6th Annual Science Fair 2024


Kindergarten

Can different liquids affect oxidation?

Mrs. Moody's Kindergarten Class

PINEVIEW ELEMENTARY SCHOOL
TALLAHASSEE, FL

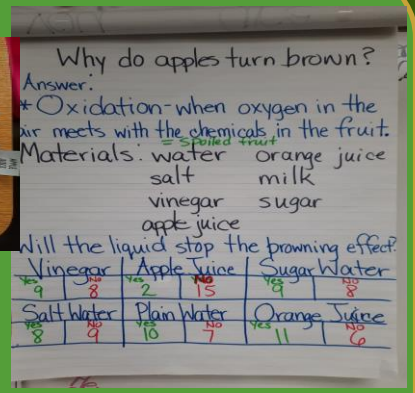
Purpose: The purpose of our experiment is to investigate if different liquids can affect apple browning (oxidation).

Hypothesis: We think that some liquids will cause the apples to turn brown because after an apple is cut, it turns brown.

Materials:
1. Apples
2. Knife
3. Plain water
4. Salt water
5. Sugar water
6. Apple juice
7. Orange Juice
8. Bowls for each liquid
9. Plate

Procedures:
1. Pour each liquid into individually labeled bowls.
2. Slice apples and place each one in a different liquid.
3. One slice will be left out of the liquids as a control variable.
4. After 3 minutes remove the apples, place on a plate and record how the apples changed.
5. Repeat process and record results after 6 minutes.

Data:



Results: After our experiment we observed that the control apple turned brown each time in the 3 minute and 6-minute trials when compared to the apples submerged into orange juice, regular water, sugar water, salt water, and vinegar.

Conclusion: Our results show that natural oxidation occurred when the apple was not submerged into a liquid. There was slight browning of apples dipped in apple juice and sugar water. Therefore our hypothesis was incorrect as the liquids did not cause oxidation to occur. Next time we will add lemon juice and revise our hypothesis.

GUMMY BEARS IN LIQUIDS

MS. JOHNSON
KDG 2024

Pineview Elementary School; Tallahassee, FL.

PURPOSE:

Gummy bears are a fun and tasty treat that can also be used to teach young children about science and math The purpose of the gummy bear experiment for kindergarten students is to introduce them to the concept of scientific investigation, as well as to teach them about science and math, and the scientific method. They will learn to predict what will happen, conduct the experiment, and record their observations.

HYPOTHESIS:

Half of the kindergarten class thinks the Baking Soda and water will expand the gummy bear and will grow 2 inches .

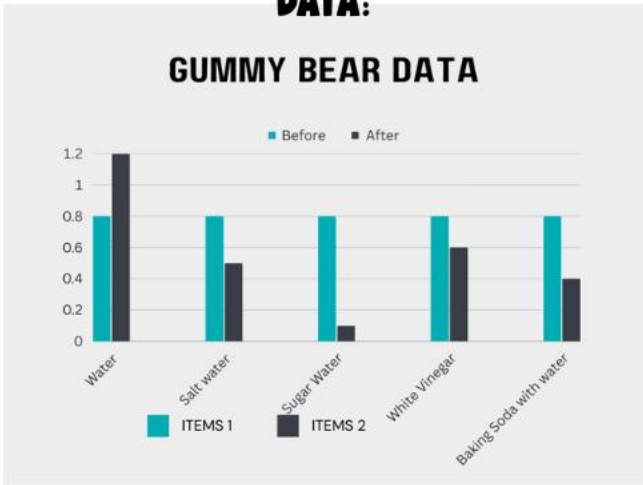
MATERIALS:

- Gummy bears
- Small clear containers
- Salt
- Water
- Baking Soda
- White Vinegar
- White Sugar
- Pencil
- Ruler
- measuring spoons

PROCEDURES:

1. Measure the gummy bear's height and width with a ruler.
2. Have students predict which gummy bear will expand.
3. Label each container for the different kinds of liquid (Tap water, sugar water, salt water, vinegar, baking soda)
4. Add half a cup of tap water, sugar water, salt water, vinegar water, and baking soda to the containers.
5. Add one gummy bear to each container of liquid.
6. Leave the gummy bear in the containers for 12 hours.
7. Remove each gummy bear from the different solution. Compare the Gummy bears.
8. Discuss the results with the class

DATA:



RESULTS:

The gummy bears that were placed in water, will absorb the liquid and become larger and softer. The gummy bears that were placed in vinegar, will dissolve and become smaller.

CONCLUSION:

We discovered that gummy bears can grow bigger when they are soaked in water for a long time. We also learned that gummy bears can dissolve in some liquids, like soda and vinegar. It was interesting to see how the gummy bears changed over time and we had fun making predictions about what would happen next.

