

Digestive System

Primary/Elementary

“The world is full of magic! We created the Virtuali-Tee and these resources to enable you to unlock the curiosity that exists within every student”

OVERALL LEARNING OUTCOMES

Primary / Elementary

The Digestive System Objectives

- To identify parts of the digestive system
- To describe their function
- To identify where nutrients enter the bloodstream
- To describe what happens to food as it goes through the body



Let's get curious...

What happens to food once we've eaten it?

What does our digestive system do?

What is digestion?

Which body parts form our digestive system?

Let's find out some more.....

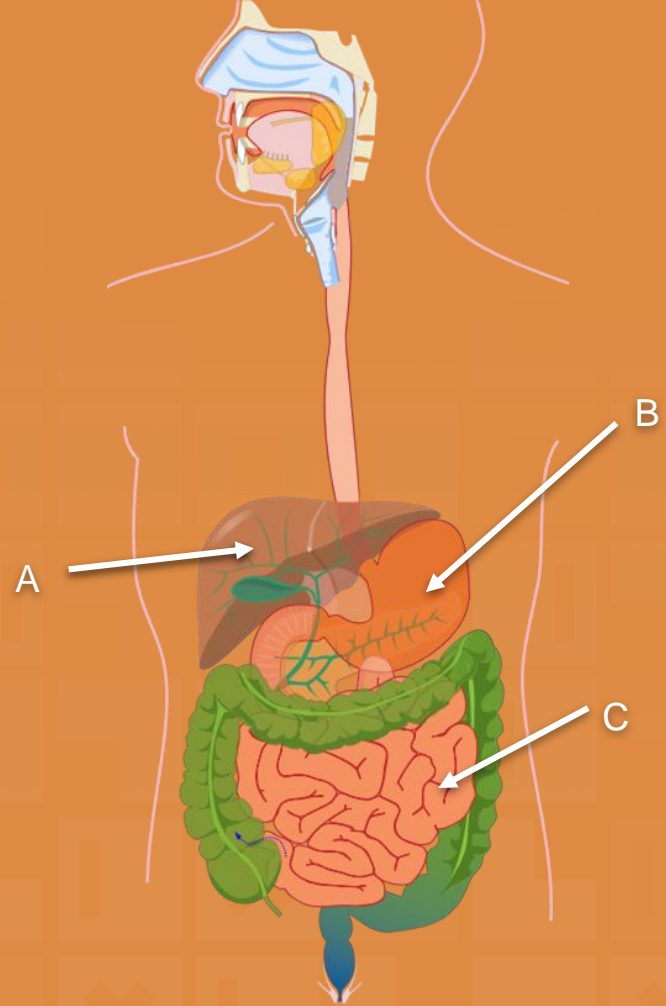


A KWL Inquiry worksheet for the digestive system is available in the teacher's resources repository at: <https://drive.google.com/drive/folders/17N-hPZnEAdBwevuxAYoTi-yasNatYQM9?usp=sharing>

The digestive system

Where in your body is your stomach?

Answer: B

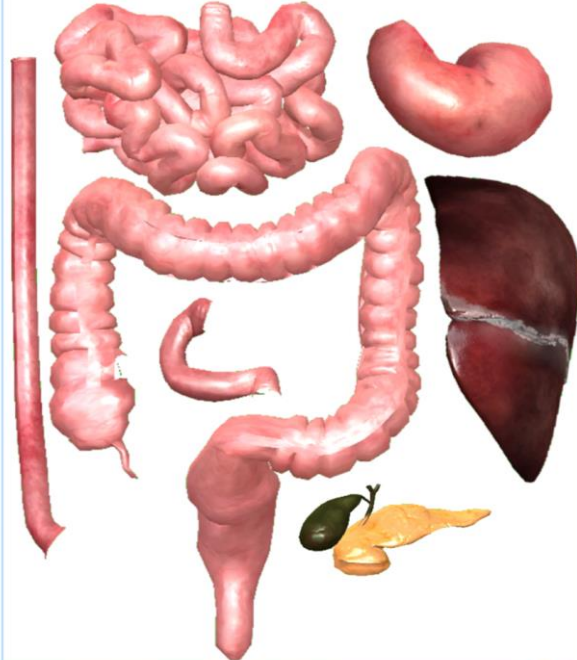


The digestive system puzzle

Have a try at putting together your digestive system puzzle and labelling the organs.




Do your best. You can check all of your answers on the Virtuali-Tee app!

