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Project Title: Magnets

YouTube Link: _____

Short Explanation of Project: We did our project about
magnets and some cool experiments
with magnets.

Do you have a signed photo release form for each student?

- Yes
- No

Comments

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Introduction

Why we chose this project...

What we hope to learn...

What is the problem/objective...

We are doing our project about magnets because we think magnets are very interesting and we would like to learn more. We would like to learn more about magnetic forces and how they work. We would also like to learn about the different types of materials they stick to. And if they are made in a certain country. What country?

Main Information

What we found out about our chosen topic.

Magnetism happens when tiny particles called electrons behave in a certain way. All objects in the universe are made up of electrons and other particles (neutrons and protons). The electrons spin around the atoms nucleus which contains the other particles. The spinning electrons form tiny magnetic forces. Sometimes many of the electrons in an object spin in the same direction. In these cases all the tiny magnetic forces from the electrons add up to make

the object one big magnet

One of the earliest uses of magnets was in compasses. A compass is a needle-shaped magnet that is free to turn around. The planet Earth is a giant magnet. Because the south pole of a compass is attracted to the north of Earth the compass needle always points north.

Magnets are usually made of metal iron or other materials with lots of iron in it.

Three types of metals interact with

Magnetic fields: ferromagnetic, paramagnetic

and diamagnetic metals ferromagnetic

metals are strongly attracted to magnets

the rest are not. Magnets also attract

paramagnetic metals but very weakly.

Diamagnetic metals repel the magnet

though the force is typically very weak

ferromagnetic metals are strongly attracted

by a magnetic force, the common

ferromagnetic metals include iron nickel

cobalt gadolinium dysprosium and alloys

such as steel that also contain specific

ferromagnetic metals such as iron

or nickel, ferromagnetic metals are commonly

used to make permanent magnets

A magnet will weakly attract paramagnet metals such as magnetism, molybdenum and tantalum are weakly attracted to a magnetic force. The attractive force is about a never feel the attraction from holding a magnet to a piece of magnesium for example only very sensitive scientific equipment can measure the weak force. Diamagnet metals don't attract magnet - they repel them though weakly. examples include copper, carbon, gold, silver, lead and bismuth.

Experimental Methods

Research Question:

How many pages will a magnet
go through?

Prediction/Hypothesis:

We think a magnet will go through
about ten pages

Materials used:

Planet Math 4th class

Bua na Cainte 4

Magnets

Procedure:

We got a planet maths book and used a magnet to see how much pages it would go through. It went through the whole book which was 192 pages long.

Then we tried with a Bua Na Cainte and it went through about the same amount of pages so we tried a stronger magnet. And it went through the whole book which was 204 pages long.

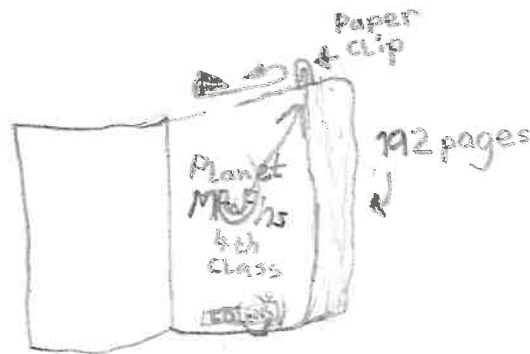
Observations:

Magnets are really strong and they can go through a lot of pages.

Conclusion:

If you use a thicker book the weaker the magnet gets.

Diagram(s):



Conclusions

What we learned.

The key discoveries that we made.

What we enjoyed most while doing the project.

What we found most challenging.

What we would do differently if we were to begin again.

We learned that magnets can go through a whole book. First, we tried our Planet Maths book, which has 192 pages. Planet Maths had worked so we tried a slightly bigger book. We tried it with our Irish book (Bua na Cainte) which has 204 pages. We also found out that it goes through our table which is 2cm thick. Even though it is only 2cm

thick it is a much stronger material.
We enjoyed watching the paper clip
move around. We found some of
the words a bit tricky to understand.
We would use thicker books and
different magnets if we were to
do the experiment again. We were
happy that everything worked.

Acknowledgements

Support we received with our project...

We thank our teacher Múinteoir
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Ruby Henderson

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Naoise Sarsfield

Karol Bendkowski

References

Books, websites, articles or other references that helped us with our project.

www.nationalgeographic.org

Small World Geography & Science

first4magnets.com

youtube.com