

# Stay at Home Science



## Naked Egg

### What You Need

Raw Egg  
Vinegar  
Clear container  
Corn syrup (optional)  
Water (Optional)

### What You Do

1. Place the egg in a clear container.
2. Add just enough vinegar to the container to cover the egg. It is okay if the egg floats a little bit.
3. Let the egg sit for 24 hours. Throughout the day, check on your egg to observe any changes.
4. Carefully remove the egg from the vinegar. You may be able to gently rub off some of the shell at this point. Dispose of the vinegar.
5. Add fresh vinegar to the container and let it soak for another 24 hours. Continue to make observations.
6. Take the egg out of the vinegar. Observe how it looks and feels now.
7. Optional Extensions:
7. Drop your egg from a height of one inch. Then try it from higher heights. You may wish to do this outside!
8. Place your naked egg in water and let it soak overnight.
9. Place your naked egg in corn syrup and let it sit for at least 24 hours.

### Questions to ask

- What can you observe about your naked egg? How does it look? Feel? Smell?
- Compare the naked egg to an egg you crack to eat. How are they the same? Different?

### What's The Science?

The shell of a chicken egg is made up primarily of calcium carbonate. If you soak this egg shell in vinegar (which is about 4% acetic acid), you start a chemical reaction that dissolves the shell. The acetic acid reacts with the calcium carbonate in the shell, releasing carbon dioxide bubbles. The egg's insides remain intact, held together by the two fragile membranes just inside the shell.

### Try This

**Use science vocabulary:** Use related science words such as dissolve, shell, yolk, membrane, acid.

**For older children:** Add an extra challenge for older children. Have them create a journal detailing their observations of the naked egg experiments.

### Keep In Mind

The order suggested is not the only right or perfect way. Make adjustments based on the age, ability, and interests of the children.

### Additional Resources

<https://www.imaginationstationtoledo.org/educator/activities/how-to-make-a-naked-egg>  
*Chickens Aren't the Only Ones: A Book About Animals Who Lay Eggs* by Ruth Heller

