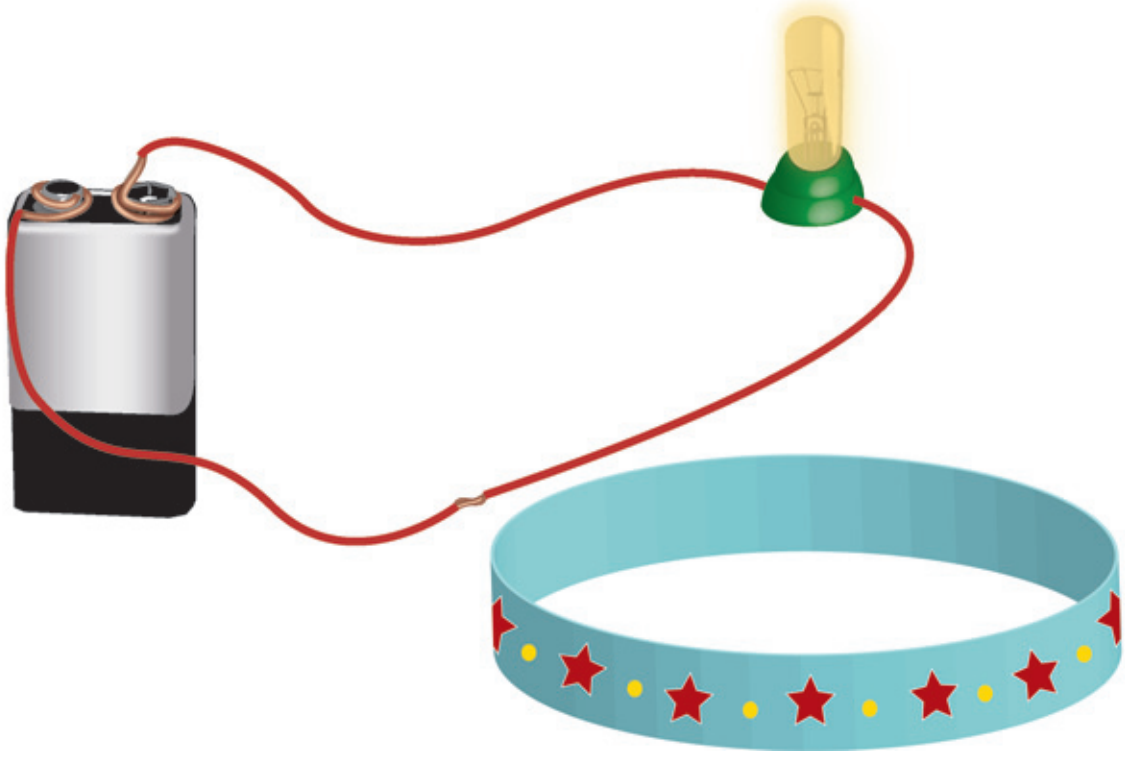
Now the ring is closed! Let’s hear it for Penelope the Pig as she performs her daring tightrope act in Circus Ring 3!

And way to go, Leo!