ACKNOWLEDGMENTS:

We would like to thank all the wonderful chemists and other scientists who spent time discovering the world around us!

Pineview Elementary School; Tallahassee, FL .

Kindergarten- Ms .A Jefferson

Purpose: The purpose of our experiment is to identify the various materials that are compatible with water absorption.

hypothesis: We believe that water will fully absorb a paper towel, cotton ball, napkin and paper bag. Additionally, we think that water will not successfully absorb a plastic bag or aluminum foil sheet.

Materials

1. 1sponge
2. plastic lid
3. napkin
4. foil
5. skiffle packed
6. sock
7. zip lock bag
8. paper towel
9. sandwich wrap
10. construction paper
11. aluminum foil
12. cotton balls

Procedures

1. Make predictions about the materials that will be absorbed by water and what will be repellant against water.
2. Fill an eye dropper or straw with colored water and squeeze onto each materials.
3. Using observation skills and appropriate senses, identify which materials absorb water and which do not.
4. Complete the chart recording these findable results

Data

Results: As a result, we were able to identify that all paper-based products such as napkins, paper towels and tissue were easily absorbed by water.

The Science: Water, rather known as H20, is highly compatible with the chemical makeup of paper-based products and as a result, is able to be fully absorbed by these materials. Materials that absorb water are described as porous. Porous means capable of absorbing liquids. Porous materials have pores or openings that allow air or water to pass through easily. Materials that repel water or don't absorb water are called non-porous.

Pineview Elementary School; Tallahassee, FL .

Kindergarten-Ms.Williams

Purpose: The purpose of our experiment is to see if we could create a lava lamp using Alka-Seltzer, water, and food coloring.

Hypothesis: Our hypothsis is that the Alka Seltzer may cause bubbles, but will not have the effect of a Lava Lamp

Materials

1. 2 Mason Jars
2. Water
3. Alka Seltzer Tablets
4. Food Coloring

Procedures

1. Fill the containers with 1/4 water. Top up near the top with cooking oil
2. Wait as the oil and water separate into two layers, water at the bottom and oil at the top
3. Add Food Coloring. The color will mix with the water at the bottom.
4. Drop half an Alka Seltzer tablet into the container, and watch as it bubbles.
5. Record Observations

Data

Results: Food Coloring mixed with the water at the bottom of the jar. The Alka Seltzer Tablet did create bubbles with in the jar. As the color mixed, it DID create the effect of a Lava Lamp.

The Science: Alka Seltzer is made of citric acid and sodium bicarbonate. As the tablet dissolves they mix to form carbon dioxide and sodium citrate. It is the bubbles of carbon dioxide gas and sodium citrate that carry the colored water into the oil giving a Lava Lamp effect.

1st Grade

Pineview Elementary School; Tallahassee, FL

Mrs. Pinkney's Class **The Floating Egg**

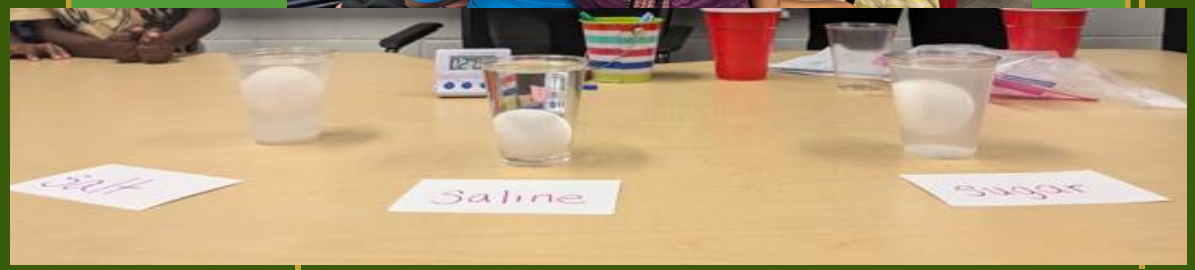
Purpose: The purpose of our experiment is to understand the science behind float objects in water.

Hypothesis:
Sugar water-
Saline Water-
Salt Water-

Materials:
1. 3 Eggs
2. Water
3. Salt
4. Sugar
5. Cups

Procedures:
1. Create the saltwater mixture
2. Create the sugar water mixture
3. Fill a cup with regular water.
4. Place an egg in each mixture of the cups
5. Observe

Data:



Results: After our experiment we observed that the eggs in the salt and the sugar water floated.

Conclusion: Our results show that when the salt and the sugar are added to the water, it increases the density. The denser the liquid is the easier for the object to float.

Acknowledgements: We would like to thank you all for viewing our project!

Pineview Elementary School; Tallahassee, FL

Ms. Hirst and First Grade Class

Purpose: The purpose of our experiment is to find out what will happen to an eggs shell when submerged in different liquids.