Digestive System Puzzle
Before using the 'Virtuali-Tee' and app, try to put together the digestive system. You can check your answers when you use the app! If you know what an organ is called, you can label it.



The image shows various parts of the human digestive system as puzzle pieces. At the top left is a long, thin esophagus. To its right is a coiled small intestine. Further right is a reddish, bean-shaped kidney. Below the kidney is a large, dark brown liver. In the center is a long, segmented large intestine. To its right is a yellow, pear-shaped gallbladder. Below the gallbladder is a green, pear-shaped pancreas. At the bottom center is a pink, J-shaped stomach. To the left of the stomach is a small, curved appendix. At the bottom left is a long, thin vermiform appendix.

The **ULTIMATE** way to learn about the body

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So what is digestion?

Digestion is when the food we eat is broken down into smaller pieces our body can use.

Without digestion, we would not be able to use food to give us energy.

Why does our body need energy?



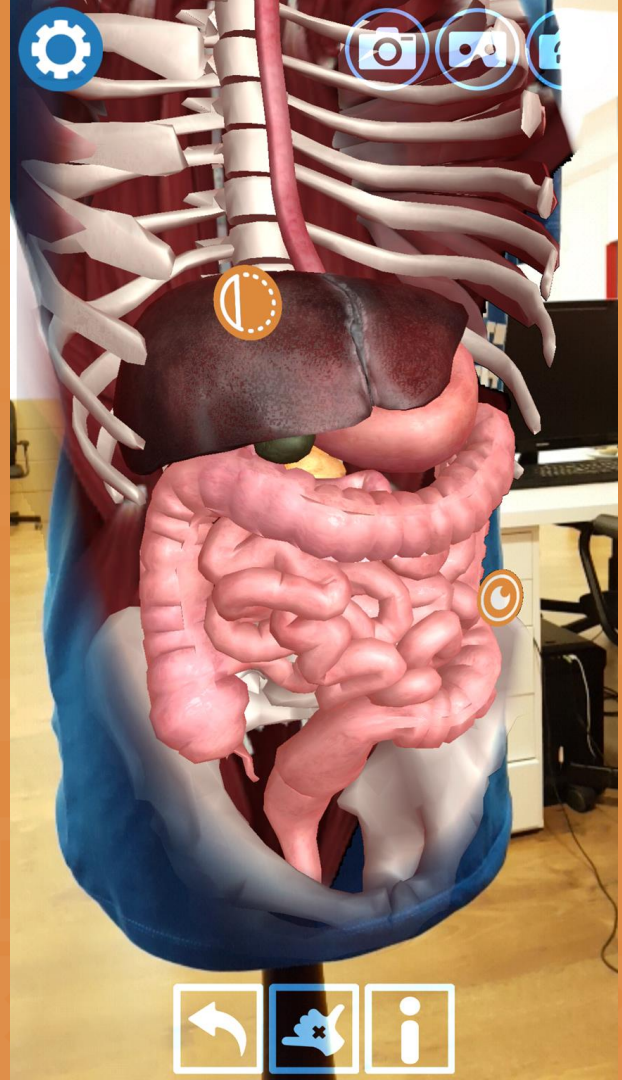
What did you have for breakfast this morning?
It will be digesting right now!

So what is digestion?

Digestion happens in our digestive system which is a group of organs that work together to break down the food.

What organs do we have in our body?

Which ones do you think are important for digestion?



The Virtuali-Tee

Today we are going to be using a very special t-shirt to explore your digestive system

*“Explore the Human Body....
On a Human Body.....”*



What is the Virtuali-Tee?

A t-shirt that lets us see inside YOUR body using Augmented Reality!

We'll use a mobile devices to scan the tshirt with the app and open a portal so we can explore what is going on under your skin.



Step 1 - Getting started

To get started, simply open the Virtuali-Tee app and point at the t-shirt. The tracker image is best picked up by initially pointing at the upper chest with the device 0.5m/1.5ft from the t-shirt.

The tracking of the t-shirt requires that you are in a well lit space without heavy shadows and that the t-shirt is not stretched or heavily wrinkled.

