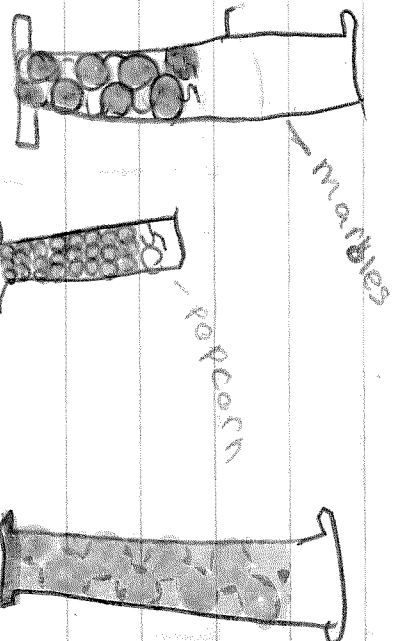


what will have is the
pop corn are going to fill
in the space in the marble



	Volume	Volume	Mass
marbles	55 ml	43.4 g	
pop corn	50 ml	42.9 g	
pop corn	80 ml	80.0 g	

Mass

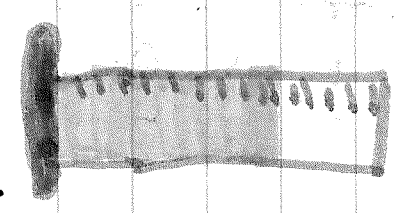
water

alcohol

Cyl 1	50.2 g	40.4 g
Cyl 2	50.6 g	40.0 g
Cyl 3	100.1 g	
both	100 ml	100 ml
Cyl 1	50 ml	50 ml
Cyl 2	50 ml	50 ml
Cyl 3	100 ml	100 ml

Cyl 1
Cyl 2
Cyl 3

Volume
the space
it takes up



mass
how much
matter is
in the
object.
find it by
its weight.

Water | mass

Marbles | 43g

Volume

55ml

mass +
Volume

43g

55ml

Popcorn
corns

42g

50ml

42g

55ml

Marbles
+

85g

80ml

85g

80ml

Popcorn

Alcohol | mass

cr11

40g

50ml

40g

cr12

60g

50ml

48g

cr13

80g

100ml

80g

1. measure the mass

2. measure the volume

3. put in the # of volume

4. put the # of mass ml

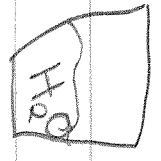
5. your finish!

Density = both / solid

Mixture is when you put more than two things together.

When the solid (salt) is mixed with the salt is transparent and it can't be separated.

Salt solution



metals

- they conduct
- heat and electricity
- bent / flattened
- soft / breaking their solid
- @ form
- temperature
- gold, copper, silver, and iron

non metals

- don't conduct electricity
- heat
- they break
- water than bend
- most are gases
- helium, oxygen, nitrogen, carbon

metalloid

- conduct heat
- electricity but not so well
- Boron, and silicon

Mixtures

Part 1

Prepare three cups. Put 1 level spoon (5 mL) of each solid material in each cup. Observe the three solid materials. Fill in the property chart below.

	Color	Texture	Particle shape	Particle size
Gravel	white and brown	rough and bumpy	triangles △	medium
Powder	bark white	soft	irregular particles	very small
Salt	white	rough	circle and triangles	small

Part 2

Add 50 mL of water (one full syringe) to each cup. Stir and observe. Write your observations on the opposite page.

Gravel and water: the color is the same takes
bark + looks browner

Powder and water: bark white no powder

Salt and water: makes salt

Mixture

Gravel/water
~~Gravel~~ H₂O
 powder/water
 both separate

Powder/water
 separate

Salt/water
 not separate

Gravel or H₂O
 you could separate

Solution

A chemical change is change in matter that produces substances different from the substance you start with.

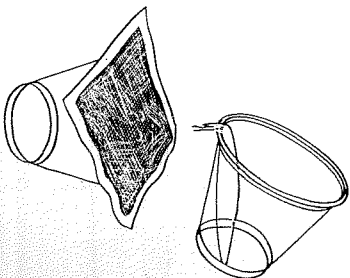
Separations

How can a mixture be separated?

Procedure

Separate all three mixtures, using screens and filters.

1. Place a screen over an empty, labeled cup.
2. Stir the mixture thoroughly.
3. Pour the mixture through the screen.
4. Pour the mixture through the filter paper.



