mini scientist

intel

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Project Title: Sinking and Floating

YouTube Link:

Short Explanation of Project: We did this project to see How things float and Others sink

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 did this projects to Learn How things Float and Others Sink. We hope to Learn Why Ships and boats Float and why Rock's Sink. We also did this to see How many thing or people can go on a boats without Sinking. We whats to Know Why big Ships With Lot's on it Float without Sinking and How. A Small Rock Sinking but a big ship with Lot's on it Floating!

Main Information

What we found out about our chosen topic.

Have you ever Wondered why Some things Float and others things sink? You might even thing that bigger this sink and some Smaller things float. But in the weirdeird and wonderful world we live in. that's not true! There are For more Reasons behind the mystery of sinking and floating. A thing called density. Everything around us is made up of tiny, tiny Molecules. In some objects Molecules are Jam packed together. And in others they are loosley packed together.

This is actully what density means. The objects that are Jam packed together have a higher density and the more loosley Packed objects aren't as dense. For a minute think of a large Object like a boat or make an airship. How dose this sink and float Work? Some boats are massive, and would seem very dense. So How do they stay afloate. Well the boat pushes water aside so that there's

room for it. As it's so heavy it actually gets pulled down by the force of gravity. But there's more to this. Now comes buoyancy, which is the opposite of gravity. What is buoyancy? Think about what happens when you put an ice cube in a glass of water. As the ice cube moves some water to make way for itself, the water level rises and the ice floats partially in and out of the water. Gravity is pulling the ice cube down and the buoyant force is pushing it up. How far in or out of the water your ice cube stays depends on it's density, as that is what is pushing and pulling forces are working against.

Here is an activity! Get a bowl or bucket and a few objects from your house or garden. These could include a pice of small wood, a stone, a spoon, an egg, small balls or anything else you could find. Put them in the water and see what Sinks and what Floats. Now you know what Sinks and what Floats and what Sinks is more dense and what Floats is less dense. Write your findings down. As we know things Float they are less dense in water. Did you

Know it is easier to lift a heavier person in a swimming pool? This is called Buoyancy. Liquids of all kinds have different densities. Try mix a few liquids together in a jug and see what floats and what sinks to the bottom. Those at the bottom are denser. Steel ships float because even though steel is denser than water, their hulls are full of air. They sink until enough water has been moved to match the weight of steel and air in the hull. Ships float at higher than another, now you know why! Ships float higher in sea water than in fresh water because salt makes water denser. Ships float higher in dense cold seas than in warm water.

Experimental Methods

Research Question:

How much sand goes into a container without it sinking.

Prediction/Hypothesis:

About three quaters full.

Materials used:

Sand, container, bason, water.

Procedure:

First we put a small bit of sand in the container. Then we put it in the water. It did not sink so we put some more in and it still did not sink! We filled up to the top and it finally sunk!

Observations:

Sand is light enough and to make a small container sink you need to fill it to the top.

Conclusion:

With a small container you should fill it to the top with sand if you want it to sink

Diagram(s):

Experimental Methods

Research Question:

Can we make bluetack float?

Prediction/Hypothesis:

We think we can make bluetack float.

Materials used:

Bluetack, basin and water.

Procedure:

First we got a big pice of bluetack and it sank even when we made it diffrent shapes. Then we got a smaller pice and it did float! We made it a boat shape and carefuly put it in the water.