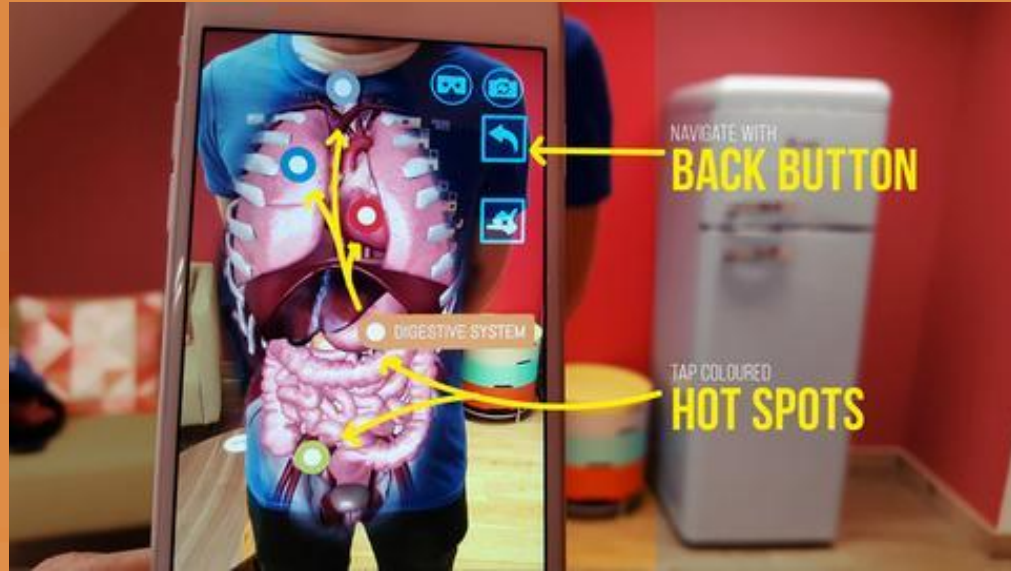


STARTING DISTANCE of
0.5 METRES

Step 2 - Wow, the organs look amazing...now what!?

Well, we have implemented some pretty cool features into the app. Just tap the screen to get started. You can then isolate the physiological system by tapping on the coloured hot spots. You'll see some buttons floating outside the chest, use the back button to navigate between systems.

We encourage you to explore, if you see a button....tap it to find out what it does!




Step 3 - Surprise! Meet Dr Glover....your virtual expert on the body!

Think of Dr Glover as a holographic guide to the body. He'll talk you through the anatomy and physiological systems in the body. Just tap the Hans button and he'll appear.

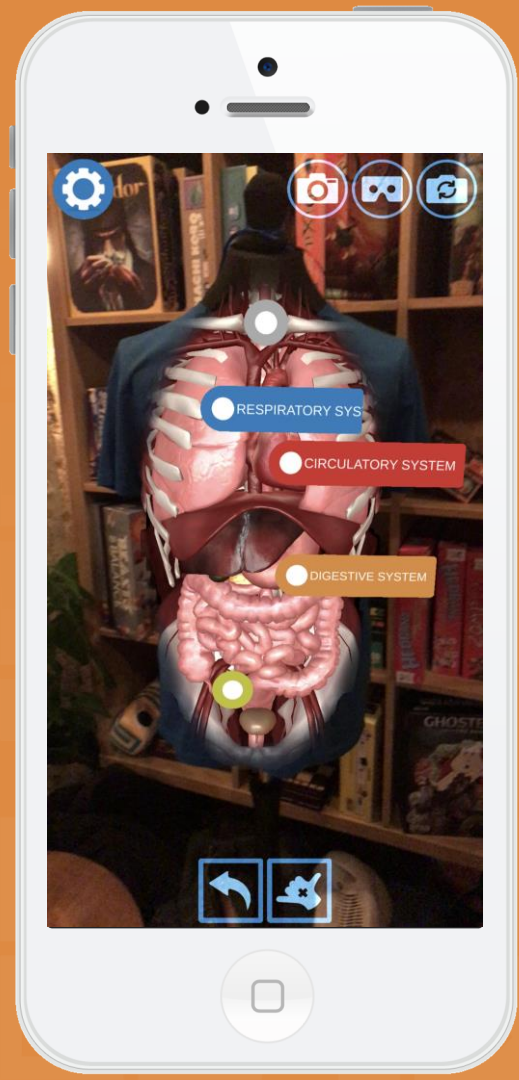


Getting into your digestive system

Tap on the orange digestive system hotspot and the app will isolate to just that system. See through to your spine!

Tap on the  button to call Dr Glover, who will give you a guided tour!

