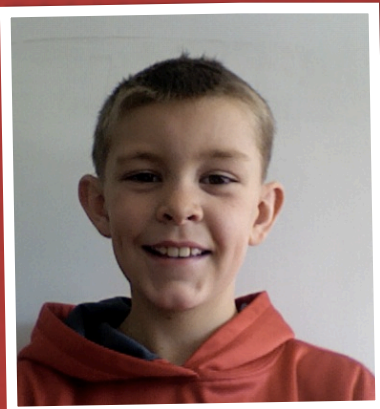


PINBALL MACHINE

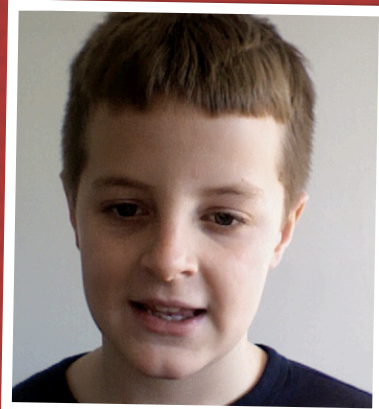


HOW SCIENTIFIC IS A PINBALL MACHINE?

WRITTEN AND CREATED BY:



MITCHELL BOERMAN



RILEY BROWER



KALISSA BRUS

Table of content's

Chapter	Author	Page
Marbles on a ramp	Kalissa Brus	3
Making a Bulb Light Up	Mitchell Boerman	4
Magnetism	Riley Brower	5
Newton's 1st Law	Kalissa Brus	6
Newton's 2nd Law	Riley Brower	7
Newton's 3rd Law	Mitchell Boerman	8
Glossary	ALL	9

Marbles on a Ramp

Where's the science?

What I learned from this experiment that the higher the the ramp the more FORCE and with more FORCE the more SPEED can pull the marble down with just as FORCE as the GRAVITY and FRICTION and the GRAVITY would make the marble go down but it can't go down because there is cardboard in the way so it goes down the ramp with SPEED till it hits the ground but it also hits the bumpers and with more WEIGHT the more FRICTION. The marble has the most ACCELERATION at the bottom.

Did You Know???

that if there wasn't any gravity you would float your house you would floating animals would even float and everything else.



Life Connection Story...

This year when I went sledding I kept on wiping out but then finally I went straight down the sledding hill and I went fast down the sledding hill and it was lots of fun. When I was going down the sledding hill I kept and kept thinking that I was going to crash again and when I got to the bottom of the hill and didn't crash I was happy because normally I crash.

Vocabulary

Speed -something that is fast.

Force -an energy that can move something.

Acceleration- when it goes the fastest.

Gravity -a force that pulls something down.

Weight- how much something weighs.

Friction- something that makes you slow down.

Making a bulb light up

Where's the science?

I learned about a **load** and **open circuit** and **closed circuit**. It works like this, a **load** is what you hook up to the battery and a **open circuit** is a circuit that is not working and a **closed circuit** is a circuit that works. I also learned that an **electric current** can flow through a wire. Also I learned that a **switch** can turn a circuit on and off. I also learned about a **conductor** and **insulator**. A **conductor** lets electric current flow through it and a **insulator** is something that **electric current** cannot flow through.

Did
You
Know???

That a light can get brighter if you hook up more battery's to it. and if you hook up to many battery's it will burn out.



Life Connection Story...

"Ouch" me and brother were taking apart a microwave, I was taking out the light bulb I cut myself again that light bulb holder in the microwave is sure sharp I looked at all the wires "boy theres a lot of wires" I thought. just like hooking up a light bulb in the experiment. the end.

Vocabulary

Electric - Current is like a wire lets electric current go through it.

Open circuit - is a circuit that is not on

Closed circuit - is a circuit that is on

Load - a load is like the load on a electromagnet.

