

WHAT WE EAT AFFECTS OUR TEETH EVERY DAY ...

Egg shell has a similar chemical makeup to human teeth. This experiment will unveil the effects that acid has on teeth!

## gg-aminating Your Teeth

**INGREDIENTS:** 1 fresh egg in the shell, a glass, some white vinegar (acetic acid), and some water with a few drops of bright food colouring

## **INSTRUCTIONS:** (Time: 3 days)

- 1) Place a fresh egg (in the shell) carefully in a glass or jar and cover with vinegar. Let it sit for 24 hours.
- 2) Carefully pour out the liquid and gently feel the egg—it should be soft and rubbery. Next, place the egg back in the glass and cover it again with more vinegar. Let it sit for 24 hours.
- 3) Remove the egg from the liquid. At this point, the eggshell is completely dissolved and the egg is left naked, only its rubbery membrane is holding it together. Note too how the egg is larger in size than a raw egg. Without its shell, the egg can absorb more liquid and so it expands in size.
- 4) Carefully take the egg out of the vinegar and rinse if off slightly. Now place it back into the jar and cover with water. Add a few drops of food colouring for a nice bright colour and let it sit again for 24 hours. You will not see a large, plump egg again! Also, some of the coloured water will migrate through the membrane and back to the inside of the egg. Note how the membrane alone, without the shell, provides little protection for the inner egg.
  - This shows us how our teeth become at risk for decay and disease if we eat acidic foods without brushing!

—Thanks to our SuperChefs Advisor Dr. Steve Howell, Chief of Space Science & Astrobiology, NASA, Ames Research Centre



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	ACIDIC ALKALINE ALKALINE															

## What is pH? p stands for power,

H stands for hydrogen. The pH level in the mouth affects the health of our teeth and gums. We control the pH through the foods we eat. Controlling the pH in the mouth helps reduce the acids in our mouths, thereby reducing our risk for cavities, gum disease,

## How does acid and sugar affect our teeth? Bacteria in your

mouth can break down sugars to make acid. Acids can wear down enamel and gradually destroy teeth and lead to decay. To prevent this, daily brushing, flossing and reducing the intake of refined foods and sugars will help keep your teeth healthy!

ACIDIC

Alkaline

FOOD

PH SPECTRUM

