

Day 2 – Acid & Alkali (2)

Learning: What happens when you add acid to an alkali?

Copper Coin Experiment

Show them the nail and coins? What happened to them?

The Nail changed colour, the vinegar dissolved the copper in the water, which is attracted to the nail so coating it with copper.

Explosions Video 1

Baking Soda & Vinegar Reaction Experiment in groups

What you need:

1. Cup
2. Baking Soda
3. Vinegar
4. Water
5. Zip lock bag

What to do

1. Cut the cup in half and put a teaspoon of baking soda in the cup
2. Put 6 teaspoons of vinegar into the bag
3. Carefully put the cup of baking soda into the bag without spilling the baking soda.
4. Seal the bag.
5. Shake the bag.
6. What happened

Group Time before the Experiment:

Group Time after the Experiment:

1. They reacted together, what was produced? What makes the bag expand
2. Chaos in English is pronounced gas.
3. When acid reacts with a base it produces a gas.
4. What is a gas? Can you name some gases?
5. Carbon dioxide gas is being produced.

Egg & Vinegar Experiment (Will carry out a couple of days before lesson)

What you need:

- Eggs x 6
- Container
- Vinegar
- Big Spoon

What to do:

1. Place your egg in the container.
2. Add enough vinegar to cover the egg. Notice that bubbles form on the egg. Cover the container, put it in the refrigerator, and let the egg sit in the vinegar for 24 hours.
3. Use your big spoon to scoop the egg out of the vinegar. Be careful—since the eggshell has dissolved, the egg membrane may be the only thing holding the egg together. The membrane is not as durable as the shell.
4. Scoop the egg out and rinse it carefully.
5. When you're done, you'll have an egg without a shell. It looks like an egg, but it's translucent—and the membrane flexes when you squeeze it. Very cool!

Group Time

1. Show the children the egg. Explain that the egg had been sitting in vinegar for 24 hours.
2. What is vinegar? Acid
3. The shell of the egg is calcium carbonate which is alkaline.
4. What happens when you add an acid to an alkali? They react.
5. When you submerge an egg in vinegar, the vinegar reacts with the shell dissolving it.

Making Sherbet

What you need:

1. Cup
2. Tasting Cups
3. Plastic spoons
4. Jug for water
5. Teaspoons
- 6.

Recipe

7. 1 teaspoon Baking Soda
8. 1 teaspoon Citric Acid
9. 8 teaspoons Jelly crystals
10. 5 teaspoons Icing Sugar

What to do:

1. Combine all the ingredients together into the cup
2. Transfer some to your tasting cups and taste it.
3. Add water, drink fizz

Group Time

1. What does it feel like on your tongue? Fizzy
2. What is making the fizz? Acid reacting with the alkali

Volcano Experiment

Finish making the volcanoes ready for the volcano experiment

1. Wrap laminated sheet around plastic bottle.
2. Use glue gun to glue top edge of bottle to the cone.

**What you need:**

1. Plastic Beaker
2. Measuring cups
3. Stirring spoons
4. $\frac{1}{2}$ cup warm water
5. $\frac{1}{4}$ Cup vinegar
6. 6-8 drops of Dishwashing soap
7. A few drops of Red colouring
8. Two tablespoon of Baking Soda

What to do

1. Add the following to your plastic beaker: the water, baking soda, dishwashing soap and the red colouring.
2. Stir until it dissolves, add to your volcano.
3. Pour the vinegar quickly into your volcano and stand back.