Switch - turns electric on and off

Conductor - let's electric go thru it

Insulator - does not let electric go threw

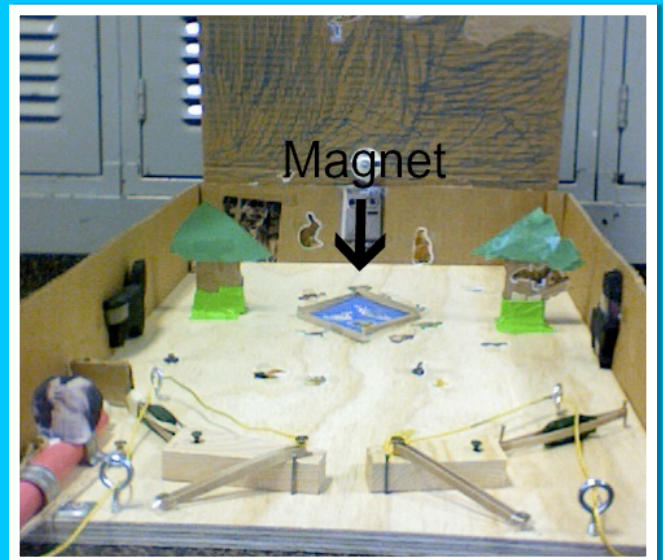
Magnetism

Where's the science?

The **Electromagnet** can be turned on and off by opening and closing the circuit. A magnet has a **magnetic pole** like a north pole and south pole. A magnet can also attract metal things this is called a **magnetic attraction**. A **magnetic field** is a field around a magnet and if a metal thing touches it the magnet attracts it.

Did You Know???

A electromagnet can be turned on and off not like a normal magnet.



Life Connection Story...

One of my favorite electromagnet story's is where me Kalissa and Mitchell made a electro magnet together and then picked up 8 paper clip's. Mr. Commeret said "try to make it without the instruction's" it was hard I thought but we did it and I was happy.

Vocabulary

Magnetic attraction, It mean's that two magnets attract.

Magnetic field, a region around a magnetic material or a moving electric charge within which the force of magnetism acts.

Magnetic pole, It means that there is a south pole and a north pole on a magnet.

Electromagnet, A electromagnet is a magnet that can be turned on and off.

Newton's 1st law

Where's the science?

In Newton's first law of MOTION an object in MOTION wants to stay in MOTION unless acted upon by a person who touches it or an animal or a object and both are a unbalanced FORCE. An object in rest wants to stay in rest unless acted upon by an unbalanced FORCE which could be a person or animal or a object.

Did You Know???

A object in motion want's to stay in motion and a object at rest want's to stay at rest.



Life Connection Story...

When ever I don't want to sleep like when sometimes I even stay up till nine but when I finally do go to sleep I want to stay sleeping unless somebody opens the door like once when my dad was bring my cough medicine to my moms house that time was really late. Sometimes my sisters are talking down stairs in their bedroom which sometimes wakes me up because they stay up longer than me up because my mom is yelling at them to get ready for bed but then I want to stay up.

Vocabulary

Inertia

Force an energy.

Mass how many parts there are.

Acceleration the speed of things.

Action & Reaction doing something and the result of it.

Motion something happening .

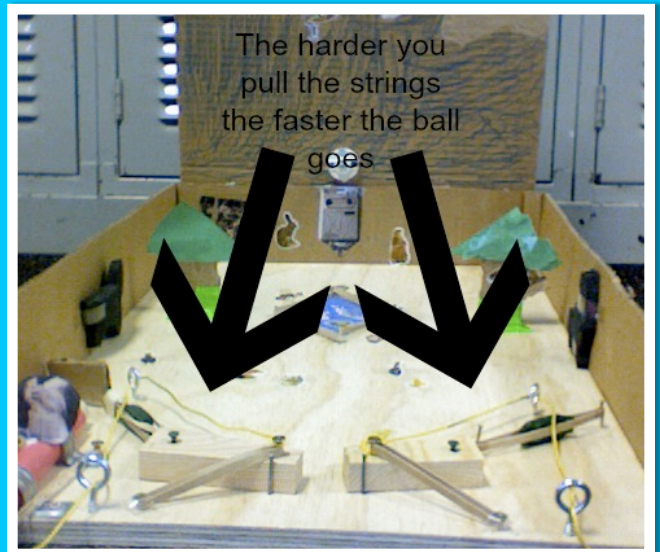
Newton's 2nd law

Where's the science?