Did you separate the mixtures? Record your results.

	Screen	Filter paper
Gravel	yes	no
Powder	no	yes
Salt	no	no

I think the water evaporated, because there's no H₂O and all that part are salt crystals.

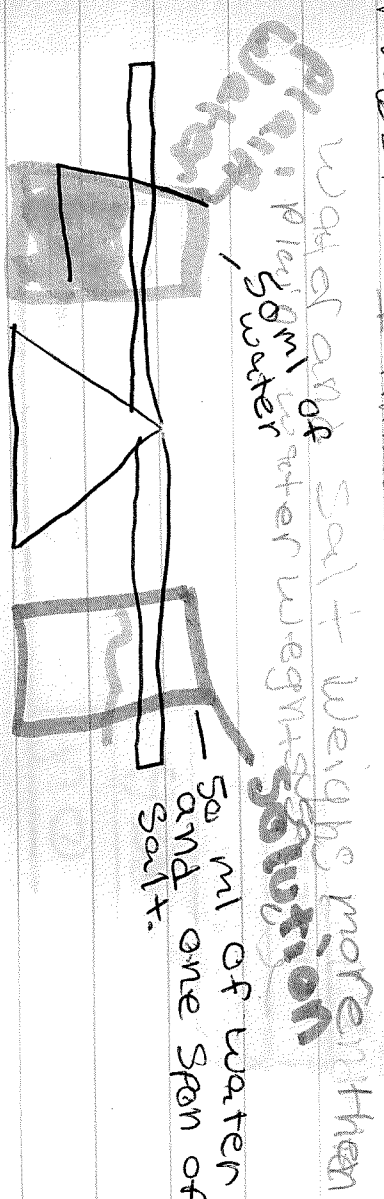
... I think it's going to be more mass. I think it's going to be more mass. I think it's going to be more mass.

Where does the solid material go when a solution is made?

mass of water = 50g (volume)

Will a solution made with 50ml of plain water, and one spoon of salt have... the same mass, more mass, or less mass. I think it's going to be more mass. I think it's going to be more mass. I think it's going to be more mass.

I was right. Solution has more mass. I think the solution of the

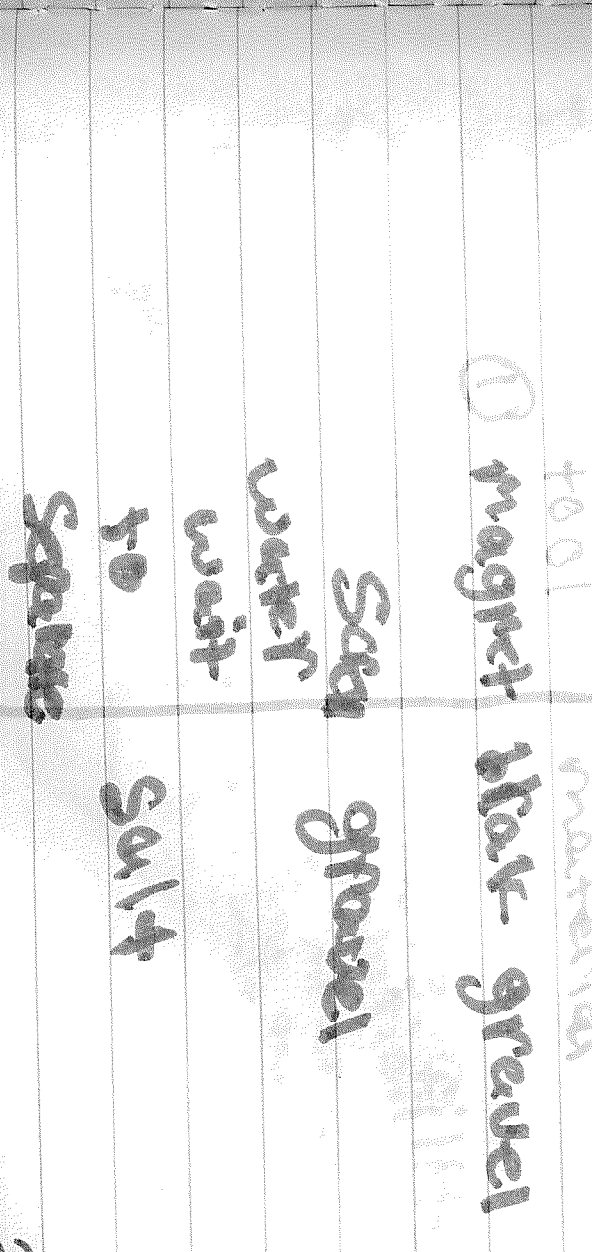


Final Plan

First, we use a magnet to separate the mystery material. Next, we use a screen to separate the gravel from the powder and salt. Then, we use the water to mix the salt, powder and the water. After that, we use the coffee filter to separate the solution from the powder. Finally, we wait for the water to separate (evaporate) then we have left the salt behind and now all the materials are separated all the dry materials.
(fill glass or funnel)

