

## Making a Rubber Egg

### Safety!

- If you spill any vinegar make sure to clean it up with some paper towels
- If you drop the cup on the floor and it smashes, make sure you tell an adult to help you clean it up
- Don't eat the egg!!! It is still raw
- Be careful to not drop the egg and handle with care



### Apparatus

- White vinegar
- Egg
- Glass jar / cup



### Method

#### Summary

By using vinegar we are able to break down the shell of an egg. The shell is made of something called calcium carbonate and can react with vinegar. The reaction breaks down the shell and also produces carbon dioxide (which you can see as bubbles on the egg). After time, all of the shell has reacted leaving a thin layer, known as a membrane, which surrounds the yolk and white of the egg.

#### Steps

1. Place an egg into a glass cup or jar (such as a measuring jar)
2. Cover the egg completely with white vinegar
3. Leave the egg for 24 hours
4. The next day empty the vinegar and pour some fresh vinegar over the egg in the jar
5. Leave for a week in a safe place



#### Evaluation / Conclusion

This experiment is more than just dissolving an egg shell. It shows the chemical reaction of an acid (Vinegar) with another compound, in this case a carbonate. Acids are very reactive and can react with loads of other compounds, see if you can find some more things that they can react with.

**FOLLOW UP SCIENCE**

Research and make a list of some more acids

**Why did we use vinegar to react with the shell and not any other type of acid?**

**What would happen if we used a different acid?**

- You can do the experiment again by mixing different amounts of water with vinegar and repeating the experiment above. Make a guess and record how long it takes for the shell to dissolve in each case. (By adding water, we are making the vinegar weaker, also known as more dilute)
  
- Repeat the experiment with different types of carbonates, some examples include :
  - Chicken bones
  - Snail Shells