Hypothesis: We thought that nothing would happen to the egg submerged in plain water. As for the egg in salt water we thought that the egg would get softer. The egg submerged in vinegar we thought that the shell would get harder. Lastly, the egg in oil we thought the shell would disappear.

Materials:
1. Eggs (4)
2.Containers with lid (4)
3.Water
4.Salt
5. Oil
6.Vinegar

Procedures:
1. Label the lid as to which liquid will be In it.
2. Fill each container with water, salt water, vinegar, and oil.
3. Submerge egg in the different liquids.
4.Observe

Data:

Results: After our experiment we observed that nothing at all happened to the eggs submerged in water, salt water, and oil. However, the shell of the egg in the vinegar disappeared and the egg got bigger.

Conclusion: Our results show that the shell of the egg in vinegar disappeared. Therefore our hypothesis was incorrect. We thought that the shell in the oil would disappear and that the shell would get stronger in the vinegar.

Acknowledgements: We would like to thank all those that took the time to read and view our information about the shell of eggs.

Pineview Elementary School; Tallahassee, FL

Ms. Kimel's Class, First Grade

Purpose: The purpose of our experiment is to determine which type of salt will absorb the most liquid from an apple slice.

Hypothesis: If the size of the crystals affect the amount of liquid salt can absorb, then the Kosher salt will absorb the most since its crystals are the largest.

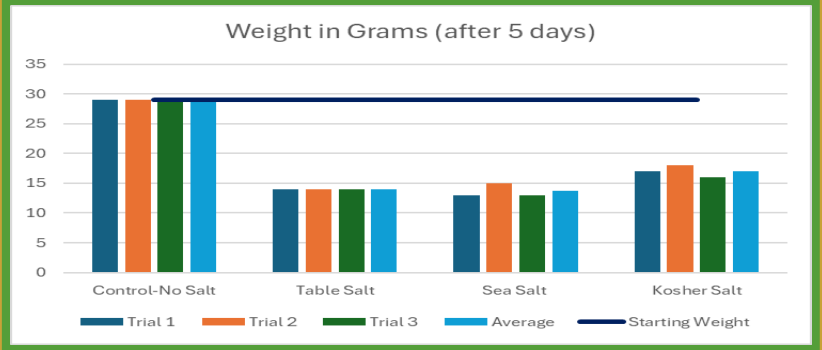
Materials:

1. 4 large Honeycrisp apples
2. 750 mL of Kosher salt
3. 750 mL of table salt
4. 750 mL of sea salt
3. Apple slicer
4. Knife
5. Graduated cylinder
6. Scale
7. Paintbrush

Procedure:

1. Using an apple slicer, cut an apple into equal pieces.
2. Weigh each slice using the scale to select apples of the same weight, 29 grams.
3. Shave a small amount of apple with the knife if necessary to ensure that the slices are of the same weight (29g.)
4. Place each apple slice in a plastic container.
5. Label each container: table salt, sea salt, Kosher salt, and no salt.
6. Measure 250 mL of table salt and pour it into the correct container making sure it surrounds the apple completely.
7. Measure 250 mL of sea salt and pour it into the correct container making sure it surrounds the apple completely.
8. Measure 250 mL of Kosher salt and pour it into the correct container making sure it surrounds the apple completely.
9. Seal all 4 containers and allow to set for 5 days.
10. Repeat steps 1-9 for two more trials.
11. After five days, remove each apple and brush off the remaining salt with the paintbrush.
12. Weigh each apple and record the results.

Data:



Results: After our experiment, we observed that apples in the sea salt had the greatest change in weight with an average loss of 15.3 grams. The Kosher salt absorbed the least, with an average weight loss of 12 grams.

Conclusion: Our results show that the sea salt and table salt absorbed the most liquid. These salts had a smaller crystal size and were tightly packed around the apple. However, our hypothesis was not supported since the largest crystals absorbed the least liquid. Next time, we will attempt to better differentiate between sizes of salt crystals and extend the length of the experiment.

Pineview Elementary School; Tallahassee, FL

Mrs. Grayson's Class **Which type of Sunflower Seeds will grow faster?**

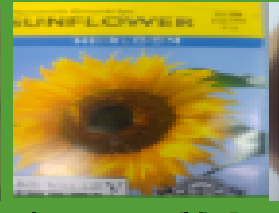
Purpose: The purpose of our experiment is to see if Natural Sunflower Seeds or Processed Sunflower Seeds will grow faster.

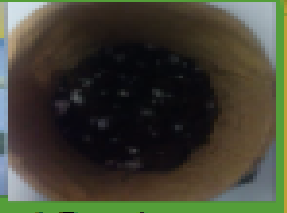
Hypothesis:
11 students predict the Processed Sunflower Seeds will grow faster than the Natural Sunflower Seeds.
6 students predict the Natural Sunflower Seeds will grow faster than the Processed Sunflower Seeds.

