**Strawberry DNA Extraction**

- Mash strawberry
- Add buffer & mash again
- Strain through cheesecloth
- Add ethanol
- Pull out DNA and move to small tube

```
DNA!!
```

**Concepts** - DNA is in the nucleus
- Need to break down the cell wall
- Break through lipid bilayers
- Break apart proteins

**Process** - see procedure above
- I didn’t cover my funnel hole w/ cheesecloth so
  some chunks of fruit got through

**Results** - I could see small, looking DNA
precipitate out once I added ethanol. The chunk
didn’t seem to hinder my results.

**Reflection**

In a classroom, there needs to be clear directions (and time) given for clean up so that I am not
down that work. Students who have learned
about cell structures already should use that
knowledge to explain what was happening at each step of the procedure on a molecular level.
I would have students draw a diagram and "zoom in" as in Carbon Time curriculum to show where each reagent is acting and which structure it is reacting on.

Compare to cheek cells ??

When talking about chromosomes... connect back to strawberries being octoploid.

It comes with models.
**Micro pipette Lab - Measure for Measure**

**Concepts** - how to use a micro pipette
- adjust the range
- using the buttons
- converting from ml to µl
- balancing a centrifuge

**Process**
- explain to students how to use the equipment
- use worksheets to practice concepts
- see Measure for Measure protocols

**Results** - I was able to make the correct sized "dots" of liquid after practicing the pipet.
- See results in lab manual p. 5...
  - 1.0 µl
  - 5.0 µl
  - 10.0 µl
  - 20.0 µl
  - 100 µl
  - 500 µl

**Reflection** - I need to pay attention each time to the screen for the micro pipette. Each one has a red (decimal) area in a different spot. The P-200 doesn't have red at all!
- The centrifuge is sensitive. Tube C was a bigger volume than Tube A or B, and needed 98 µl (centrifuged separately with another person's Tube C) even though the number of tubes was balanced. → volume matters too.