Earthworms feed on _____ matter in the soil and are called deposit feeders	Earthworms suck in the soil using the strong muscles called the	$CaCO_3$, calcium carbonate is secreted from the _____ gland	Why is food digested?
Organic matter	**Pharynx**	**Calciferous**	**To break down polymers into smaller molecules that can be absorbed into blood for energy**
Four stages of a digestive system are	Carbohydrates break down into	Enzyme which digest carbohydrates	Fats break down into
Absorption, Digestion, Absorption and Egestion	**Glucose**	**Amylase**	**3 fatty acids and 1 glycerol**
Enzyme which breaks down fats	Proteins break down into	Enzymes which break down proteins	What happens in the crop of the earthworm?
Lipase	**Peptides then amino acids**	**Pepsin and trypsin**	**Nothing, food is just stored**
Where is food crushed and ground up in an earthworm?	Why is it important for food to be crushed up?	Where are enzymes added to the soil in earthworms?	What do enzymes do to the food molecules during digestion?
Gizzard	**Increases the surface area of food so it can be absorbed or further digested**	**Calciferous gland and intestines**	**Break the molecules down, so small enough to be absorbed into blood**

What is the fold in earthworms intestine called?	What is the name of the open where undigested food is egested?	How does the gizzard crush the soil particles up?	What does the word digestion mean?
Typhlosole	**Anus**	**Muscles relax and contract grinding the soil on the sand particles**	**Breaking down of food so small enough to be absorbed into blood**
Why do we need to eat food?	What is the role of the blood in the digestive system?	What type of teeth are absent in cows?	Why do cows not have canine teeth?
To provide the fuel for respiration (production of energy)	**Carry the digested molecules to the cells where they are used**	**Canine**	**Don't eat meat so don't need to rip or tear meat**
Human teeth are all about the same size, why?	Where in the human body does digestion occur?	Increased efficiency of digestion in humans is achieved by having many enzymes and a _____	Why do humans and cows require so much energy?
Don't eat just one type of food so no teeth are specialised	**Mouth, stomach and 1st part of small intestines**	**System made up of compartments to digest each food type**	**We are homoeothermic and need to generate heat**
What are the finger like structures which increase SA of digestive system for max absorption of digested food molecules?	Where in the body is bile and pancreatic enzymes added to the food?	What enzymes do pancreatic juices contain?	What does the enzyme amylase digest?
Villi	**Duodenum**	**Trypsin, lipase and amylase**	**Carbohydrates to glucose**

What does the enzyme trypsin digest?	What does the enzyme lipase digest?	What does the enzyme pepsin digest?	What is absorbed in the ileum?
Protein to amino acids (AA)	**Lipids to fatty acids and glycerol**	**Protein to peptides or AA**	**Digested food molecules**
What is absorbed in the large intestines?	Organisms which have short large intestines produce _____	What do cows feed on?	What is the main structure in the cow for physical digestion?
Water and dissolved molecules	**Runny faeces**	**Tough plant material**	**Large molar teeth**
What, in correct order are the names of the four stomach in cows?	What is found in the first three cows' stomachs?	Why is grass so tough to digest?	What does the word ruminate mean?
Rumen, reticulum, omasum and abomasium	**Anaerobic microbes carry out anaerobic respiration to digest the food**	**Very hard to breakdown the cellulose in grass**	**Ability to regurgitate the food from rumen and re-chew**
Why is it important for cows to ruminate?	What enzyme is in the stomach?	What is also added in the human stomach?	Why is HCl added in the human stomach?
Aids the breakdown of the tough grass	**Pepsin**	**HCl**	**Increases acidity so pepsin can digest protein**

What do the microbes in cows first 3 stomachs mainly produce?	Worms have no teeth, what do they use instead for physical digestion?	Why do humans have such a long digestive system?	Why is it important for the cow to also digest the microbes
Volatile fatty acids	**Sand particles in the gizzard**	**Maximise the digestion and absorption of molecules to provide energy**	**They provide vital nutrients**
Humans are _____ meaning they eat both plant and animal material	What is added to the grass in the saliva of cows mouth	What do the phosphates and bicarbonates do in the cow	Why is it important for the first 3 stomachs to be kept neutral?
Omnivores	**Phosphates and bicarbonates**	**They neutralise the acids produced in the first 3 stomachs**	**If these get too acidic the microbes which digest will die**
Chemical digestion involve the using of _____ to break down the food	The name for the gap in a cows mouth where canines would have been	The name for the ball of food as it moves through the digestive system	The muscle which controls the entry and exit of food from the stomach
Enzymes	**Diastema**	**Bolus**	**Sphincter**
The name for the tube which joins the mouth to the stomach.	The gland in the mouth which releases enzymes	The type of respiration where no oxygen is present. Occurs in a cows first 3 stomachs	What is the job of the caecum in cows?
Oesophagus	**Salivary**	**Anaerobic**	**Contains more microbes for further anaerobic fermentation**

Where is bile produced?	Where is bile stored before being added in the duodenum?	What is the function of bile?	The teeth used to crush food.
liver	**Gall bladder**	**Neutralises the stomach acid and emulsifies the fats**	**Molars**
The teeth used to bite / slice	The teeth used to rip	Which stomach is also called the honeycomb?	What is the name of the muscle contraction which push food through the digestive system
Incisors	**Canine**	**Reticulum**	**Peristalsis**
What is the name of the flap which prevents food from moving into the wind pipe?	What stage of digestion are villi used for?	Why do we say the appendixes and caecum in human are redundant?	What does the word ingestion mean?
Epiglottis	**Absorption**	**No longer needed for digestion as we don't eat large amounts of cellulose**	**Bringing food into the body**
What is the function of the rectum?	Where do the gastric juices come from?	What are found inside the folds of the villi?	What is a typhosole?
Store the waste before egestion	**Wall of the stomach**	**Blood capillaries**	**Fold in the intestinal wall which increases the SA for absorption**