Materials:
1. 2 Cups
2. Soil
3. Water
4. 5 Sunflower Heirloom Seeds
5. 5 Salted and Roasted Jumbo Sunflower Seeds

Procedures:
1. First, gather two cups and fill them with soil. Label one cup as Natural Seeds and the other cup as Processed Seeds.
2. Next, dig a hole In each cup of soil. Place 5 Sunflower Heirloom Seeds in the middle of the soil labeled Natural Seeds. Then, place 5 Salted and Roasted seeds in the middle of the soil labeled Processed Seeds. Last, cover the seeds with soil and add water. Finally, place the cups outside to get air and sunlight.
3. Complete observations for 5 days.
4. Compare plant growth.

Data:





Processed Seeds Results

Natural Seeds Resuls

Results: After our experiment we observed that the Natural Sunflower seeds grew much faster than the Processed Sunflower Seeds.

Conclusion: Our results show that the Natural Sunflower Seeds grew at a more rapid rate than the Processed Sunflower Seeds. We believe the Natural Sunflower Seeds consisted of less chemicals than the Processed Sunflower Seeds.

Acknowledgements: We would like to thank you all for viewing our project!


2nd Grade

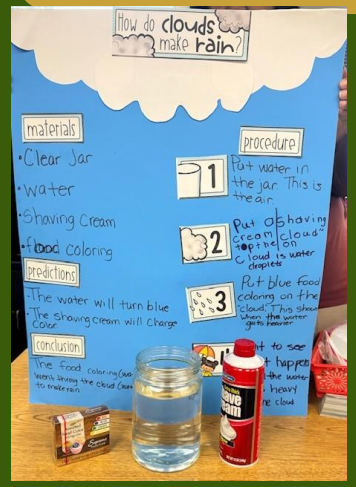
Pineview Elementary School; Tallahassee, FL

Ms. Range's Class **Rain in a Jar**

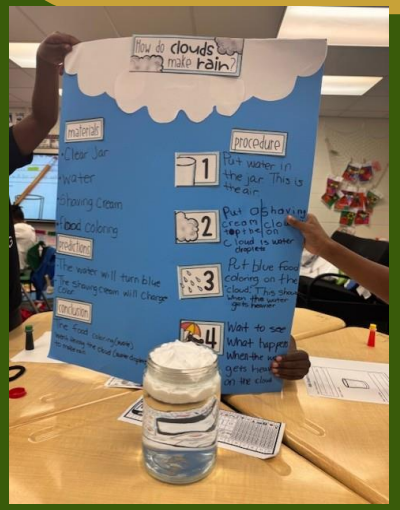
Purpose: The purpose of our experiment is to investigate the process by which clouds produce rain

Hypothesis: How many drops of food coloring will it take to produce rain in the jar:
6, 11, 2, 15, 19, 10, 17, 5, 4,

Materials:
1. Glass Jar
2. Water
3. Shaving Cream
4. Food Coloring



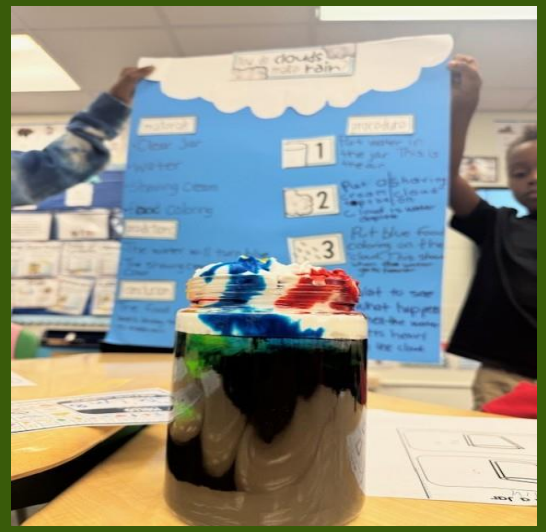
Procedures:
1. Put Water in a jar. The water represents air.
2. Put a shaving cream cloud on top of the water. The shaving cream is representation of a cloud.
3. Put food coloring on the clouds, one drop at a time. This shows when the water gets heavier.
4. Count as you squeeze drops of food coloring onto the shaving cream until color appears in the water.
5. Observe



Results: Some hypothesis were correct and others were not.

Conclusion: The number of drops required varied, as it depended on factors such as the placement of the drops and the amount of food coloring dispensed.

Acknowledgements: We would like to thank you all for viewing our project!



Pineview Elementary School; Tallahassee, FL

Mrs. Villa's Class

Purpose: The purpose of our experiment is to determine which material will lead to the cleanest water.

