**Strawberry DNA Student Handout**

Materials:

* 1 Ziploc bag
* strawberries (thawed)
* 1 test tube
* Cheesecloth
* 2 rubber bands
* 1 glass rod
* 10 mL extraction buffer (dishwashing detergent, salt solution)
* 20 mL cold ethanol/isopropyl alcohol
* 1 pipette
* Necklace string

Procedure:

1. Once handed your bagged strawberry, begin to smash it with your hand for 2 minutes.
2. Add 10mL of extraction buffer to your bag, using a pipette.
3. Reseal your bag and knead the mixture for 1 minute (avoid soap bubbles).
4. Assemble filtration apparatus: Place cheesecloth on top of the test tube, secure with rubber bands. Make sure you have some slack for the strawberry mixture to rest in while it drains.
5. Pour mixture into cheesecloth, let drip directly into test tube; might be helpful to gently stir mixture around in cheesecloth to help move pulp out of the way of filter.
6. Remove cheesecloth & SLOWLY pour around 20 mL of cold alcohol into tube AT AN ANGLE (do NOT pour it directly into the test tube; you want it to pour in from the sides and form a separate layer on top of the strawberry liquid)
7. After this step, stop and watch the test tube for 30-60 seconds. What do you see?
8. Dip the glass rod into the test tube where the extract & alcohol layers come into contact with each other, gently stir—and voila! You have strawberry DNA! ☺
9. Once you have your string, begin transferring your DNA into your glass necklace charm by gently twirling the DNA around your glass rod. Or, you can use your pipette. **Be careful to only extract the top layer of your solution, since that is where your DNA will be. Be gentle with it—it’s fragile!**