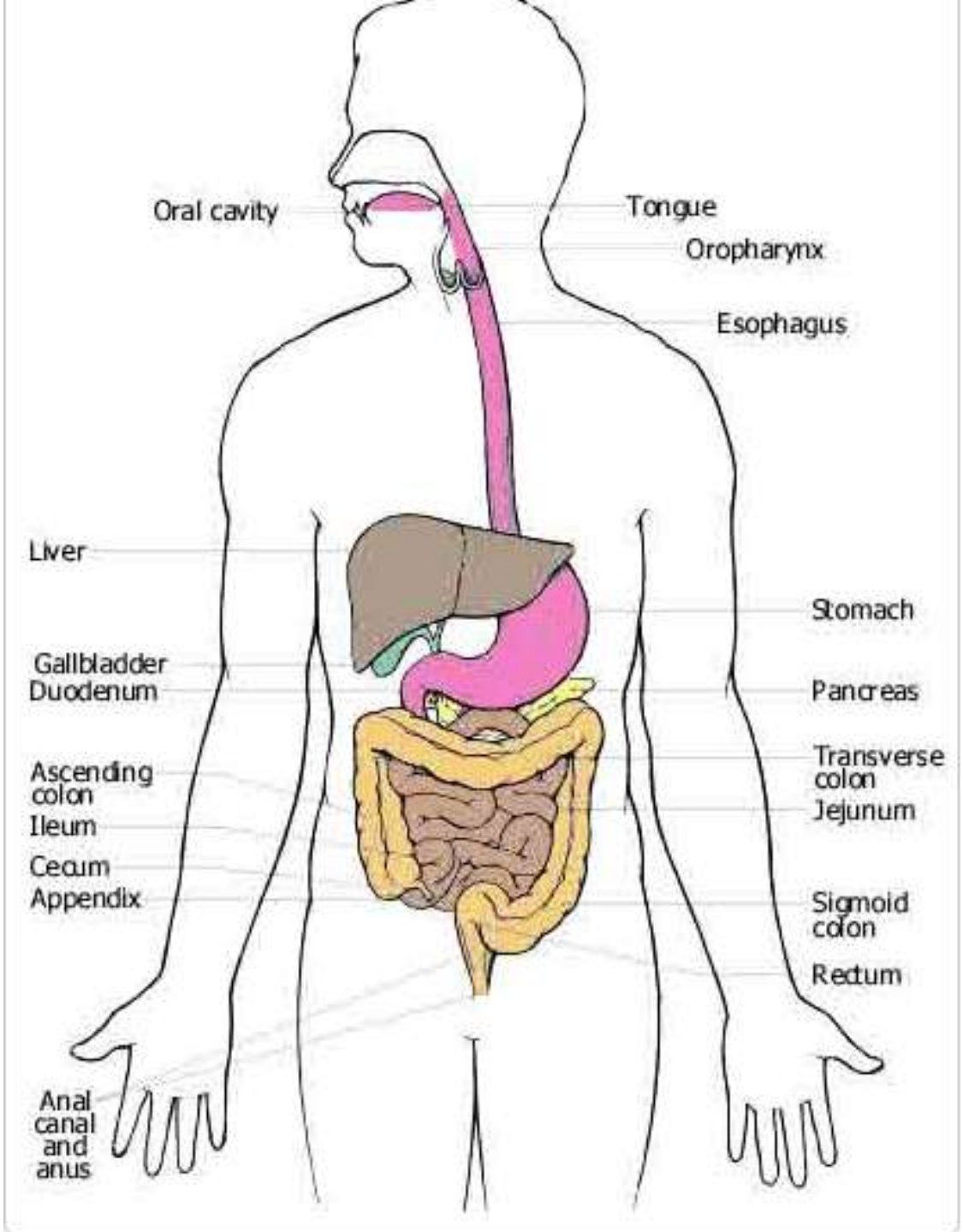
Digestion Revision
- MONDAY LESSON

Digestion Revision

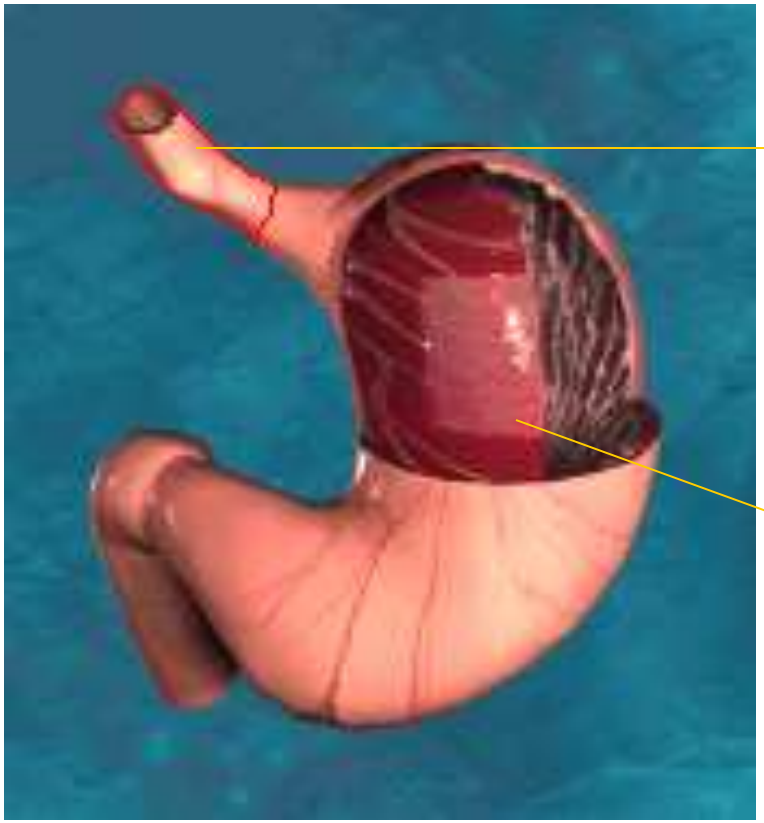
- **WALT: Explain the processes involved in food moving through our bodies**

- I must explain the path food takes from mouth to anus
- I should describe the role of enzymes
- I should understand the adaptations our intestines have to absorb food

Watch the demo of food moving through our bodies. Can you identify the different parts?



