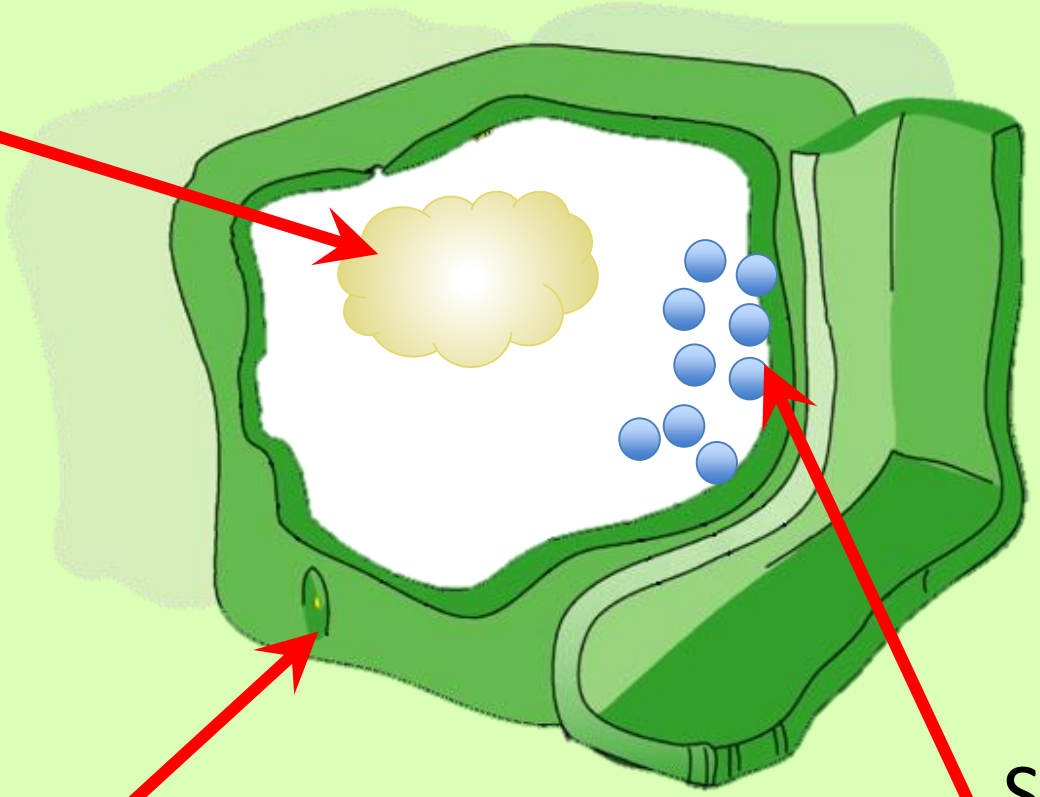
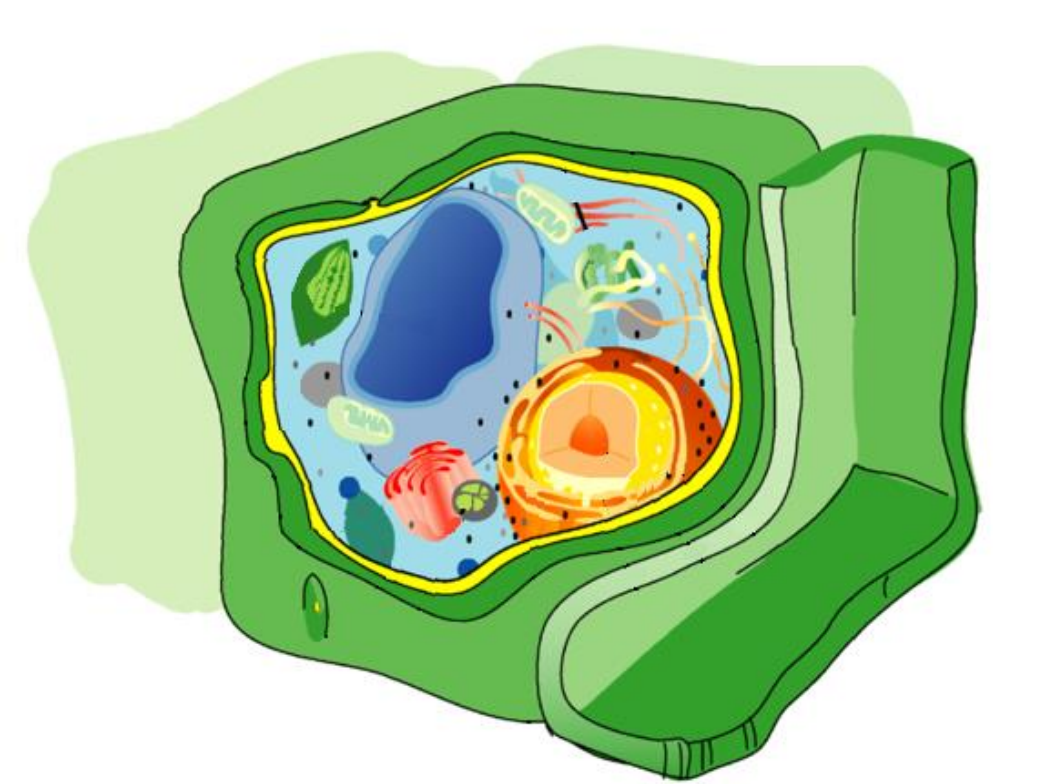
Edible Algae Models

Review: What are the three parts of algae we can make into fuel?



