

Eggs

Description

Eggs are an exciting thing! We'll show you how to "x-ray" an egg or make a bouncy egg. We'll also explore how to tell raw from cooked and fresh from old eggs. Eggs from different birds not only look different, but are also different sizes.

Materials

- 1 Raw and boiled eggs
- 2 Flashlight
- 3 Glass
- 4 Vinegar
- 5 Container with water

Procedure

- 1 Eggs are exciting, but unfortunately similar to a black box - to peek inside you have to break them. Or do you?
- 2 Darken the room and carefully place an egg on a flashlight which is switched on. You can see the yolk as the dark part of the egg, next to irregularities in the shell. The lighter part of the egg contains only egg white. Sometimes with older eggs, an air bubble at the thicker end of the egg can also be seen as a light area.
- 3 If you want to peel a raw egg, put it in a glass and pour vinegar on it. Be careful: vinegar should not get into your eyes! After one day you can carefully take the egg out of the jar and carefully wash it with water. How does the egg feel now? And how does it look? Change the vinegar and put the egg in it for a few more days. After about 5 days, the „rubber egg“ will be stable enough for you to bounce it like a bouncy ball.
- 4 You've accidentally put the hard boiled eggs together with the raw ones and now you don't know which is which? No problem for an explorer! Put the eggs on the table and make them spin. If the egg spins smoothly and quickly, it is cooked. If the egg spins slowly and with difficulty, you have caught a raw egg.

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Background

Egg shell is made of lime. Vinegar is an acid and dissolves the lime. The reaction produces carbon dioxide, which bubbles up in small gas bubbles. Under the solid lime shell there is still a thin skin. You know this egg skin as a thin membrane from your breakfast egg. It encloses the liquid inside of the egg and prevents the „rubber egg“ from leaking.

The egg-scanning method, also called shearing, is used in chicken farming to determine whether an egg is fertilized or not. If you want to test if an egg is still fresh, it is best to do the water test. Place the egg in a glass filled with water. If the egg is fresh, it will stay on the bottom.

If the egg is about a week old, the blunt end will lift up. When an egg is about two weeks old, it stands in the water. After four weeks of age, the egg floats without contact with the bottom. You should no longer eat it.

The rotation test for identifying raw and cooked eggs works because in a raw egg, the liquid inside resists. It only reacts to the turning motion with a delay. The egg lurches, while the egg with the hard interior spins like a stone.

The reason for the slowly rising egg in the freshness test is the air chamber in the egg, which becomes larger over time: Water evaporates through the shell of the egg over time and air enters. The egg thus acquires an inner floating ring, so to speak, and rises to the top after about four weeks.

All bird species lay different eggs. An ornithologist (bird researcher) can thus tell from an egg to which bird it belongs. However, not only birds lay eggs: most fish, reptiles, amphibians, insects, and mollusks also lay eggs. There are even mammal species that lay eggs: the echidna and the platypus.