



## At-Home Science Experiment: Bare Eggs

**Grade Level:** Kindergarten and above, with help from an adult

**Timing:** This activity will take a few days from start to finish. But don't be intimidated; it doesn't take long to set up. You can do it in just a few minutes!



A **bare egg** is simply an egg without a shell. Using vinegar, you can dissolve the shell without breaking the delicate membrane that contains the egg.

**Materials:**

- An egg (or two)
- A cup or a container
- White vinegar
- a large spoon

**Procedure:**

1. Take a raw egg and place it in a cup or container
2. Pour in your white vinegar (also called acetic acid).
3. Observe the egg. What do you notice happening? Do you see little bubbles surrounding the egg?
4. Place the egg and container in the refrigerator, and let it sit for 24 hours.
5. The next day, use your spoon to scoop the egg out of the vinegar.
6. Be gentle. Because the eggshell has been dissolving, the egg membrane may be the only thing holding the egg together.
7. Carefully dump out the vinegar.
8. Put the egg back in the container and cover it with fresh vinegar.
9. Leave the egg in the refrigerator for another 24 hours.
10. The following day, scoop the egg out again with your spoon and rinse it carefully.
11. You should have a whole egg without a shell!

**What's happening here?**

The acid has reacted with the shell and "eaten" away at it. The shell is made up of calcium carbonate that gets dissolved by the acid. The inside of the egg should still be intact because the vinegar doesn't break down the egg membrane. The egg also swells up because some of the liquid seeps inside it by diffusion. You should be able to see the yellow yolk through the membrane.