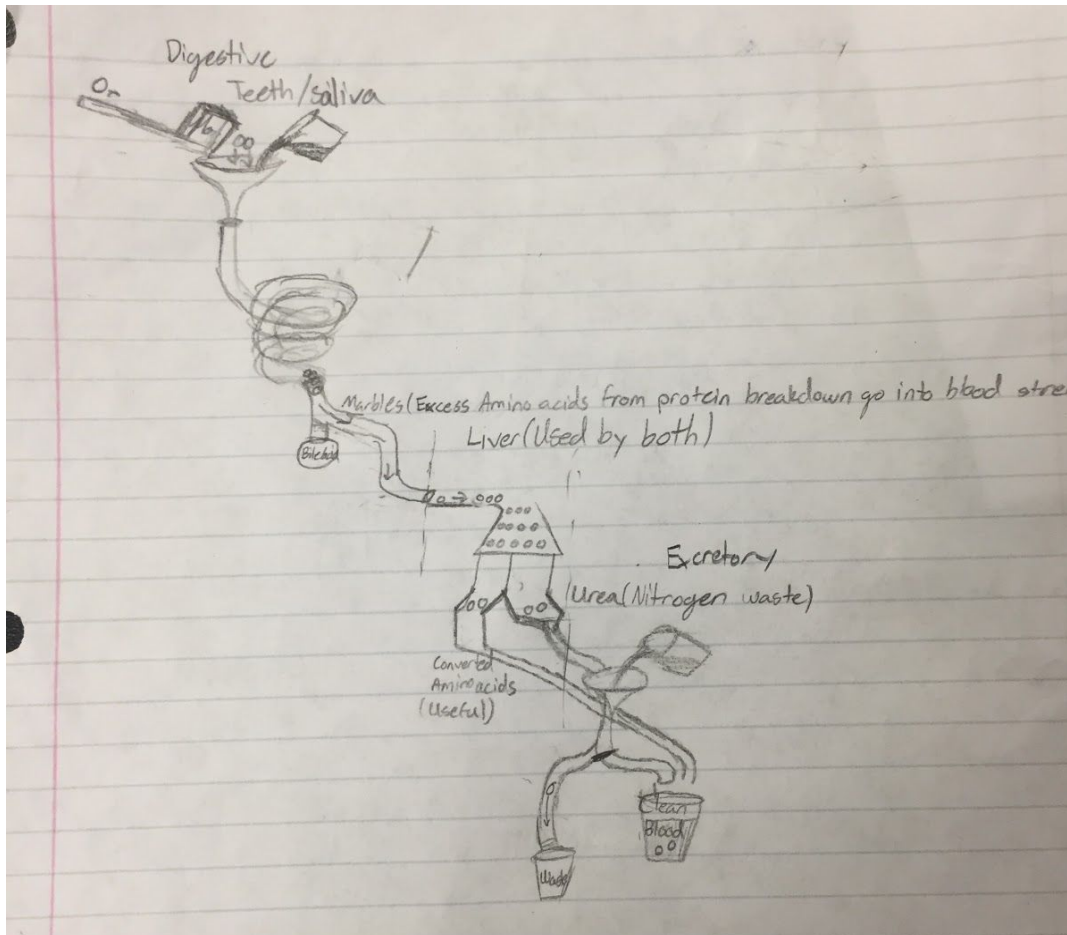


Description of Model:

The model will start with a wind up mouth to show the function of the chewing of the mouth. Upon reaching the wind-up toy, the larger marble will be replaced with multiple smaller marbles to show the breakdown of food. Then there will be a system of funnels and tubing that will carry water and a variety of sizes of marbles to display the path of food through the esophagus with saliva, as well as the presence of stomach acids, and a small pouch/cup to collect the water and prevent it from spilling. Once again, the medium sized marbles will be replaced with smaller marbles to show the breakdown into nutrients that the body is able to use. Then the tubes will split into a few different paths that will show how the liver, which is the shared function of the two systems, converts the excess amino acids from the bloodstream into useful compounds and toxic nitrogen waste, or urea. The final step, which is represented by the kidneys and the excretory system, is the tubes leading to 2 cups at the bottom which separate urea from the blood and carry the useful molecules to the blood (one of them being "clean blood" that can now be put back into the circulatory system and "urea".)

Drawing of our model:



Aditya Katewa, Hunter Mahan, Brigid O'Brien, Casey Elmhirst

Functions: Chewing(wind up mouth toy), Stomach Churning(twisted tube), purifying blood(tubes leading to 2 different cups),separation of urea from bloodstream (2 cups labeled 'urea',and 'clean blood') , removing waste products, (tube systems and filters) and processing and breaking down food for energy(top half of model)

Materials: 3 1-1.5 inch strainer, combo of small, medium, and large marbles, at least 2 yards of tubing, wide enough to fit the biggest marble, funnels, water, wood, screws, nails, hammers, screwdrivers, and all purpose glue, wind up mouth toy

Construction Plan: Building time: as many days possible, as our model is fairly large. Will take a day or two to obtain all the materials, and we will use a combination of all purpose glue, nails, and screws. We will divide up the prep work so when it comes time to assemble it will go as fast as possible.

Timeline

Day 1: Collect all needed materials and begin assembling the top of the model

Day 2: Try to finish building Digestive system portion of model

Day 3: Add in the shared function of digestive and excretory system

Day 4: Build excretory system model and tweak

Day 5: Test to make running perfect

Unresolved Issues: We are dealing with a time crunch and hopefully can finish on time. We have a schedule of sorts but we don't know if we can keep up with it. We don't know if we have the correct materials for the different steps we need.

Special Requests: paper towels, food coloring if available.