



## STRAWBERRY DNA

Extract visible strands of DNA from a strawberry!

### Materials

Rubbing alcohol  
Clear cup  
Tablespoon  
Teaspoon  
Dish soap  
Salt  
Strawberry  
Plastic bag  
Coffee filter  
Tweezers

### Procedure

- First, place the bottle of rubbing alcohol in the freezer so it can begin to chill.
- Pour 6 tsp. of water into a clear cup. Add 2 tsp. of dish soap, then stir in ¼ tsp. of salt until it dissolves. This is the extraction liquid.
- Place a strawberry into a plastic bag, pour in the extraction liquid, then seal the bag shut. Use your hands to smash and knead the strawberry inside the bag until it becomes a liquidy mush. Strain the mashed up strawberry solution through a coffee filter back into the clear cup. It's okay if not all of it goes through, you only need a little bit for the experiment to work.
- Add 1 tsp. of the chilled rubbing alcohol to the mashed up strawberry solution. Observe as a whitish foam separates and appears on top of the solution. This is your strawberry DNA!
- Use tweezers to carefully lift the strawberry DNA out of the solution and lay it on a dish to examine.

### Results

You have pulled visible strands of DNA from a strawberry.

### Why?

Strawberries hold a larger amount of DNA than most fruits. They are octoploids, which means they contain eight copies of each chromosome. Every living thing contains DNA, and scientists use different methods to extract the DNA for study. In this experiment, the salt and soap mixture lysed, or popped open, the strawberry cells. This released the DNA into the solution. Adding cold alcohol caused the DNA to precipitate out of the strawberry mixture. The DNA clumped together instead of remaining as individual strands, so it was easier to see.

This activity was adapted from Earth Steve Spangler Science