Hypothesis: We think that the pebbles will do a better job at "cleaning" the dirty water.

Procedures:

1.Cut three water bottles in half.
2. Sit the top half of each water bottle in the bottom half.
3. Secure a coffee filter to the end of each water bottle
4. Add pebbles, activated charcoal, and pebbles to their own bottles
5. Pour the dirty water into each bottle.
6. Wait 5 minutes after pouring the water in each bottle and test the filtered water with a PH strip.

Materials:

1. Plastic water bottles
2. Dirty Water
3. Clear plastic cup
4. Activated charcoal
5. Pebbles
6. Cotton balls
7. PH test strips
8. Coffee filter
9. Rubber bands

Data:

Results: After our experiment, we observed that the activated charcoal produced the cleanest water.

Conclusion: Our results show that out of all three of the materials used, activated charcoal produced the cleanes water.

Acknowledgements: We would like to thank each other for working together.

Pineview Elementary School; Tallahassee, FL

Ms. Davis' Class

Purpose:
How much salt does it take to make an egg float in a glass of water?

Hypothesis:
Half of the class thinks that the egg will never float. The other half thinks the egg will float when we add different measurements of salt.__

-

Materials:

1. 5 Eggs
2. 5 Cups
3. Tablespoon
4. Salt
5. Water

Procedures:
1- Fill up 5 glasses of lukewarm water. Lable the glasses 1 to 5

2 –Place the 5 eggs into their own class.

3 – Add no salt to cup 1, three tablespoons of salt to cup 2, four tablespoons of salt to cup 3. five tablespoons of salt to cup 4, and 6 tablespoons of salt to cup 5

4- See which measurement of salt makes the egg float in water.

Data:

Results:
The egg floated in the water after six tablespoons of salt was added into the glass.

Conclusion:
In conclusion, we were able to observe the density concept. We saw how adding salt to water increases its density, making it denser than the egg, which allows the egg to float. The more salt added, the denser the water becomes, enabling the egg to float.

Acknowledgements: We would like to thank all the wonderful chemists and other scientist who spent time discovering the world around us! ☺


3rd Grade
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APPLE BROWNING

Mrs. Miles' Homeroom

Grade 3

Research Question

What can you put on an apple to keep it from browning?

Hypothesis

The majority of the class thinks Sprite will keep the apple from browning.

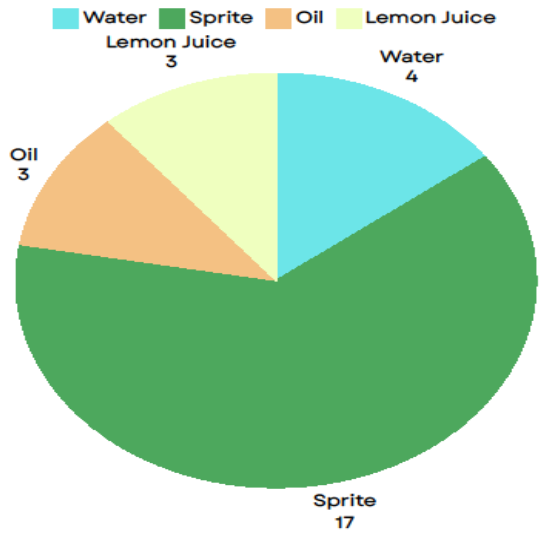
Research

Over 120 mins, the students observed the oxidation process of an apple and watched how some chemicals can slow down that process.

Materials

- Apple
- Knife
- 5 clear cups
- Oil
- Water
- Lemon Juice
- Sprite

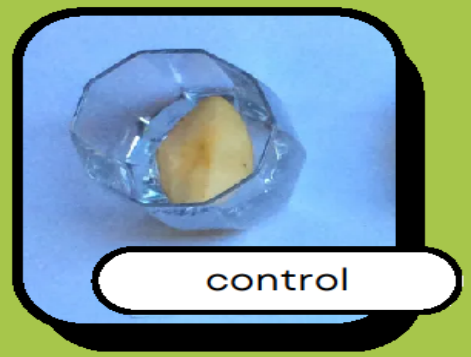
Charts



Procedure

1. Gather all of your materials.
2. Make sure each liquid is at room temperature.
3. Label your cups with the name of each liquid, leave one empty for control
4. Pour each liquid, about halfway, each cup.
5. Cut your apple into 5 even slices
6. Place one apple slice into each cup.
7. Observe the experiment over the next few days.
8. Document your results.
9. Publish your results.

Results



Conclusion

Lemon Juice helped to stop the browning of the apple. So, the next time you want to save an apple, drop it in lemon juice.