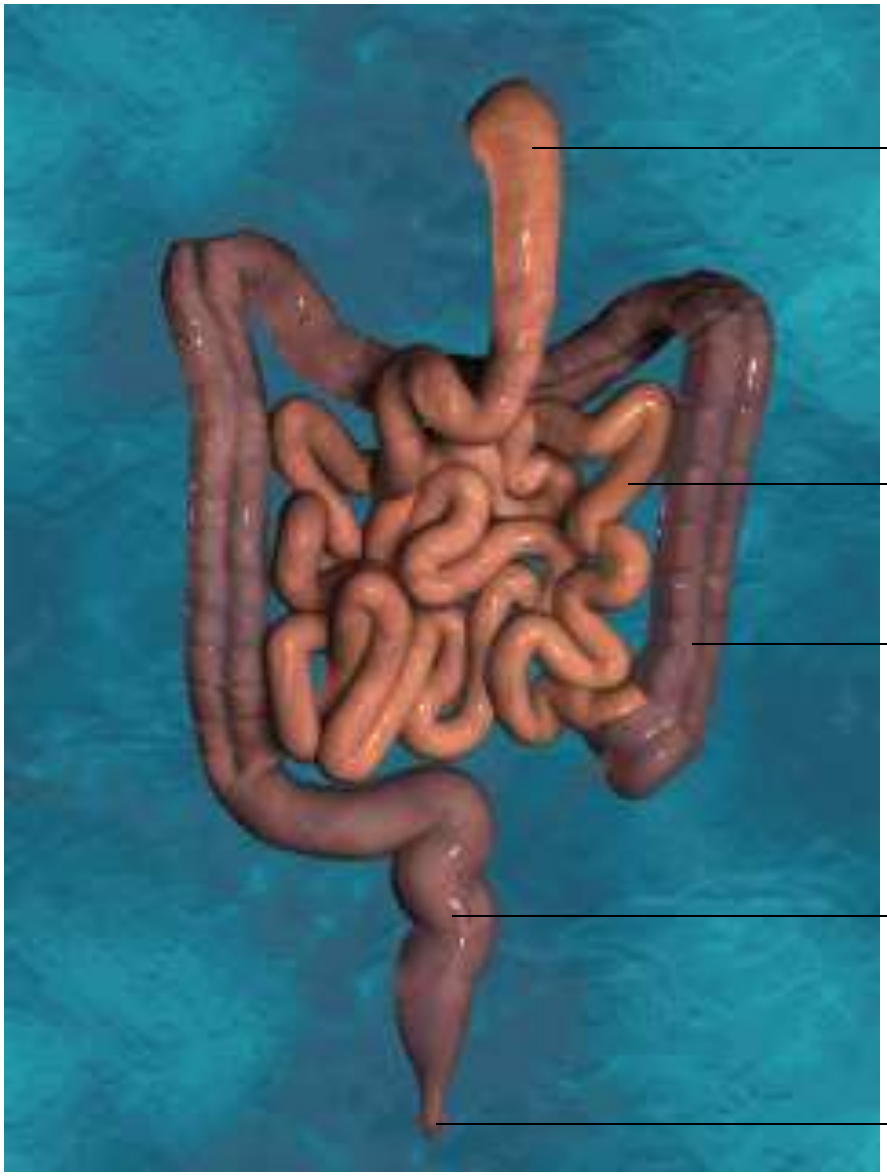
- Food is chewed to make digestion easier.
- The stomach starts to digest the food and makes it into a liquid.
- The small intestine finishes digesting the food and the tiny dissolved food particles move into the blood.
- Undigested food passes out through the large intestine.



oesophagus

stomach

The food is squashed by muscular contractions and acid is added.


duodenum
Small intestine
Large intestine
Rectum
Anus

Why do we need food?

