

Evaluate a Model of the Digestive System

<https://www.youtube.com/watch?v=aeml64NAK08>

Watch the video clip to identify the function of each part of the digestive system and the model used to represent each process in digesting the food.

	Function	Model Used to Represent Process
Mouth		
Teeth		
Saliva		
Oesophagus		
Stomach		
Hydrochloric Acid		
Protease (Enzyme)		
Lipase (Enzyme)		
Carbohydrase (Enzyme)		
Liver		
Pancreas		
Small Intestine		
Large Intestine		
Rectum		
Anus		

Sample Answers...

	Function	Model Used to Represent Process
Mouth	Ingestion occurs – Food is taken in.	Bowl/ basin
Teeth	Physical digestion – Teeth cut and grind the food into smaller pieces.	Scissors = Incisors Potato Masher = Molars
Saliva	Chemical digestion – Saliva helps soften the food. Saliva also contains an enzyme called amylase. Amylase breaks down starch and turns it into maltose (a sugar).	Clear liquid added.
Oesophagus	A muscular tube that allows food to be passed into the stomach.	Hands moving contents from the bowl to the plastic bag.
Stomach	Chemical & physical digestion occurs here. The muscular walls churn up the food.	Plastic bag – turn and squeeze the bag.
Hydrochloric Acid	In stomach, the hydrochloric acid kills any bacteria.	Red liquid added.
Protease (Enzyme)	Protease enzymes break down protein into amino acids.	Liquid added.
Lipase (Enzyme)	Lipase enzymes break down fat into fatty acids and glycerol.	Liquid added.
Carbohydrase (Enzyme)	Carbohydrase or amylase breaks down starch into sugar (glucose)	Liquid added.
Liver	The liver produces a liquid called bile. Bile helps with the breakdown of fats. Bile is stored in the gall bladder. (The food does not pass through the liver on its way through the body.)	Liquid added to represent the bile.
Pancreas	Digestive enzymes are produced in the pancreas.	
Small Intestine	Soluble food molecules are absorbed into the bloodstream.	Food is passed through tights. Food passing through holes in tights represent the absorption of nutrients.
Large Intestine	Water is absorbed from the food. The remaining solid waste (faeces) is passed into the rectum.	Food is dried with tissue.
Rectum	Faeces is stored in the rectum until it is passed out of the body through the anus.	Bin bag.
Anus	Faeces is passed out of the body.	

	Strengths of Model	Limitations of Model
Mouth		
Teeth		
Saliva		
Oesophagus		
Stomach		
Hydrochloric Acid		
Protease (Enzyme)		
Lipase (Enzyme)		
Carbohydrase (Enzyme)		
Liver		
Pancreas		
Small Intestine		
Large Intestine		
Rectum		
Anus		