

**Project: Student Resource Sheet**

**1. Oral cavity, pharynx, (must also include accessory organs such as salivary glands, tongue, and teeth)**

* What is the oral cavity and what does it contain?

The oral cavity represents the first part of the digestive tube. The primary function is the entrance of food and to initiate the digestive process, using salivation and by pushing the bolus into the pharynx (which are the tubes connecting the nose and the mouth to the esophagus). The oral cavity refers to the mouth, including the lips, teeth, gums, tongue, soft and hard pallets, and the salivary glands.

* What is the function of the salivary glands?

The function of the salivary glands is to produce saliva, which helps break down carbohydrates (with salivary amylase). Another function of saliva is lubricating the passage of food from the mouth to the esophagus to the stomach. There are three pairs of salivary glands; parotid which is located below the ear. The Submandibular, which produces serous and mucous products. And the Sublingual gland which is the smallest salivary gland and produces mucous secretory products.

* What is the function of the tongue?

The function of the tongue is to manipulate the chewed food into a bolus. The tongue is a small organ made of several muscles covered by a thick, bumpy, skin-layer. The outside layer of the tongue is called papillae, which is responsible for griping food as it moves through the mouth. The tongue aids in speech, as well as coordinating the movement of the food to aid in swallowing.

* What is a bolus?

A mass of food that has already been chewed (mixed with saliva) and is about to be passed or is already inside the gastrointestinal tracts

* Where are the soft and hard palate located and what are their functions?

The soft and hard palate make up the roof of the mouth. Specifically, the soft palate is located at the back of the roof of the mouth which is posterior to the hard palate. The hard palate is located closer to the teeth which is anterior to the soft palate. The bony hard palate holds the roots of teeth and helps with chewing. Whereas, the soft palate helps with speech, swallowing, and blocks the nasal passage when food is consumed.

* What mechanical and chemical digestion occurs in the oral cavity?

Mechanical digestion begins in the mouth as the food is chewed. Chemical digestion involves breaking down the food or carbohydrates into simpler nutrients, which begins in the mouth when food mixes with salivary amylase.

* What mechanisms are in place to make sure food does not “go down the wrong tube” and into the windpipe?

A flap-like valve called the epiglottis separates the esophagus and the trachea (windpipe), prevents food from going into the windpipe. When you swallow, a flap called the epiglottis moves to block the entrance of food particles into your larynx and lungs