

## ACTIVITY!

## Inquire &amp; Investigate



## Ideas for Supplies ▼

- 3 glasses or clear plastic cups
- bottled water
- salt
- clear dish detergent
- cold isopropyl alcohol
- blue food coloring

To investigate more, consider that your sample contains not only your cells, but the cells of bacteria that live naturally in your mouth. These bacteria cells contain DNA too! What would this mean for a scientist trying to learn about you from this DNA? To extract DNA from other things, check out these experiments.



Museum of  
Innovation  
strawberry DNA



## EXTRACT YOUR OWN DNA

In the movie *Jurassic Park*, biologists extract dinosaur DNA from mosquito-like bugs that were preserved for millions of years in amber. Today's scientists have not yet turned this fiction into fact, but you can easily see your own DNA in your own home.

- **In a clear cup, stir 2 cups of bottled water with 1 tablespoon of salt until the salt is dissolved.**
- **Place 3 tablespoons of saltwater mixture into a separate cup.** Swish the salt water around in your mouth for 1 minute. Don't swallow it! Spit the saltwater mixture into the second cup. Your cheek cells are now mixed with the salt water.
- **Add a drop of clear dish detergent to the salty cheek water and gently stir it.** This breaks down the cells and releases the DNA. Be careful not to make bubbles!
- **In the third cup, mix ½ cup of isopropyl alcohol and three drops of food coloring.** Pour this mixture into the salty cheek water slowly and gently so that the alcohol crates a layer on top of the salt water. Tip the cups a little as you pour.
- **Wait about 2½ minutes.** Watch for small white clumps and strings forming. This is DNA! DNA is tiny. One million threads of DNA can fit into the dot at the bottom of this exclamation mark!
- **If you need help, watch this short video on the process:**



NOVA extract own DNA

