

PINBALL MACHINE



HOW SCIENTIFIC IS A PINBALL MACHINE?

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Making a lightbulb light up

Where's the science?

To make the load do what you want you need a source with an electric current. It also needs a conductor. Wires are good conductors. If there is a open circuit the electricity won't go through if there is a closed circuit the electricity will go through. The switch opens and closes the circuit a insulator is substance or device that does not readily conduct electricity

Did You Know!?

Did you know electricity travels at the speed of light?



Life Connection Story...

Drones work by battery. When the battery is charged the drone can fly. It has 4 propellers that spin and the gravity can not keep it on the ground.

Vocabulary

Electric Current-An **electric current** is a flow of **electric** charge.

Open circuit-an electrical circuit that is not complete.

Closed circuit-a circuit without interruption, providing a continuous path through which a current can flow.

Load- The power of the source

Switch- A switch is a thing that opens or closes a circuit

Conductor-Are stuff that can transport electricity

Insulator- is a substance or device that does not readily conduct electricity

Newton's 2nd Law of Motion

Newton's second law of motion says that $F = m \times a$ which means the **force** of an object against something equals its **mass** multiplied by its **acceleration**. Another way to explain this is to say that the more mass an object has, the more **force** it will take to move it. Also, if you want to accelerate **faster**, you will need more **force**. So if I was pulling a car that has a lot of **mass**, I would need more **force** to move it. If I was pulling a car with less **mass**, I would need less **force** to move it at the same speed. If the car had slower **motion** (less **acceleration**) the less **force** there would be if it hit something.

Did You Know?

If you were small kid it would be easier than pushing a larger kid. That is because the larger kid would have more mass.

Picture with label and arrows
Use PicMonkey

Life Connection Story.

I was racing my dad on a sled and he beat me cause he has more mass than me.

Vocabulary

_Force = A push or a pull on an object

Mass = the matter of an object

Acceleration = an object speeding up

Motion

**ONLY use the words that relate to*

YOUR law