

How scientific is a pinball machine?

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Mr. Commeret's**



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Making a Bulb Light Up

Where you'll see this on my pinball machine

- At the top of the pinball machine you'll see the light bulb

What i learned ...

Pinball Blogs #1

What did you learn about circuits: That we can make cool things with a circuit. To make a circuit, you need 2 wires, a battery, battery holder, and a light bulb holder. The battery is the source, the path is the wire, and the load is the light bulb. You would connect the wires to the ends of the battery holder, use one wire each for one side. Then hook the ends of those wires to the light bulb holder (push down tab for the light bulb holder and the battery holder), and it should light up.

Electromagnets

That to make an electromagnet, you have 2 feet of wire, then wrap it around a nail, then It will pick something up that is magnet. I learned that the amount coils wrapped, the more paper clips you can pick up. In order to make it stick, you can't just can't lift it up by you, you have to let it stick to the nails by itself. To make it stick, you may just have to use paper clips. May be it can work with anything that is attracted by an Electromagnet. Some objects attracted to magnets are such as paperclips, small metal bars,

nails.

Newton's Law's of motion

Law 1#

The law of inertia

- - An object at rest will remain at rest and an object in motion will stay in motion
 - If an object is moving it will keep moving unless it is stopped

How I can apply it to my pinball machine
the launcher will be pulled back and launch the ball forward

law 2#

$$F=ma \text{ (force = mass)}$$

- - If you want to push a chair it wouldn't be hard because it doesn't have much mass to push if you want to push a truck it would have a lot more mass
 - Acceleration is produced when a force acts on mass ;The greater the mass (of the object accelerated) the greater the amount of force needed(to accelerate the object)

Law 3#

Force - pairs

- - for every action there's a reaction along with it
 -
 - If you're going to shot a gun it has a kick to it the reaction is it coming back at you the reaction is the bullet coming out

Marbles on a ramp

I learned that the big marble goes faster than the other marbles. The other marbles went fast but not as fast as the big marble.

The more mass = the faster the marble goes.

Final reflection

Is the Pinball Machine more scientific than you thought?

Our pinball machine is more scientific than I thought. The launcher is the action - reaction I never knew that;) did you?

What is one (or more) thing that surprised you?

The flippers can be whatever. We were going to make them out of pens and cardboard .

What is one (or more) thing you learned?

The launcher is harder to make than I thought.

COLLABORATION

What were the joys of working in a group?

We made a launcher that has a lot of that works and has a lot on action and awesome powerful bumpers.

What were some struggles of working in a group?

We had trouble work together and agreeing sometimes:(

About the author



My name is Kyla Schrottenboer and the book "How scientific is a Pinball machine?" is for science. I am in Mr. Commeret's class. My family is My mom, dad, me, my sister Brinae, and my brother Hudson. We have a lot of fun together. I have fun classmates and a really fun and funny teacher.

Glossary

Attract- To attract means to pull toward one another. Iron and steel objects are attracted to magnets.

Battery- A battery is an electric cell that provides electricity or a power source for variety of electrical device. The battery is a source in an electrical circuit.

Closed Circuit- A closed circuit has a complete path, which allows electricity to flow continuously.

Conductor- A conductor is a material that allows electricity to flow through it. Metals are examples of good conductors.

Current Electricity- Current electricity is the flow of electric charge through a wire or other conducting material.

Electricity- Electricity is a form of energy that is found in nature (lightning, static) and can also be produced through rubbing, chemical reactions, and generators. Electricity is produced through the movement of electrical charges.

Electromagnet- An electromagnet is produced when electricity flows through a coil of wire wrapped around an iron bar. It acts like a magnet.

Friction- Friction is the rubbing of surfaces. Friction can produce heat energy

Light Bulb- A light bulb is a lamp or light source whose light is produced by the glow of a heat wire. The light bulb requires an electrical circuit to heat the wire.

Load- A load is a part of a circuit that uses electricity by giving off light, sound, heat, or increasing magnetic interaction. Light bulbs, motors, and electromagnets are examples of loads.

Magnet- A magnet is a material that has the ability to attract iron, steel, or an iron.

Magnetic- A magnetic is a substance that is attracted to a magnet and can act like a magnet.

Magnetic Field- A magnetic field is the area of attraction and repulsion that surrounds a magnet.

Magnetic Pole- A magnetic pole is a place on a magnet where the magnetic effect is the strongest. The two ends of a bar magnet are its poles.

Magnetically Attract- If two objects magnetically each other, they are pulled toward each other. Iron and steel objects are magnetically attracted to magnets. When two unlike poles of magnets are placed near, they are magnetically attracted.

Magnetically Repel- If two objects magnetically repel each other, they are pushed away from each other. When two like poles of magnets are placed near, they are magnetically repelled.

Open Circuit- An open circuit has a break in the conducting material of the path. Electricity cannot flow continuously in an open circuit.

Path-A path is the part of a circuit along which electricity travels. The path is made of conducting material.

Repel- To repel means to push away from one another.

Simple Circuit-

Source-A source is the part of a circuit that pushes electric current from the conducting material along the path. Batteries are examples of a source

Switch-A switch is a device made of conducting material that can open and close an electric circuit.

Wire- The wire in an electric circuit provides a path for the flow of electrons from the source (battery) to the load (light bulb).

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