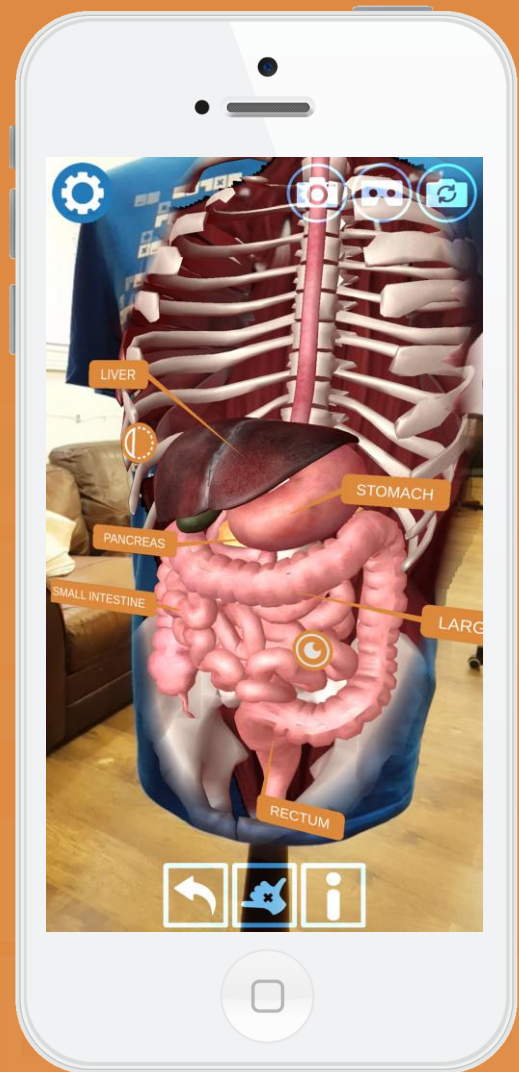
Tap the  button if you would like subtitles.




Discovering your digestive organs

Tap on the  button to bring up the labels for the digestive system.

Study these as they will help your next activity.



Your small intestine is amazing!

Tap on the  icon in the digestive system to look inside your small intestine.

You can see the tiny wavy finger-like structures on the walls of the small intestine. These are known as villi. Villi produce a HUGE surface area which maximises the amount of nutrients your intestine can absorb.

Notice the expanding and contracting of the walls called peristalsis. This is like a mexican wave that travels along the small intestine, colon and even your oesophagus. This is how the food gets pushed down into the stomach, and along through to the toilet!



Let's explore and answer these:

How does the liver support the Digestive System?

What is the name given to the substance that helps with digestion in the stomach?

Where does the food go after it has been in the stomach?



Quiz

Can you fill in the blanks and show what you've learnt today? Use the words in blue to help you.

Our body needs food so that we have enough _____ to survive. Our _____ system is made up of organs that work _____ to _____ down food. Digestion begins in the _____. The _____ squeezes the food down into the _____. The food goes through the _____ and then the _____ where the proteins, fats, sugars, vitamins, minerals and some water is absorbed. Finally the remaining water is absorbed in the _____ and the left over waste is expelled through the _____.

together - energy - duodenum - small intestine - colon (large intestine) - mouth - anus
stomach - digestive - break - oesophagus

Activity 2 - Quiz

Can you fill in the blanks and show what you've learnt today? Use the words in blue to help you.

Our body needs food so that we have enough energy to survive. Our digestive system is made up of organs that work together to break down food. Digestion begins in the mouth. The oesophagus squeezes the food down into the stomach. The food goes through the duodenum and then the small intestine where the proteins, fats and sugars are absorbed. Finally the water is absorbed in the colon and the remaining waste is expelled through the anus.