Cell wall	A structure made of sugar that surrounds and protects the cell The sugars can be used to make more biofuel

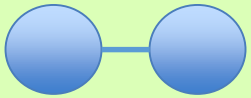


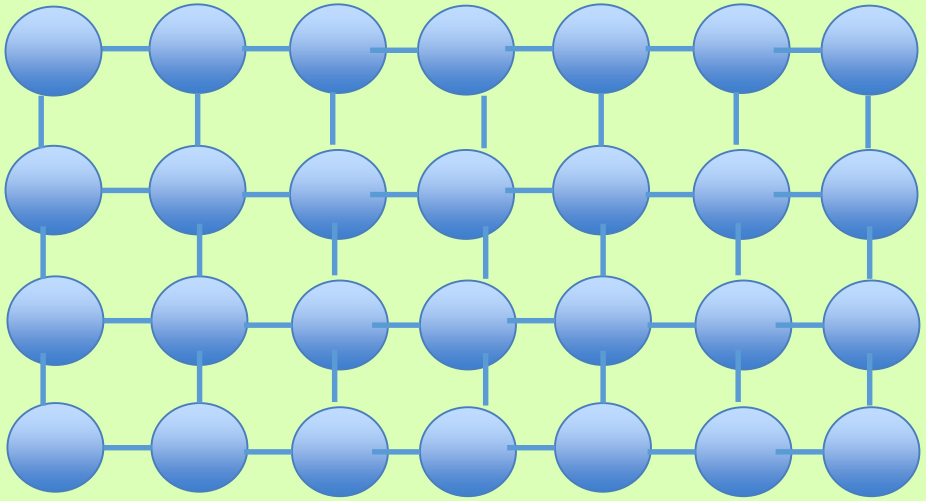
Review

To mimic the cell wall and “goodies” inside the cell (lipid and starch), we are going to make sphere of juice that we can eat

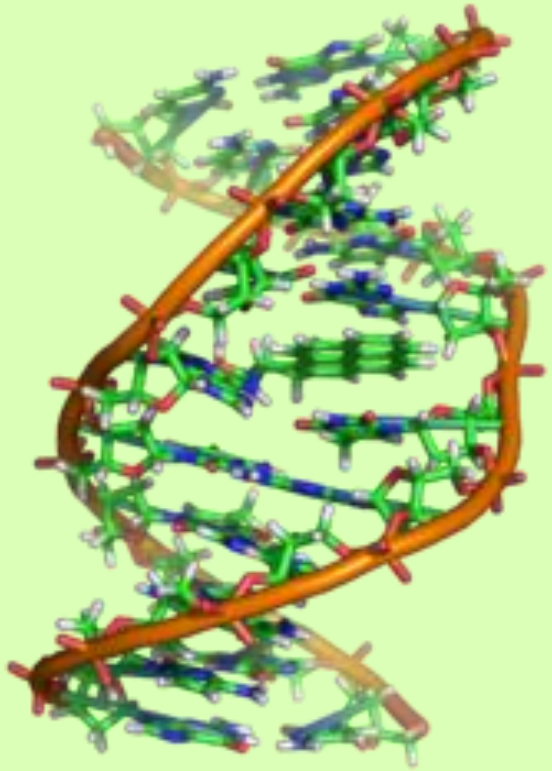
Just like the cell wall, the surface of the juice sphere is made of a polymer

This is a **mono**mer 

This is a **di**mer 

This is a **poly**mer 

Polymer	A large chemical made of repeating pieces. Examples include materials in the cell wall, DNA, protein and LEGO pieces



Activity Background Information

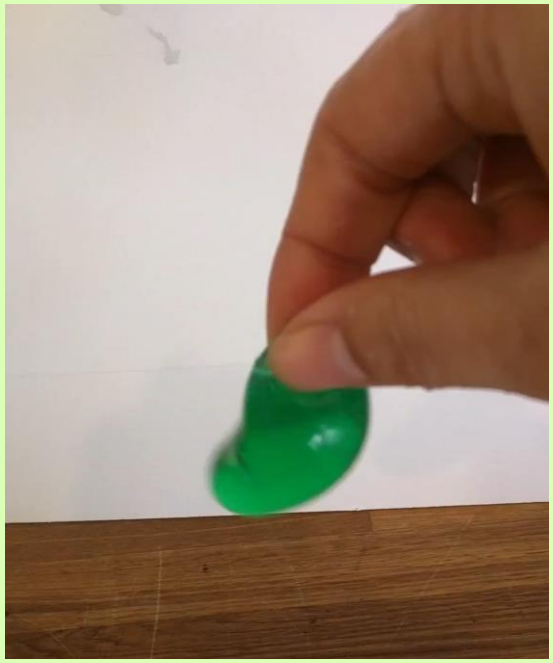
—the materials we're using—

- The polymer we are using today is called sodium alginate.
- It is made from algae (coincidentally) and is completely edible.
- We can make a gel using the sodium alginate by exposing it to calcium lactate (also edible).

Steps for making the algae juice sphere models

1. Wash your hands
2. Put a scoop of the juice + sodium alginate mixture into the calcium solution
3. Wait about 30 seconds. Then use a strainer to remove the juice sphere from the calcium solution. Put it into the water to rinse.
4. Use a strainer to remove the juice sphere from the water. Make observations about your algal model and then eat it!

After making your model cell, watch these videos.



➔ Then describe why the juice sphere is a model for an algal cell