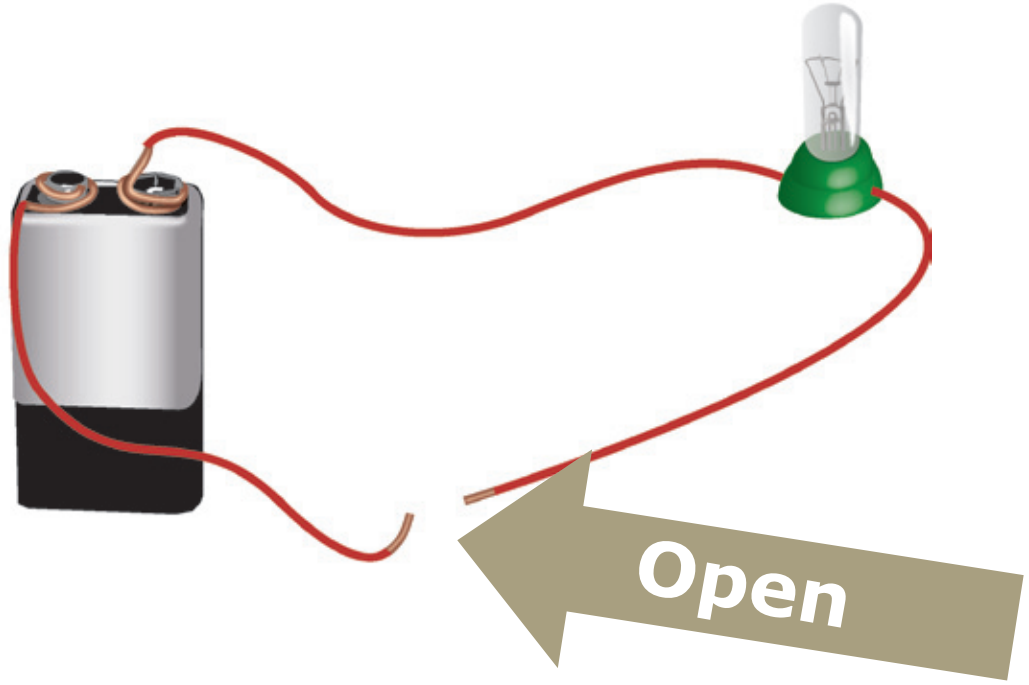
Ladies and gentlemen! Let’s hear another round of applause for our sensational circus performers!

Ladies and gentlemen! Now it is time for some behind-the-scenes reporting on the events you have just witnessed. What is the scientific explanation for this amazing circuit circus?

In a similar way to the circus acts, light bulbs cannot light up, buzzers cannot buzz, and motors cannot run unless their circuits are closed. A circuit is a closed path through which electrical energy can travel. Light bulbs, buzzers, and motors need electrical energy to light up, make noise, or run.

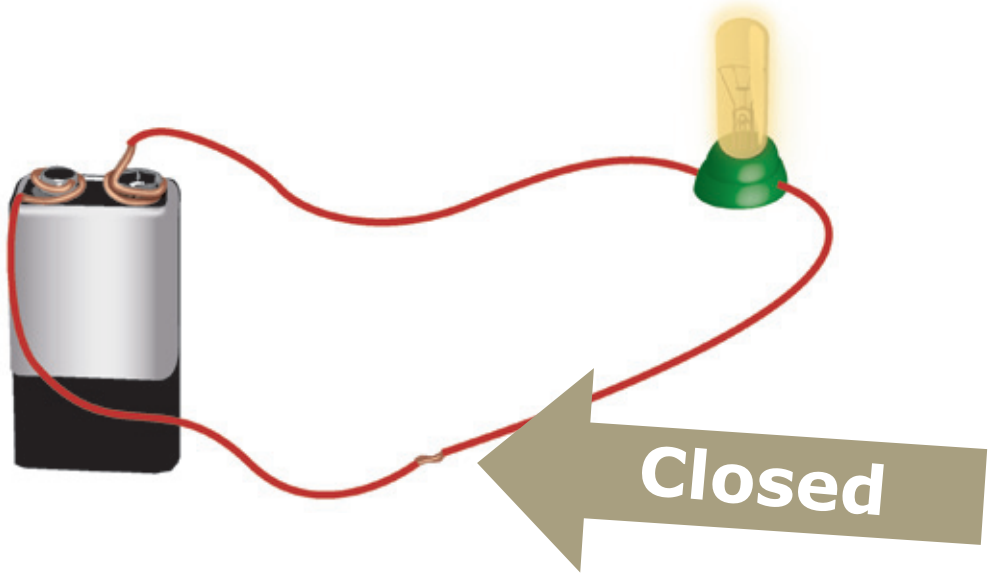


Electrical energy cannot travel through the circuit when the “door” is open. In the circus, the animals could not perform when the door was open or when the ring was incomplete.



