Title of Workshop: Introduction to the Digestive System

Objective/s:
- Describe the anatomical structures and the major tracts of the digestive system
- Describe the pathway of food
- Describe the functions of different structures of the system
- Identify accessory structures and their functions
- Describe the enzymatic processes which allow for digestion
- Explain how digestive gland secretions are controlled

Learning Outcomes:
- structure and function
- structural and functional interdependence
- maintenance of homeostasis
- preparing an experiment that breaks displays the breakdown on saltine crackers

Target Audience: Grade 11/12, can be for individual students or an audience of 20 - 30 students

Duration of Workshop: ~1.5-2 hours

Delivery Method: face-to-face and/or online instruction

Experiment: Simple Digestion Experiment utilizing salivary amylase

Materials Required:
- saltine or oyster crackers
- Two bowls
- iodine
- tablespoon
Allergy risks/Safety Protocols
Ensure a safe environment to learn in! Do not use any toxic products for this experiment

Procedure/Instructions
As we learn in the lesson plan the mouth begins the chemical digestion process by secreting salivary amylase which hydrolyzes starch to maltose. We will create an experiment where you can visualize the effect of salivary amylase.

**Step 1:** Crumble half of a saltine cracker or a couple of oyster crackers into a bowl.

**Step 2:** Add 1 or 2 tablespoons of water to the cracker crumbs. Lightly stir to mix the water and the crumbs.

**Step 3:** Chew the other half of the saltine cracker or 2 or 3 oyster crackers in your mouth very well so that it mixes with the saliva. Spit the cracker and saliva mix into the second bowl. Yes, it’s gross, but it’s for science, so it’s okay!

Add some more water to the bowl, 1 or 2 teaspoons.

**Step 4:** Note the difference between the two bowls.

**Step 5:** Add two drops of iodine to each bowl, swirling to spread the iodine.

You should be able to see a difference between the two bowls. The bowl where you spit the cracker and saliva mixture into is going to have more break down and will have a different consistency than the other bowl.

Begin with the PowerPoint Slides on “Introduction to the Digestive System” which will take you through the learning objectives.

Activity Worksheet
There is a worksheet for “Introduction to the Digestive System” which can serve to test how well you learned the material. You may also choose to fill it out as you go.