Glucose + oxygen >>>>>>>>
carbon dioxide + water + energy

A balanced diet is...

Eating a variety of foods from each food group in the right proportions for good health.

	Dietary Component	Why we need it?	Which foods provide us with it
1	Carbohydrates		Brown pasta, cereals, potatoes
2	Fats	Slow release of energy – energy store Keeps us warm	Oily fish, dairy products, nuts
3		Build and repair muscle	
	Examples of each =	Defence against disease, general functioning of body	Fruit and vegetables and fortified cereals
5		Fills us up and keeps food moving through us	
6	Water	Keeps our body hydrated	-

	Dietary Component	Why we need it?	Which foods provide us with it
1	Carbohydrates	Release energy quickly	Brown pasta, cereals, potatoes
2	Fats	Slow release of energy Keeps us warm	Oily fish, dairy products, nuts
3	Proteins	Build and repair muscle	Fish, meat, pulses
4	Vitamins & Minerals E.g. Vitamin C Calcium (a mineral)	Defence against disease, general functioning of body	Fruit and vegetables and fortified cereals
5	Fibre	Fills us up and keeps food moving through us	Fruit, vegetables, cereals
6	Water	Keeps our body hydrated	-

Now spend 2 minutes explaining in pairs the path a bowl of breakfast cereal would make after it enters your mouth

Enzymes

- Enzymes exist in your mouth and digestive tract to help break down large bits of food into smaller bits.

- You need to know about one;…..**amylase** which breaks down starch to glucose

- Starch is an example of a ……..

- For starch to be absorbed by our bodies it must be broken down into glucose

(Starch molecules are too large but glucose molecules are small enough for absorption)

- **Digestion** is this process of breaking down the food into a form that can be absorbed.

- Enzymes help us break up the starch

Spend 2 minutes with your pair designing an experiment to test the effect of temperature on the activity of an enzyme that breaks up starch.

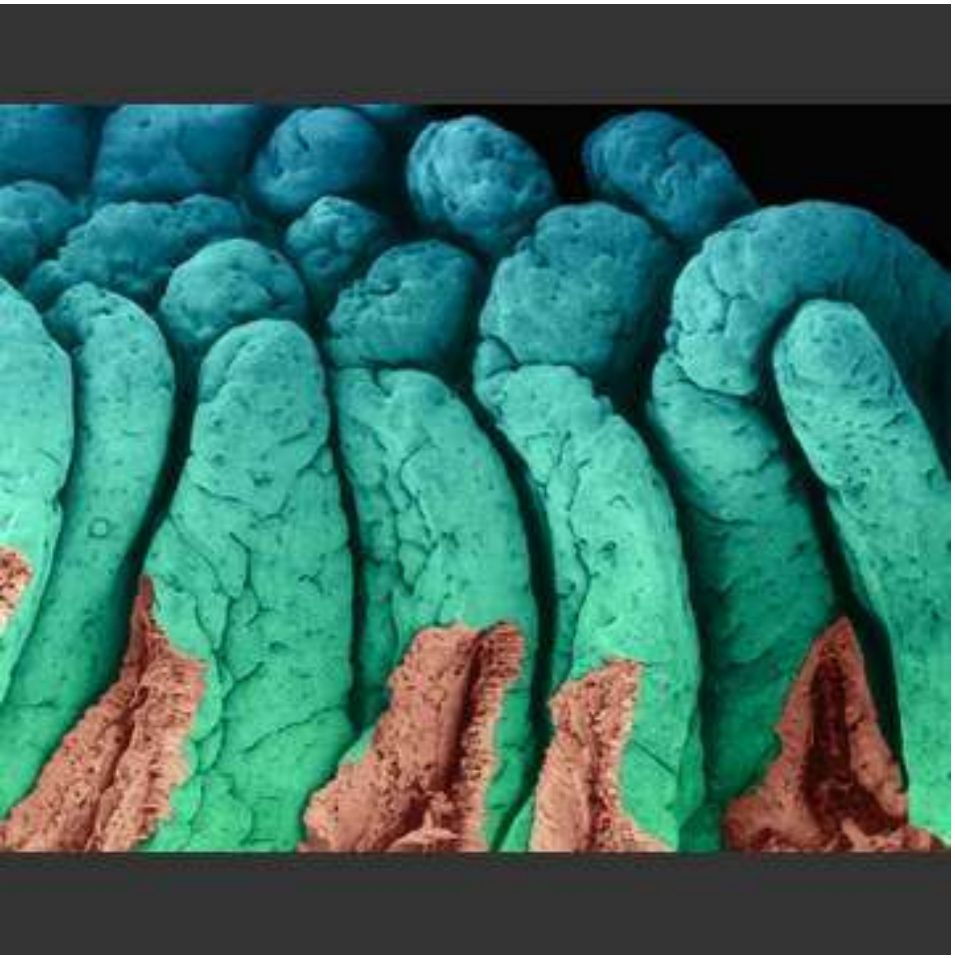
Testing the effect of temperature on enzymes