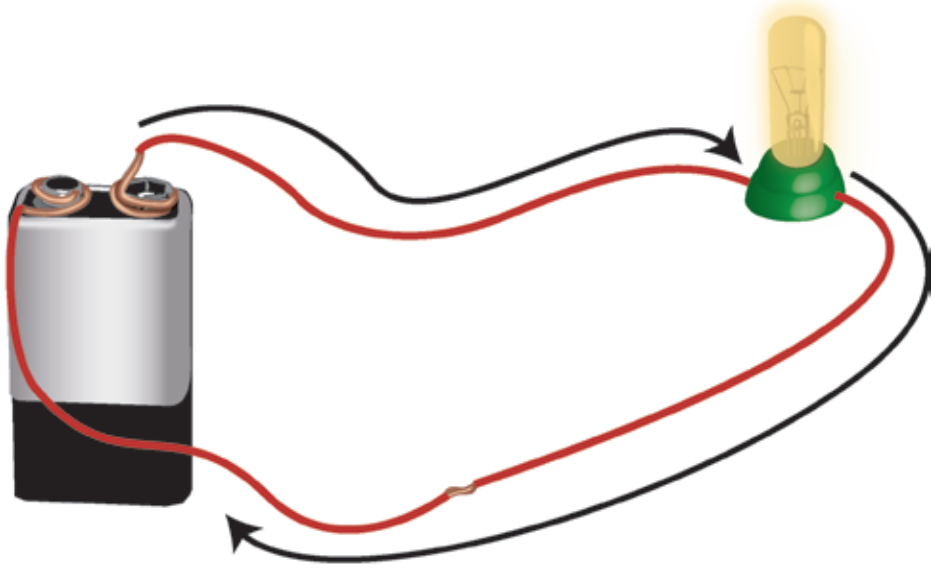
In this open circuit, the light is not working because the wires are not connected. Sometimes these circuits are called *incomplete* or *broken.*

When we connect the wires, however, the light bulb lights up, and we have a *complete* or *working* circuit. This is also called a closed circuit. In a closed circuit, the electrical energy can travel through the circuit.

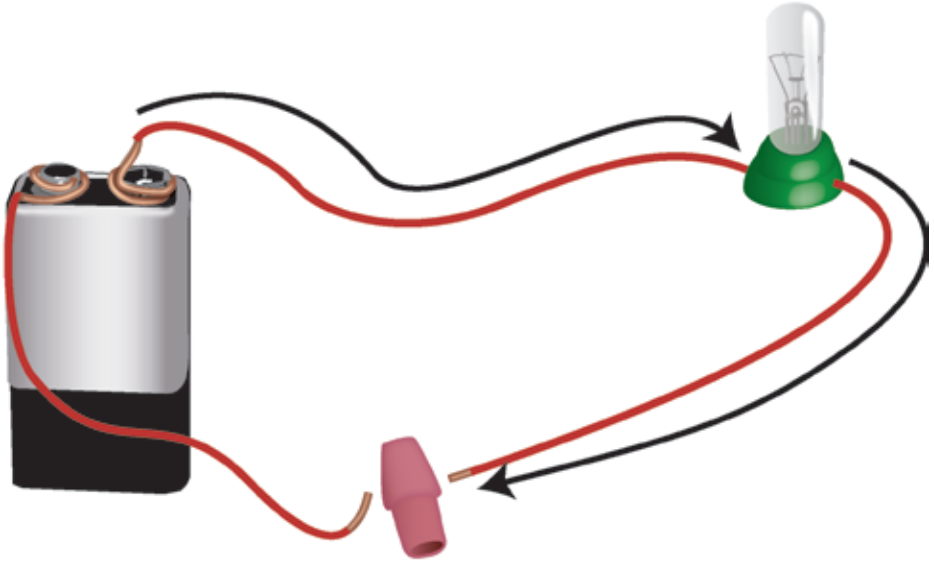


That is just what happened in the circus. When we closed the doors and the rings, the animals were able to perform their sensational acts!

