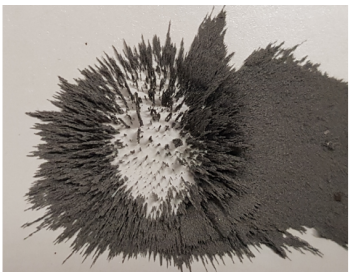


SUBMITTED BY
Markus.Sigrist

ON
2024.03.03

★ ★ ★ ★ ★
Keine Stimmen

Mysterious magnetic force



Strong magnets offer many possibilities for interesting effects such as displaying magnetic fields, illustrating the invisible power of God, showing attraction/repulsion and much more.

Material:

- Strong magnet (available e.g. at www.udobaer.ch or www.hagemann.de, very strong at www.supermagnete.ch)
- Iron filings / iron powder (available from a metalworker or at www.gerstaecker.ch)
- Beaker or similar
- Medium-thick plastic foil, paper clips and water basin for illustrating fishing

Experiments:

Caution: Super magnets can develop very large, even dangerous forces. Always have a thick piece of cardboard between two magnets, otherwise they are almost impossible to separate!

Make sure that iron powder never comes into direct contact with the magnet, it can hardly be removed!

Try the following options:

1. Sprinkle iron powder on a cardboard box, add a magnet from the bottom side. The iron takes on the direction of the magnetic field.
2. Place a magnet in an empty glass. Place a pile of iron powder on a piece of cardboard at some distance. Move closer with the magnet in the glass until the iron is attracted. You will also see very interesting patterns
3. If you have two magnets, you can also show how they attract each other (when different poles approach each other) or repel each other when you bring the same poles closer together.
4. Place the magnet on a table. Then you can move the other one under the table. The one on the table moves as if controlled by an invisible force.
5. You can also cut out fish from plastic foil (for example, from a plastic folder). Attach a paper clip to it and throw the fish into a bowl. Then you can attach the magnet to a string and pull the fish out. You can also put lots of plastic fish like this in a pond outside and have a fishing

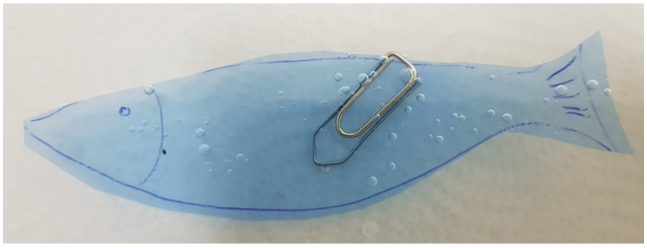
competition.



Field lines on the cardboard



Magnet in a beaker, iron filings form wonderful shapes on the outside



The fish is made of foil, with a paper clip attached to it that allows you to fish with the strong magnet

Biblical interpretation.

Invisible power is made visible. Various passages can fit in with this:

Romans 1, 20: "God's invisible nature - that is his eternal power and deity - has been seen in his works since the creation of the world, if one perceives it" (see also experiment with pet bottle)

Jesus promised that he would bring everyone to himself (John 12:32)

Jesus holds us fast: *John 10, 27-29: My sheep listen to my voice; I know them, and they follow me. To them I give eternal life, and they will never perish. No one can snatch them out of my hand. My Father has given them to me, and no one is stronger than he. That is why no one can snatch them from my Father's hand.*

When two magnets attract:

John 21:6: Then he urged them, "*Cast the net on the right side of the boat, and you will make a good catch!*" They followed his advice and caught so many fish that they could no longer haul in the net

When two magnets repel each other:

4. Exodus 20:21: So the Edomites refused to allow Israel to pass through their territory. And Israel evaded them.

Experiment 5 can be used as an introduction to the story of Peter's fishing expedition (Luke 5:1-11) or to illustrate other biblical passages with fish.

Keywords:
Physics, physical experiments, gastronomy, force, attraction, chemistry, chemical experiments, experiments

Proof of source

Cover picture: Markus Sigrist
Game idea: With the kind permission of BESJ (Bund Evangelischer Schweizer Jungscharen), slightly modified by Markus Sigrist

Weitere Informationen

Categories
Technology and outdoor activities

Tags
Physics
Experiment
Magnets
Dedication
Material

Age
8–12 years
13–16 years
from the age of 16

Number of participants
No data available.

Bible
Topic:

Duration
No data available.

Terrain / surroundings
Meadow
Forest
City

Material
Almost effortless

File download
No file downloads

KI Generierter Inhalt
Contents
Categories
Tags
Age
Number of participants
Bible
Duration
Terrain / surroundings
Material

© YoungstarsWiki | https://youngstarswiki.org/en/wiki/art/mysterious-magnetic-force