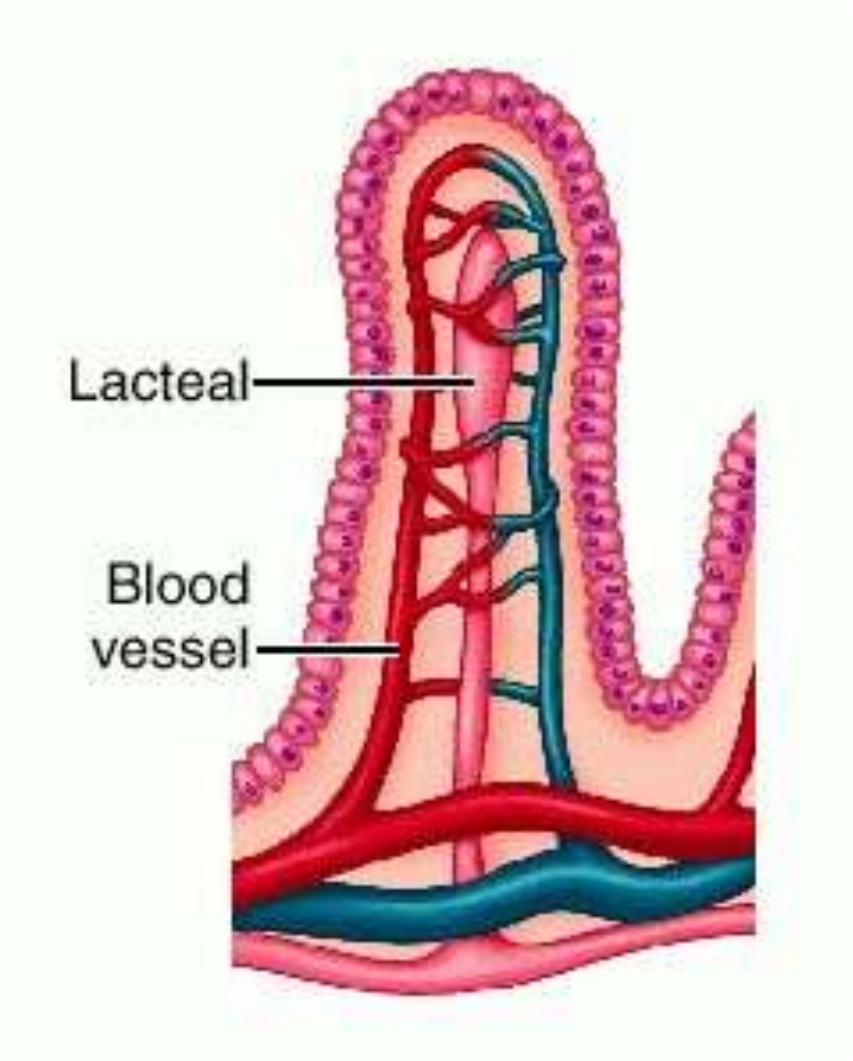
- Now you will carry out the experiment. You will have:

- Some starch
- Some amylase
- Some iodine

- Pour starch and amylase together in 3 test tubes
- Place one in a cold place, one in hot water and one at around 38 degrees
- We will test for starch after 15 minutes

Digested food is mostly absorbed where?





Turn to page 24 of the red books

Let’s read it together.

What are the main points?

1. Villi are tiny projections on the small intestine
2. They increase the surface area (i.e. the amount of area of the small intestine that is in contact with food)
3. Therefore more food can be absorbed

Your tasks for now and for prep

- Exercise 2.2 Digestion – pages 25-26 of red books (you will need graph paper)
- Complete the worksheet on enzymes

Plenary

- Think, pair, share – 5 facts each