$f=ma$ so if I push MASS with FORCE it will accelerate.
so if you push something you're using FORCE and then it accelerates.

Did You Know???

In Newton's cradle there are balls and if you pull one back and let it go it bang's into the other balls and then they go



Life Connection Story...

One time when I was little I was trying to help him ride a bike so I pushed him which equals force and they he is mass and he started to accelerate.

Vocabulary

Inertia is gravity pulling something down and keep speeding it up.

Force is if you push something you're pushing it with force.

Mass is how big something is.

Acceleration is like something speed's up.

Action & Reaction is if you move something and get it going fast and you let go that is action and reaction.

Motion is how something moves.

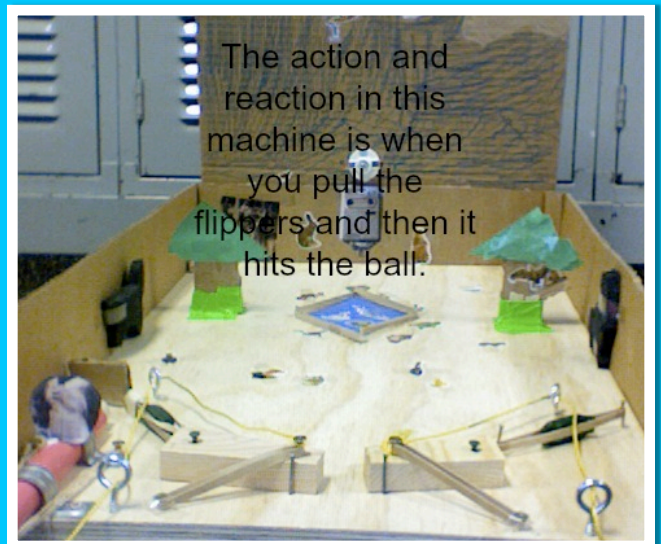
Newton's 3rd law

Where's the science?

In the pinball machine the flippers have ACTION and REACTION. When the flippers hit the ball that's the ACTION. The REACTION is the ball moves forward.

Did You Know???

Did you know if you push something then let go it will keep going forward.



Life Connection Story...

"Strike" said the umpire. I was playing baseball the action is the pitcher pitching the ball the reaction is the bat hitting the ball. "WE WIN THE GAME."

Vocabulary

Inertia

Force

Mass

Acceleration

Action & Reaction is if you move something and get it going fast and you let go that is action and reaction.

Motion

Glossary

Acceleration -	is like something speed's up.
Action & Reaction -	is if you move something and get it going fast and you let go that and it keeps sliding that is action and reaction.
Closed circuit -	is a circuit that is on.
Conductor -	let's electric go thru it.
Electric Current -	Current is like a wire lets electric current go through it.
Electromagnet -	The electromagnet is a magnet that can be turned on and off.
Force -	is if you push something you're pushing it with strenght.
Friction -	something that makes you slow down.
Gravity -	a force that pulls something down .
Inertia -	is gravity pulling something down and keep speeding it up.
Insulator -	does not let electric go threw.
Load-	a load is like the load on a electromagnet.
Magnetic attraction -	it mean's that two magnets attract.
Magnetic field -	a region around a magnetic material or a moving electric charge within which the force of magnetism acts.
Magnetic pole -	It means that there is a south pole and a north pole on a magnet.
Mass -	is how big something is.
Motion -	is how something moves.
Open circuit -	is a circuit that is not on.
Speed -	something that is fast .
Switch -	turns electric on and off.
Weight -	is how much something weighs.