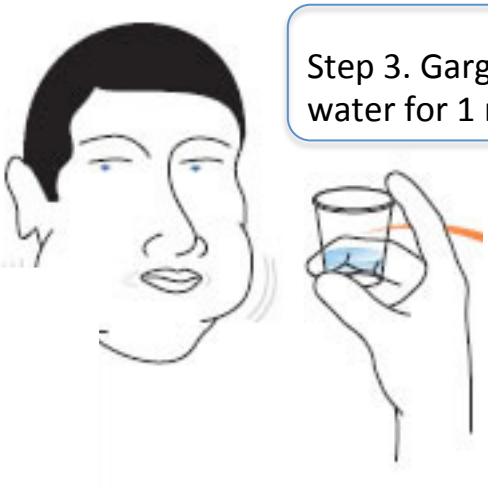
DNA Extraction Flowchart

Step 1. Mix 500 ml drinking water with 1 tbsp salt.

Step 2. Stir until salt is dissolved. Then transfer 3 tbsp of salt water into a clear cup.

Q: Why do we add salt?
A: Salt helps to free the DNA from the proteins that are usually wrapped around it.

Step 3. Gargle the salt water for 1 minute.



Step 4. Spit the water back into the cup. Now your cheek cells are suspended in the water!

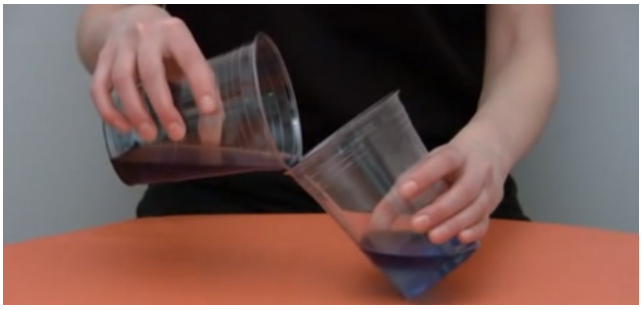
Step 5. Gently stir the salt water with one drop of soap. (Avoid bubbles as much as possible).

Q: Why do we add soap?
A: Soap is a detergent that breaks open the cells.

Step 6. In a separate cup, mix 100 ml isopropyl alcohol and 3 drops of food coloring.

Q: Why do we add alcohol?
A: DNA does not dissolve in alcohol. Instead, it precipitates.

Step 7. Tilt the salt water cup and gently pour the alcohol so that if forms a layer on top (about 2 cm thick).



Step 8. Wait about 2.5 minutes. You should see while clumps and strings forming.

Other Questions for thought.
How long will the extracted DNA last?
What are some ways to preserve the DNA?
Do you think that we only isolated DNA?
Is it possible to see the DNA structure under a microscope?