

## 7/6 — Fruit DNA

### Materials:

- 1/2 peeled ripe banana (you can also use strawberries or other fruit)
- **1/2 cup hot water (microwave cool water for 30 seconds)**
- 1 tsp salt
- 1/2 tsp liquid dishwashing soap
- Resealable zip-top bag (quart size)
- 1/4 –1/2 Cup very cold rubbing alcohol (isopropyl alcohol) placed in freezer ahead of time
- Coffee filter
- Popsicle stick

### Procedure:

1. Mash the banana (or fruit) in the resealable bag until all the lumps are gone.
2. Fill a cup with the hot water and salt.
3. Pour the saltwater mix into the bag. Close the bag and very gently squeeze and move the saltwater and banana mush together. Do this for 30 to 45 seconds.
4. Add the dishwashing soap into the bag and gently mix the contents (30 to 45 sec). Try to avoid making too much foam.
5. Place the coffee filter in a clear glass cup, securing the top of the filter around the lip of the cup.
6. Pour the mix into the filter and let it sit until all of the liquid drips down into the cup. This will take some time.
7. Remove and discard the used coffee filter.
8. Tilt the glass and **slowly** add cold alcohol down the side of the cup. You want the alcohol to form a layer on top of the banana mix, staying separated, so be careful not to pour it too fast. Make a layer of alcohol that is 1-2 in. thick.

9. After the alcohol layer is poured gently, wait for eight minutes. You may see some bubbles and cloudy material moving around in the alcohol. This is the DNA pieces clumping together.
10. Use the popsicle stick to start poking the cloudy stuff in the alcohol layer. Spin the stick in place to start gathering the cloudy stuff. When you are done, take a closer look at the stuff on the stick.