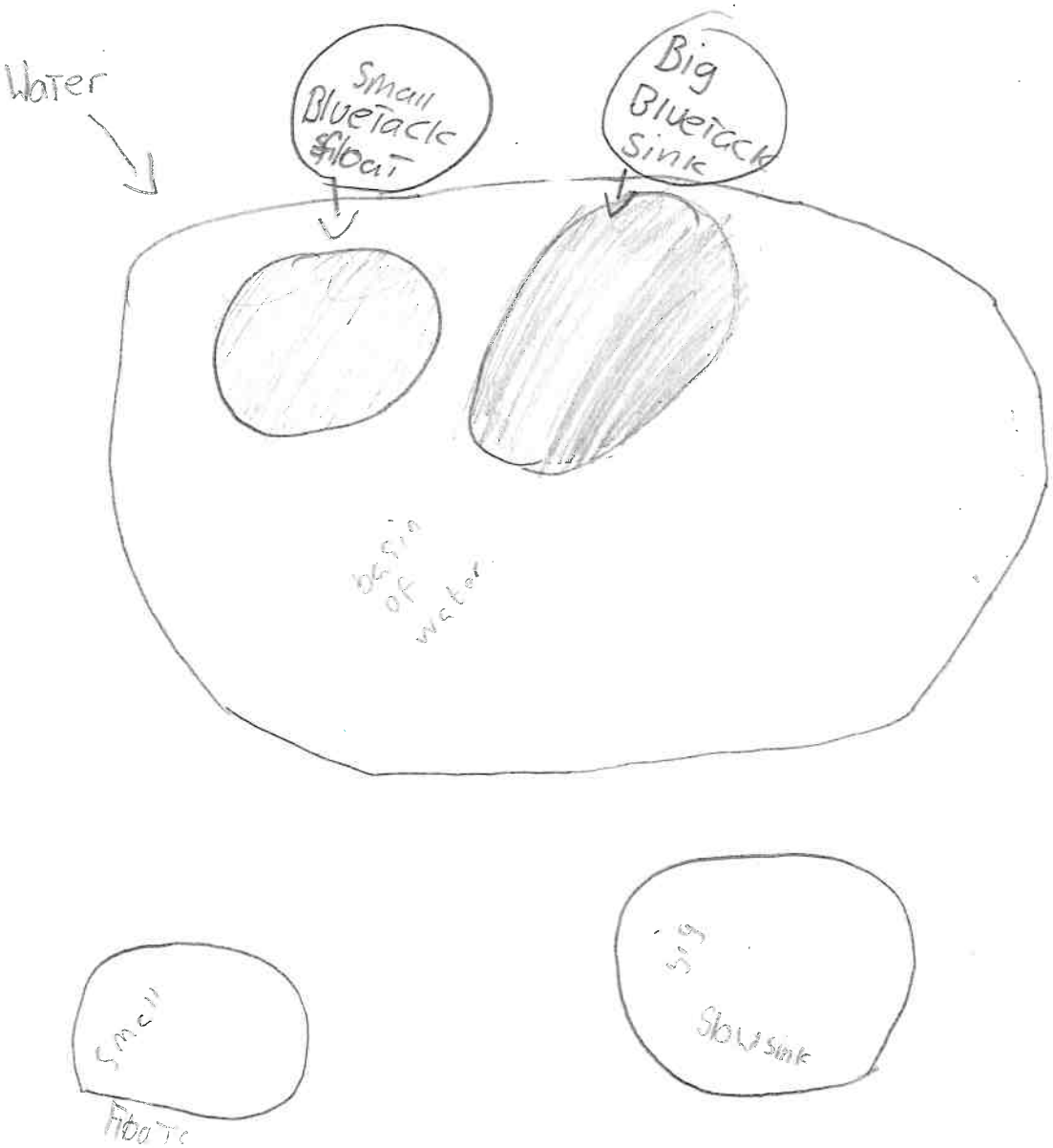
Observations:

Big pices of bluetack don't float and smaller bits do. When it gets very wet it starts to break and small holes form.

Conclusion:

Big bits of bluetack don't float and smaller pices do float and don't break that easily.

Diagram(s):



Experimental Methods

Research Question:

How much water can we put in a baby cup with it still floating.

Prediction/Hypothesis:

we thought that it would fill up half way until it sinks.

Materials used:

We Used a Baby cup, Basin of water and a Small Spoon.

Procedure:

First we poured a small bit of water into the baby cup then we put it in the water, it turned to it's side but still floated. we kept doing that until it was half way, that's when things got very tense because it was slowly going down when it was 3quarters it finnly sank

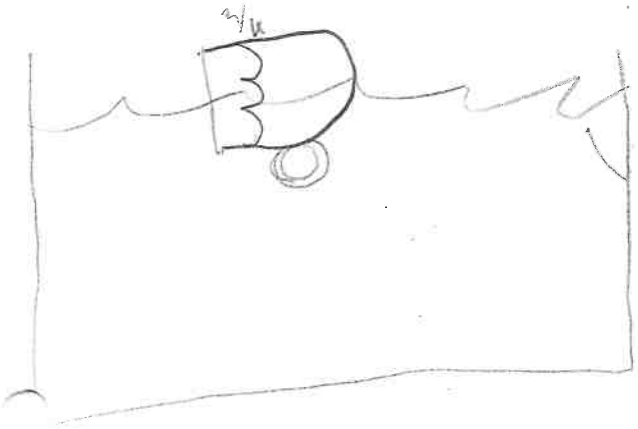
Observations:

we learned that water is heavy when it is in a cup and sinks because the cup is heavy so with water in it. It will get heavyer

Conclusion:

The conclusion is that water does float in a small 200ml cup.

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.

what we learned!

we learned that stuff floats because of density

Denisty is very important since stuff with more density will sink so stuff with less density will float.

what we enjoyed most while doing the project!

We Think That The Sand was The funest Thing That we done Because it was Hard BUT FUN!

The key discoveries.

The key discovories are that we can make

blue-tack float and we also learned that water floats on water.

If we were to change it we would see if we could make bluetack float differently and use less bluetack.

We found the bluetack not hard

Acknowledgements

Support we received with our project...

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Max

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References

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

Coolkidfacts.com

Small world

Science Netlinks

Youtube.com

Science Sparks