How can you separate a mixture of dry materials?

- 1. use gravel + 1 powder + salt = dry mixture
- 2. use coffee filter the rest
- 3. add water
- 4. add water
- 5. use screen to separate the gravel from powder & salt.



1. 100g salt
2. 100g water

3. 100g salt
4. 100g water

5. 100g salt
6. 100g water

7. 100g salt
8. 100g water

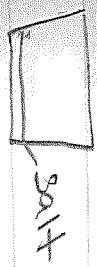
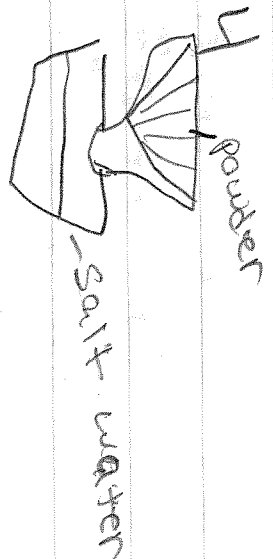
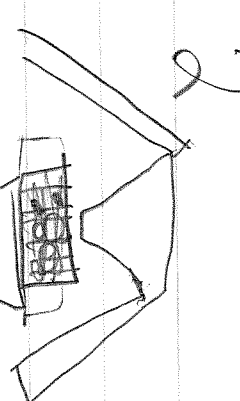
9. 100g salt
10. 100g water

