

## Naked Egg

### You will need:

- Adult help
- A glass or jar big enough to nest the egg
- An Egg
- White vinegar
- Time!

### Let's make it!

Place the egg in a tall glass or jar and cover the egg with white vinegar. Look closely at the egg. Do you see any bubbles forming on the shell?

Leave the egg in the vinegar for a full 24 hours. On the second day, carefully pour the old vinegar down the drain and cover the egg with fresh vinegar. Don't disturb the egg!

Once you have covered it with fresh vinegar, place the glass with the vinegar and egg in a safe place for 7 days! Seven days later, pour off the vinegar and carefully rinse the egg with water. The egg looks translucent because the outside shell is gone! You've made an egg without a shell and it can bounce! Shine your torch through it! What can you see?

### How?

Vinegar is an acid called acetic acid. White vinegar from the shop is usually about 4% acetic acid and 96% water. Eggshells are made up of calcium carbonate. The acetic acid in the vinegar reacts with the calcium carbonate in the eggshell to make calcium acetate plus water and carbon dioxide bubbles that you see on the surface of the shell. You will notice that the egg is now a little bigger. This is because some of the water in the vinegar solution travelled through the egg's membrane in an effort to equalize the concentration of water on both sides of the membrane. This flow of water through a semi-permeable membrane is called osmosis.