Pineview Elementary School; Tallahassee, FL

Teacher: Ms. Thomas

Purpose:

Density: Can we make an egg float?

Hypothesis:

I think that we can make the egg float by adding sugar to the water. Since cereal has sugar in it and it floats, I think sugar can make the egg float.

Materials:

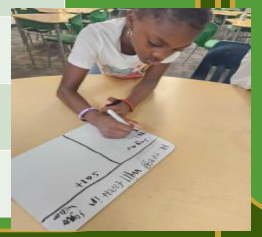
1.3 eggs
2.3 cups
3. Water
4. Sugar
5. Salt
6. Tablespoon
7. 2 small cups
8. 2 spoons
9. Food scale
10. Graduated cylinder

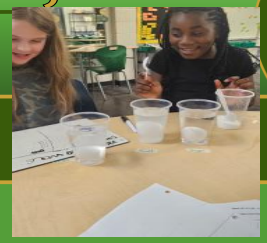
Procedures:

1. Create a label for each cup- Water, salt, sugar.
2. Pour 355 mL in each cup.
3. Gently drop an egg into the cup labeled “water”.
4. Record results on your data sheet.
5. Measure 1 tbsp of salt and stir it into the water in the cup labeled “salt”.
6. Record your observations on the data sheet.
7. Repeat steps 5-6 six times.
8. Measure 1 tbsp of sugar and stir it into the water in the cup labeled “sugar”.
9. Record your observations on the data sheet.
10. Repeat steps 8-9 six times.
11. Record your final results.
12. Dispose of your materials in the proper receptacles.

Data: S= sink F= Float

Test	H20	Salt	Sugar
1	Control	1 Tbsp- S	1 Tbsp- S
2	Control	2 Tbsp- S	2 Tbsp- S
3	Control	3 Tbsp.- S	3 Tbsp.- S
4	Control	4 Tbsp- S	4 Tbsp- S
5	Control	5 Tbsp- S	5 Tbsp- S
6	Control	6 Tbsp- F	6 Tbsp- S





Results:

The egg floated after 6 Tbsp of salt was added to the water. The egg did not float after 6 Tbsp. of sugar was added to the water.

Conclusion:

My hypothesis was incorrect, the egg floated after 6 Tbsp. of salt was added to the water. Salt is heavier than sugar, so it takes less salt to make the egg float than sugar. The salt made the water more dense than the egg.

Acknowledgements:

https://www.sciencefun.org/kidszone/experiments/floating-egg/#:~:text=The%20egg%20is%20denser%20than,causing%20the%20egg%20to%20float.


4th
Grade

Pineview Elementary School

Mrs. J. Hartsfield Block 1

Topic: Which Will Weather Faster?

Purpose:
The purpose of this investigation is to determine if smaller rocks or larger rocks will weather faster.

Hypothesis
Our class think smaller rocks will break down more quickly that larger rocks.

Materials:
2 plates
100 mL of warm water
Sugar cube
Granulated sugar

Procedures:
1. Put the sugar cube on one plate.
2. Put about one teaspoon of granulated sugar on the other plate.
3. Slowly pour 50 mL of warm water onto each plate.
4. Observe what happens to the sugar.

Data:
There is no more sugar on the plates.
The sugar dissolved into water.
The sugar cube weathered slower than the sugar.
The sugar broke down faster than the sugar cube.
The sugar turned yellow.
The sugar cube decomposed.

Results:
The granulated sugar disappeared quicker than the sugar cube.

Conclusion:
The sugar cube represented large rocks. The granulated sugar represented small rocks. The sugar cube melted more slowly that the granulated sugar. Large rocks weather more slowly that small rocks.

Research:
The process of rocks breaking apart is called weathering.

Pineview Elementary School

Mrs. J. Hartsfield Block II **Topic: How Do Magnets Attract Objects?**

Purpose:

The purpose of this investigation is to determine how and why magnets attract certain objects.

Hypothesis:

Our class think magnets will attract objects made of iron or other metals.

Materials:

Magnets
Paper clips
Nails
Medal
Plastic spoons
Corks
Paper plates

Procedures:

1.Work in groups
2.Move a magnet near each objects.
3.Observe what happens as the magnet gets close to each object.
4.Record your observations in a data table.
5. Stroke the nail 30 times with one end of the magnet. Stroke in one directions only. Record your observations.
Move the stroked nail near each object.
6 Record your observations.

Data:

Object	Attracted	Not Atrracted	Attracted by Nail
Paper clip	yes		no
Nail	yes		
Medal		no	no
Plastic spoon		no	no
Cork		no	no

Results:

The paper clip and nail was attracted by the magnet. The medal , plastic spoon, and cork was not attracted by the medal. The magnetized nail did not attract any of the objects.