11. 100g salt
12. 100g water

13. 100g salt
14. 100g water

15. 100g salt
16. 100g water

17. 100g salt
18. 100g water



5
0 0 0
0 0 0
0 0 0



3

2

Water

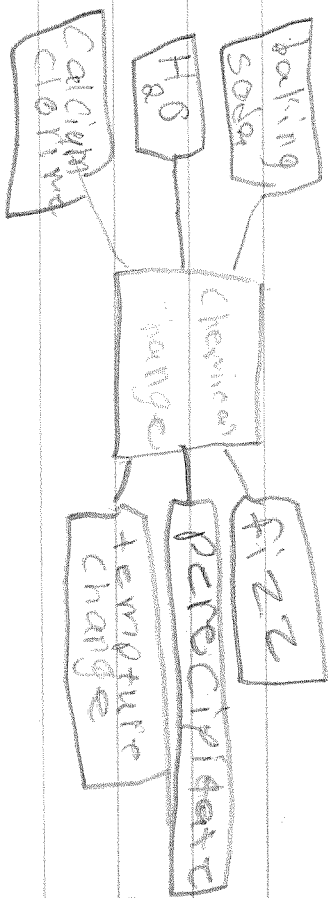
Water

Water

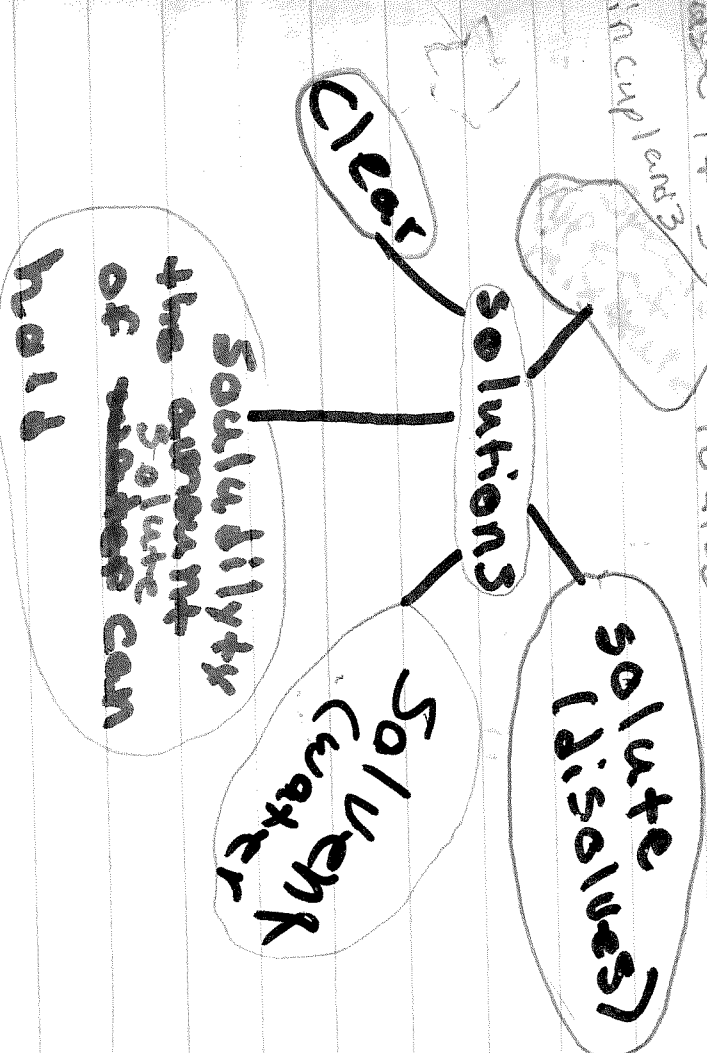
Water

salt

When baking soda calcium chlorin
 chlorin with water it
 creates a chemical change
 because a precipitate was
 created and a slight temp-
 erature change.

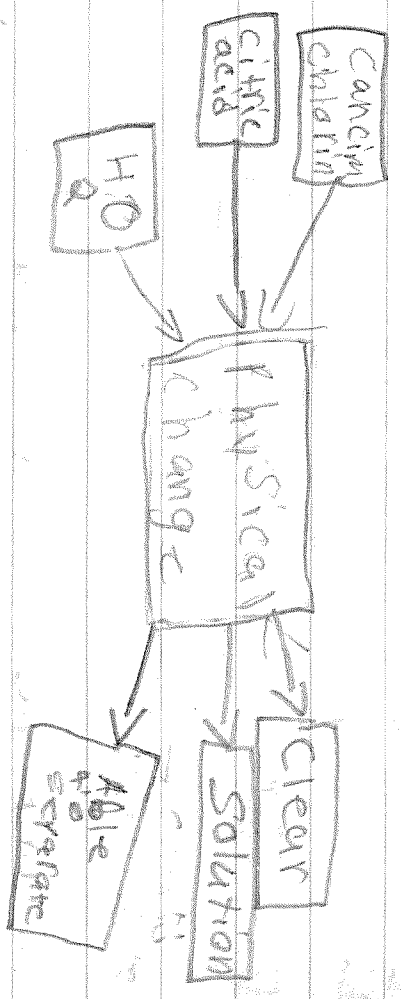


What happens when two substances
 are mixed with water? A chemical change
 because it separates to fizz and a temperature change
 like in cup 1 and 3

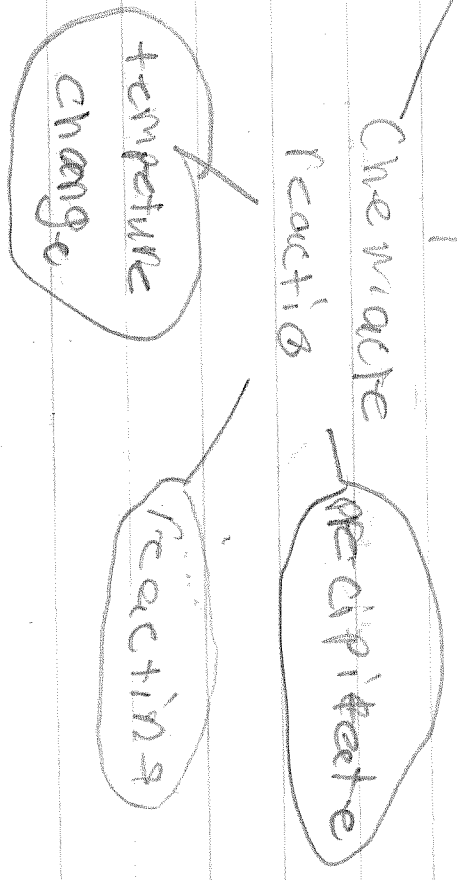
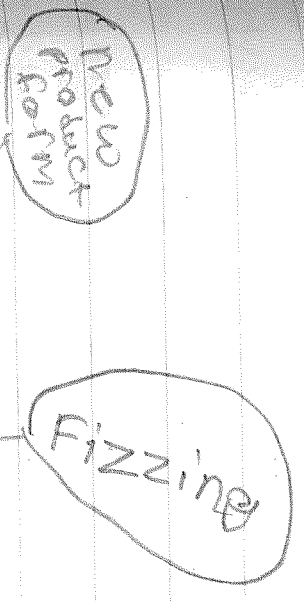


