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Genes & Mutations Activity for Kids

Extracting DNA From Strawberries DIY

Duration: **30-45 min** Difficulty: **Medium** Cost: **$0 to $15**

Learn how to extract DNA from strawberries!

Material List

- 1/3 Cup of Water
- 1 Tablespoon of Dish Soap
- 1 Teaspoon of Salt
- 1 Large Plastic Ziploc Bag
- 1 Bunch of Strawberries
- 1 Coffee Filter
- 1 Beaker
- 1 Cold Rubbing Alcohol 90%+
- 1 Toothpick

Instructions

1. Into the bag, pour 1/3 cup of water, 1 tablespoon of dish soap, and 1 teaspoon of salt. Then close the bag and shake it to mix the ingredients.
2. Put a strawberry in the bag, seal it, and smash the strawberry into tiny pieces with your fingers for a few minutes.
3. Use the coffee filter to filter out the solid chunks so you have only the liquid that remains.
4. Slowly pour an equal volume of rubbing alcohol over the top of the strawberry liquid in the beaker. Pour slowly down the sides to keep the layers from mixing. The colder the alcohol the better it will work.
5. Wait about a minute. You'll start to see DNA collecting between the two liquids (the stringy white stuff). You can pick it up with the toothpick.

How It Works

All living things contain DNA, which is the genetic material that has the instructions for making more cells. DNA molecules are long and stringy. When many of them come together, they get tangled, which makes the liquid slimy. When you put the strawberry (part of a living thing) into a soapy liquid, the soap breaks down the cell walls of the strawberry and releases the strawberry DNA into the liquid. The DNA molecule inside each of your human cells is about 6 feet (or 2 meters) long!