Conclusion:

Magnets attract objects that have metal or iron in them. The magnetic field needs to be stronger to make an object with iron or medal in it(magnetized nail) attract objects that do not have iron or medal.

Reaarch:

A magnet is an object that attracts iron and other metals. A magnetic pole is the part of the magnet where the force is the strongest. One of the poles is called the S pole. The other end is called the N pole.

Pineview Elementary School

Mrs. Hartsfield Block III

Topic: Which Will Weather Faster?

Purpose:

The purpose of this investigation is to determine which rock will weather faster- smaller rocks or larger rocks.

Hypothesis:

Our class thinks that small rocks will break down more quickly than large rocks.

Materials:

2 plates
100 mL of warm water
1 sugar cube
Granulated sugar

Procedures:

1. Put the sugar cube on one plate.
2. Put about one teaspoon of granulated sugar on the other plate.
3. Slowly pour 50mL of warm water onto each plate.
4. Observe what happens to the sugar.

Data:

What Did You See?

Sugar cube fell apart. (broken down)
The sugar melted faster than the cube.
The sugar turned yellow.
The cube dissolved down slowly.
Both the sugar and sugar cube turned into a liquid.

Results:

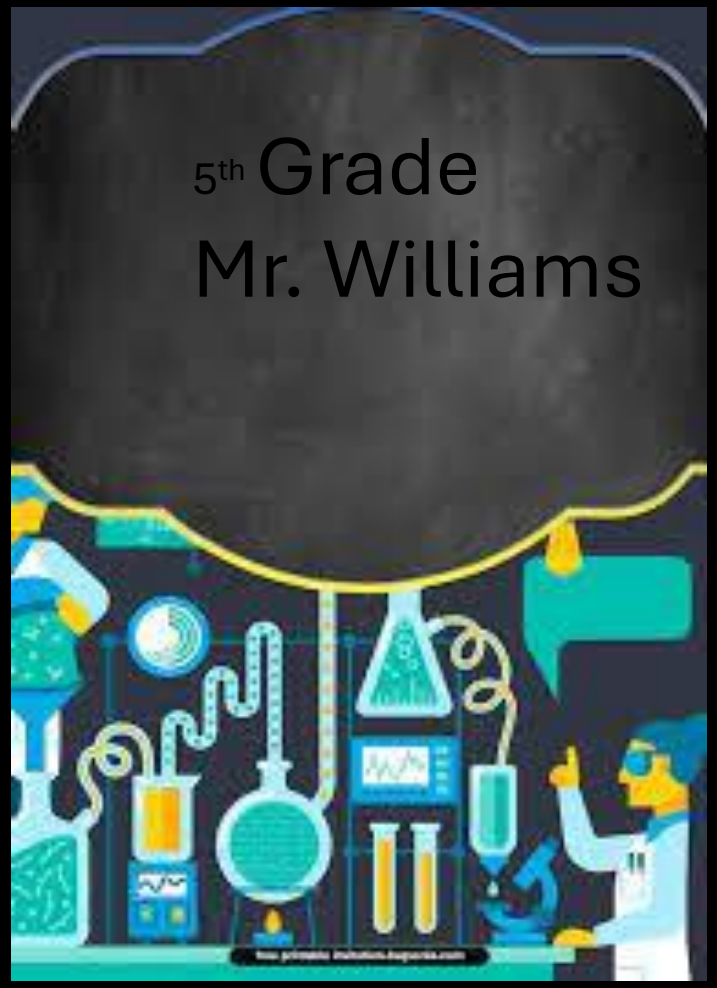
The granulated sugar dissolved into a liquid.
The sugar cube melted down slowly.

Conclusion:

The sugar cube represents large rocks. The granulated sugar represents smaller rocks. Smaller rocks weather faster than large rocks.

Research:

The process of rock breaking apart is called weathering.


5th Grade
Mr. Williams

Pineview Elementary School; Tallahassee, FL

Mr. W's class Topic: Exploring the Molecular Structure of M and M's with water temperature

Purpose: The purpose of our experiment is to determine if different water temperatures will dissolve the coating on M and Ms

Hypothesis: The coating on the M and M's will dissolve faster in hot water

Materials

- 3 Same-color M&M's
- 3 White plastic or foam dessert plates (Do not use paper plates. The water will soak through them)
- Room-temperature water
- Hot tap water
- Cold water
- Round film canister lid or a quarter
- Preparing materials
- ● This activity uses cold, room-temperature, and hot water. For best results use ice
- water, water that is about 20 ° C, and water that is about 45 ° C.
- ● You may wish to draw concentric circles in the center of plates ahead of time. Or
- students can draw them as part of the activity. The procedure for drawing these is
- 1 Plastic cup, 3 1/2-ounces
- Permanent marker
- Bucket
- Paper towels

Procedures

- Use small pieces of paper to label each of three plates or just use a permanent marker and write cold, room-temp, and hot.
- Pour cold, room-temperature, and hot water into their labeled plates so that the water covers the bottom of the entire plate
- With the help of your partners, place a same colored M&M in the center of each plate. Observe for 1 minute
- Record your observation on an activity sheet or note pad

Data:

Hot Room Cold

Results

In most cases, my students hypothesis stood up to the test. However, many did not expect the room temperature water to remove the candy coating down to the chocolate like hot water.

