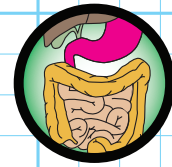


# Lesson Content



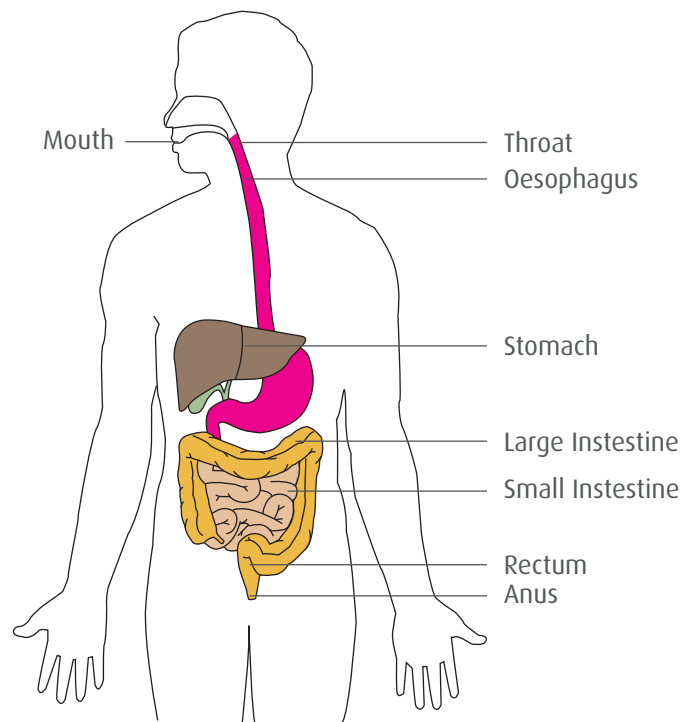
## THE DIGESTIVE SYSTEM

During this lesson the students will examine the four main parts of the digestive system and their function in turning food into energy. This module involves a humorous digestive tract activity illustrating the different parts of the digestive tract and how they interact.

### Digestive System Lesson

A system is a group of organs working together to achieve a common goal. The digestive system is made up of four main parts:

- The Mouth
- The Oesophagus
- The Stomach
- The Intestines



These four parts all work together to turn the food we eat into the energy we need to survive and packages any unused material for disposal.

### The Mouth

The mouth is the starting point of digestion. It is here that food is mashed and ground by the teeth into smaller pieces that are easier to swallow. Food is also mixed with saliva in the mouth. This helps to further break down the food into a form that is easier for the body to absorb.

### The Oesophagus

Food broken down in the mouth then passes into a long tube called the oesophagus. The oesophagus is a muscular tube which contracts squeezing the food into the stomach.



## The Stomach

The stomach is a hollow organ that churns the food up and mixes it with a very strong acid called 'hydrochloric acid'. This further breaks down the food before it passes into the intestines.

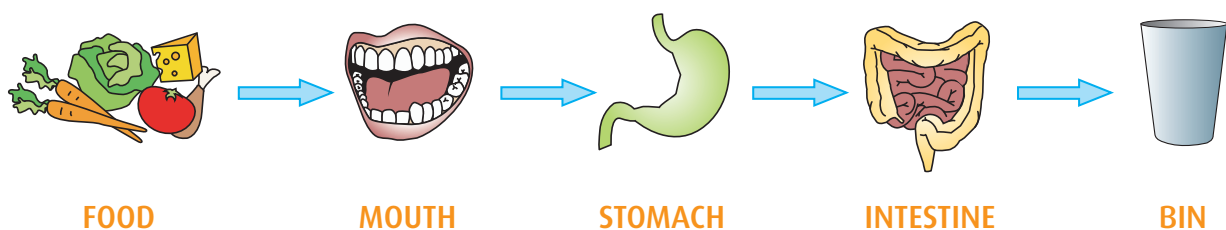
## The Intestines

The intestines consist of the small intestine and the large intestine. Semi-solid food from the stomach first enters the narrow **small intestine**. This muscular tube is around 22 feet long and squeezes and contracts to push food along. Food is further broken down in the small intestine. Green liquid called bile, made by the liver, is secreted into the small intestine to dissolve fats while other chemicals made by the pancreas continue the breaking down process. The latter part of the small intestine is where many of the nutrients are absorbed. At this stage the food is liquefied and passes into the large intestine.

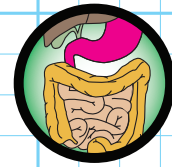
The **large intestine** is about 6 feet long and connects the small intestine to the rectum. It is also a muscular tube that pushes the liquefied food along. It takes this liquid around 36 hours to get pushed through the large intestine. As it moves along water is removed until the waste becomes solid. The solid waste that is left is mostly small bits of indigestible food and bacteria. The large intestine then empties the waste into the rectum where it can then exit the body through the anus.

## Group Task

The digestive system consists of four parts each with its own distinct job. The students can 'act-out' this digestive journey during this fun activity.



1. The pupils are split in to four groups:
  - a. The mouth team
  - b. The oesophagus team
  - c. The stomach group
  - d. The intestines

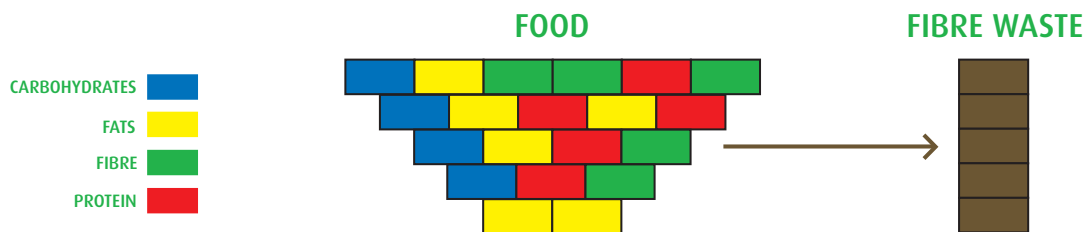


# THE DIGESTIVE SYSTEM

2. A simple Lego construction is placed at the top of the room representing a piece of food.
3. A bin or bucket is placed at the back of the room to represent a toilet for the waste.
4. The 'mouth' team must then take the Lego food and each member must help break it into individual blocks.
5. These are then passed on to the first member of the oesophagus group which pass each block individually to the stomach group.
6. The stomach group must then place the blocks into a bag or pillow case and shake vigorously before removing the blocks from the bag and passing them to the intestines.
7. Each member of the intestine group link one of the block back together until the last member drops the completed waste matter in the bin.

## Further Activities

Suggested activities or tasks around the topic of the digestive system: Food Fibre Waste



- The group task can be modified to include the students' knowledge of the food triangle. The Lego construction which represents an item of food in the above task can be made from four different coloured blocks – each colour representing a different food group. Red for protein, blue blocks for carbohydrates (sugars), yellow for fats and green for fibre. During step 8 only the green blocks can be reassembled and placed in the bin. This represents the fact that nutrients from the other food groups are absorbed by the intestines while indigestible fibre is excreted.
- The class can complete word searches and colour pictures on our website [www.bdi.ie/mambo](http://www.bdi.ie/mambo)