You might be wondering, “What is flowing through these circuits?” It’s electrical energy. Electrical energy is the flow of an electrical charge through a conductor. The conductor allows the electrical charge to flow. Examples of conductors are metals and people.



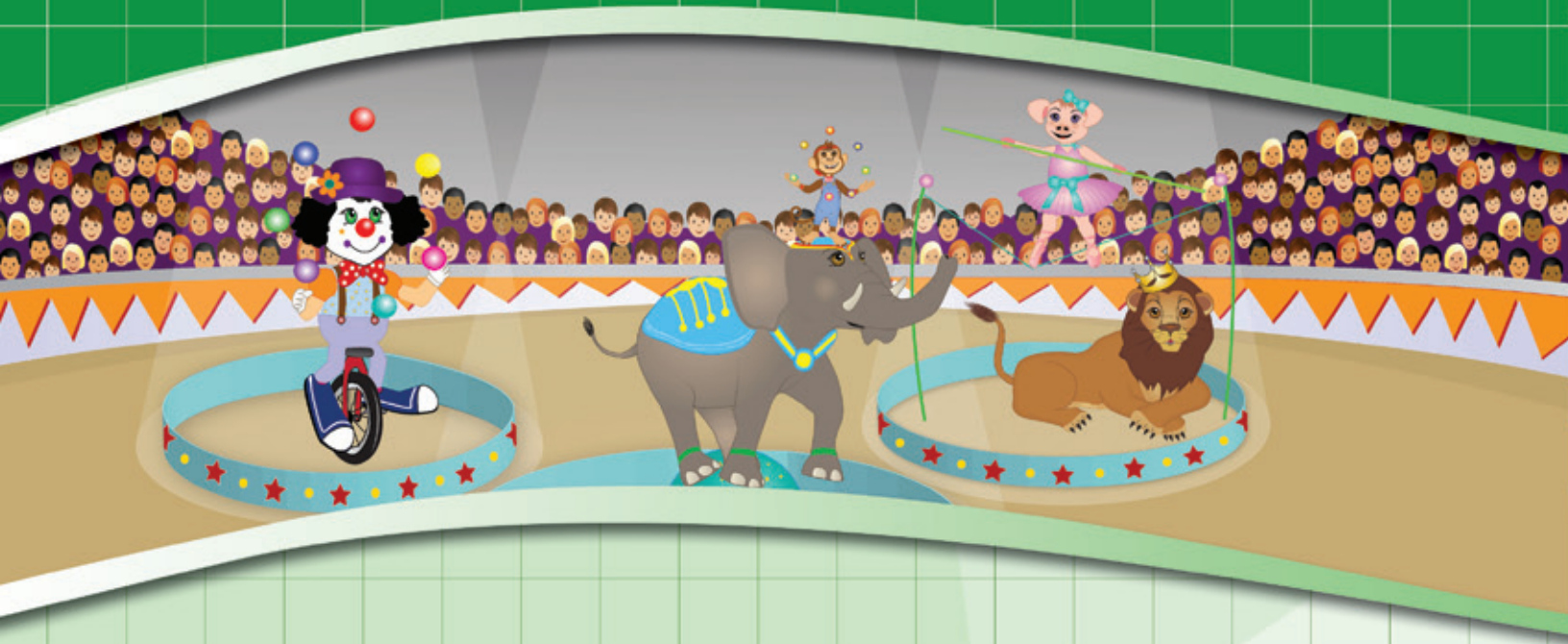
The opposite of a conductor is an insulator. Insulators greatly reduce the flow of electricity. Examples of insulators are glass, plastic, wood, cloth, and rubber.



Ladies and gentlemen! There you have it—a simple explanation for a complex scientific phenomenon! In your own words, can you summarize what you learned?

Come back soon and see the most exciting Three-Ring Circuit Circus in the world!


The
THREE-RING
CIRCUIT
CIRCUS



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