Conclusion:

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Students in all three blocks concluded hot water and room temperature dissolved the M and M's the best.

Acknowledgements:

I would like to thank my team of 5th grade scientists for their energy and effort. We were able to make connections and draw scientific conclusions together.


ESE

Pineview Elementary School; Tallahassee, FL

Mr. Seganish's class, ESE 3 - 5

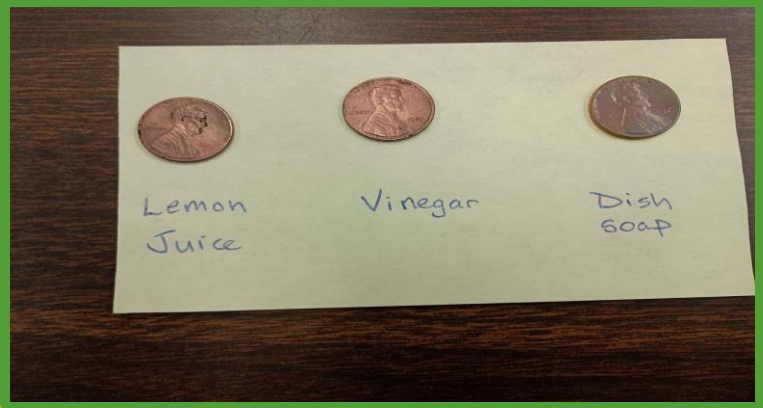
Purpose: The purpose of our experiment is to determine: What can we use a to make a dull penny shiny, soap, vinegar, or lemon juice? What we know: We use soap to clean our hands and dishes. Vinegar can be used to make pickles We use lemon juice to make lemonade. Pennies are made from a metal called copper.

Hypothesis:
All students made the hypothesis that all three liquids would make the pennies shiny.

Materials:
1. 1 shiny penny (for comparison)
2. 3 dull pennies
3. 3 jars
4. Lemon juice and vinegar
5.Liquid soap
6. Water and paper towels

Procedures:
1.Put each penny in a jar.
2.Cover one penny with lemon juice, one penny with vinegar and one penny with dish soap.
3. Let each penny soak for 24 hours. (We tried ten minutes the first time without any change.)
4. After soaking the pennies, remove them from the liquid, rinse them with water and dry them
5. Determine which pennies are shinier.

Data:



Results: After my experiment I observed that the lemon juice and vinegar made the pennies shiny, but the soap did not make the pennies shiny. Students learned that lemon juice and vinegar are acidic and most dish soap has a neutral ph.

Conclusion: My results show that liquids that are acidic will make a penny shiny. Lemon juice and vinegar are both acidic. The dish soap is not acidic. It did not make the penny shiny, but it looked a little bit cleaner.

Acknowledgement
This experiment was from the Unique Learning Systems curriculum.

Pineview Elementary School; Tallahassee, FL

Miss. McIver's Class

Purpose: Can we see the difference in how much heat is given to planets based on their distance from the sun?

Hypothesis: If a planet is closer to the sun, then it will NOT be warmer than a planet that is farther away.

Materials:

1. Thermometer
2. Flashlight (to represent the sun)
3. Small ball
4. Tape and ruler

Procedures:

1 Set Up the Model: Put each "planet" at different lengths away from the "sun." Place the "sun" (flashlight) at one end of a table.

2 Place the Planets: Place "Mercury" closest to the flashlight, "Earth" a little farther away, and "Neptune" farthest from the light source, measuring the distances with a ruler to make it consistent.

3 Turn on the Sun: Turn on the flashlight or lamp and allow it to shine on the planets for about 5-10 minutes.

4 Observe and Record: Check the temperature on each "planet" after the time has passed. Which planet is the warmest? Which is the coolest?

Data:

Mercury – Raised 4 degrees

Earth – Raised 2 degrees

Neptune – Raised 0 degrees

Results:

Mercury got hotter when the light was turned on because it was closer!

Conclusion:

Planets closer to the sun, like Mercury, are hotter because they receive more light and heat, while planets farther away, like Neptune, are colder.Our hypothesis was incorrect, but that's okay! We learned a lot about the planets, heat, and light!

Acknowledgements: We would like to thank all the scientists and astronauts for exploring the universe we live in!