



DNA

Strawberry DNA

DNA which stands for Deoxyribonucleic acid is a molecule that carries the genetic instructions for the development, functioning, growth and reproduction of all known living things. The DNA in every cell tells it how to work, duplicate, it will also tell us information about the living organism. Your DNA will tell us what you look like and all about your family history. Just like in humans plants also have DNA and that is the DNA we are going to see today. The reason we are using a strawberry is that a strawberry is called an octoploid, this means that for every 1 cell there are 8 strands of DNA.



Supplies

Strawberries
¼ tsp of Salt
10ml Dish Soap
90ml of Water
Isopropyl Alcohol
1 Ziplock Bag
Tweezers
Strainer
Cup



Challenge

Will the ratio of strawberry to liquid affect the amount of DNA you get?

1. Place a strawberry in a ziplock bag and smash it. Remember don't rip the bag we need it again.
2. In the cup add water, salt, and soap gently stir so they are well combined. Pour liquid into the bag with the strawberry, gently mix.
3. Pour the ziplock bag back into the cup using the strainer to get rid of the leftover strawberry chunks. Do not stir!
4. Gently pour in the isopropyl alcohol along the edge of the cup. This will create a layer on top. In this layer is where the DNA will be.
5. Use the tweezers to collect the DNA and place it in a small container. The DNA looks like floating spider webs.



Questions

1. Based on what you look like, what do you think your DNA would say about you?
2. Can this experiment be replicated for different living organisms?
3. If a strawberry has 8 strands of DNA and is called an octoploid, and humans have one strand of DNA what would humans be called?