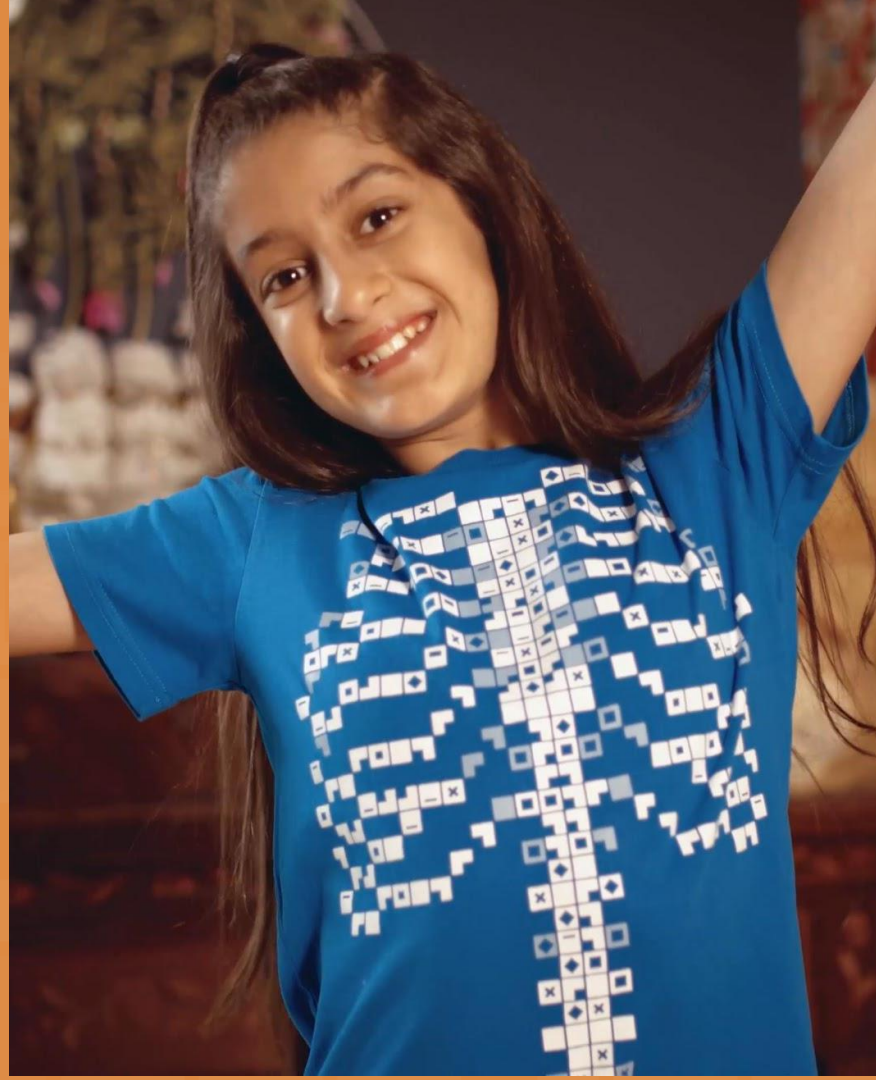
Curious facts!

Did you know that it takes food around 6 hours to complete digestion but it only takes around 7 seconds for food to travel from your oesophagus to the stomach?

It can take 10 hours to several days from mouth to rectum.

An adult stomach can hold up to 1.5 litres of food and this will stay here for around 2-3 hours

The stomach wall has three layers of muscle!



Print friendly take home sheet

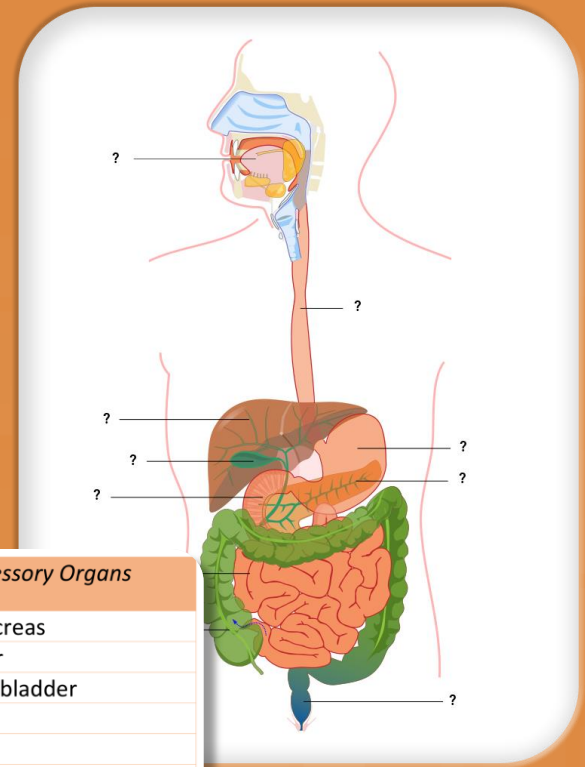
Students can enjoy labelling a digestive system diagram.

Indicating which organs are which.

Arrows to be added to show the direction of food.

The worksheet is available in the teacher resources repository:

<https://drive.google.com/drive/folders/17N-hPZnEAdBwevuxAYoTi-yasNatYQM9?usp=sharing>



<i>Alimentary Canal (Gastro-Intestinal Tract)</i>	<i>Accessory Organs</i>
Stomach	Pancreas
Mouth	Liver
Oesophagus	Gall bladder
Large intestine	
Rectum	
Small intestine	
Duodenum	
<i>Other labels</i>	
Salivary glands	Appendix
Anus	