



Ms. Valerie's Learning at Home Activity

Vinegar Egg Experiment

Related **Science Lesson** Airs March 17, 2021 on WQLN PBS

How to Make

Materials:

- Raw Egg (white or brown is fine)
- Clear glass, jar, or cup
- White Vinegar or White Cleaning Vinegar



Directions:

1. Place the egg in the glass and cover with white vinegar. *Look closely at the egg. Do you see bubbles forming?*
2. Leave the egg in the vinegar for 24 hours. *Observe what happens.*
3. Change the vinegar on the second day. Dump the old vinegar down the drain and cover with fresh vinegar. Leave in the vinegar for 3 days total (sometimes it may take a little longer). Rinse the egg carefully with water. *The egg will look translucent because the outer shell is gone. The vinegar will have dissolved the outer shell. All that is left on the outside is the egg membrane.*
4. Compare the vinegar egg with another raw egg. What looks different? Are they the same size? Can you see through the egg? Gently squeeze the egg to feel the flexible egg membrane. Compare this to the hard shell of the other egg.

Extension:

Try shining a flashlight through the egg. Try bouncing the egg. Do this on a tray or in the sink. Get a ruler and bounce at different heights starting with 2 inches. Add one inch of height each time until the egg breaks. Examine the egg membrane. *What's going on here?* The bubbles are carbon dioxide.

Vinegar is an acid and eggshells are made of calcium carbonate. The acid in the vinegar reacts with the calcium carbonate to dissolve the eggshell. The eggshell and egg membrane protect the developing chick inside of the egg when a bird is incubating her eggs.