calcium chloride-
 citric acid - solution
 baking soda - solution

Calcium Chloride



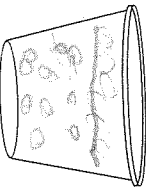
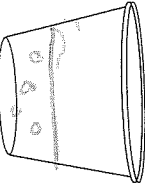
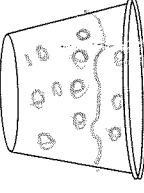
When we mix calcium chloride and citric acid with water, we get a physical change because the solution is clear and able to separate.



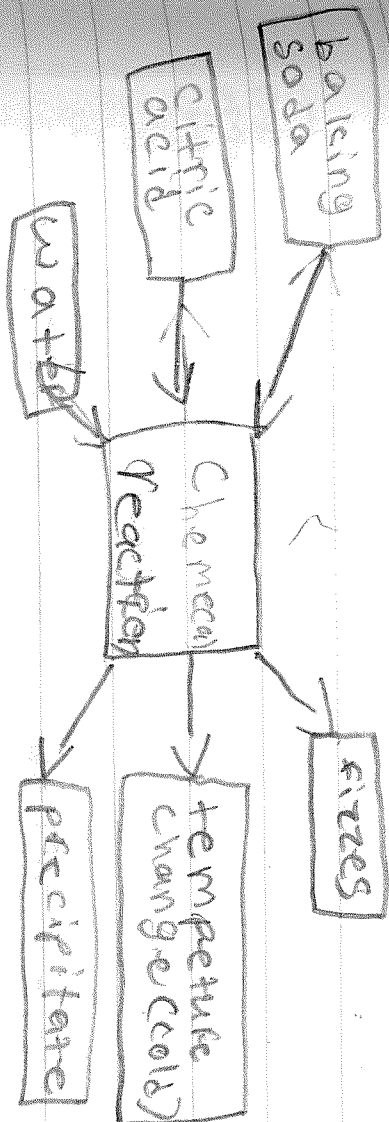
Chemical

WARNING — This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.

Two-Substance Mixtures

<p>Cup 1: 1 spoon of calcium chloride, 1 spoon of baking soda</p>  <p>50 mL of water</p> <p>the cup started to make bubbles and fizzy smells like a fresh lemonade</p>	<p>Cup 2: 1 spoon of calcium chloride, 1 spoon of citric acid</p>  <p>50 mL of water</p> <p>30°C SOLID smells bad warming</p>	<p>Cup 3: 1 spoon of baking soda, 1 spoon of citric acid</p>  <p>50 mL of water</p> <p>made carbon dioxide smells and looks like Sprite strong cold</p>
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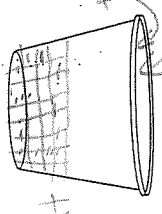
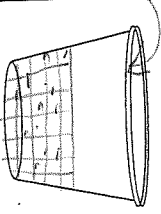
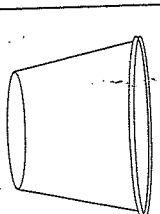
1. Which substances reacted to form a gas?
2. Which substances reacted to form a precipitate?



When you mix baking soda, citric acid with water I think you get a chemical reaction because it fizzes, it becomes cold and it precipitates.

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Solid - Liquid - Gas

 50 ml of water Ice -10°F 20°F There is frost on the ice and salt	 50 ml of water Ice 30°F Water on Dewey	 50 ml of water 150°F 110°F Water vapory
--	--	---

I predicted the water molecules come from the heat

- ① I think Dewey did not have frost because we did not add salt and on frosty we did add salt. ② I think frosty didn't get water drops because we added salt. ③ There are different Dewey is warmer than frosty.
- ④ Drops of water formed because the can is too hot to get frost.
- ⑤