

● BIOLOGY

Fold down the centre vertical line and glue. Cut out as double sided flash cards.

Cow mouth	Contains a dental pad No canines Incisors on bottom Large molars for grinding grass
Cow saliva	No amylase Contains phosphates and bicarbonates Keep the pH neutral so microbes don't die
The rumen 1st stomach	Large anaerobic vat Fermentation occurs here Food regurgitated from here back into the mouth for re-chewing to increase S.A. = ruminate
Reticulum 2nd Stomach	Honeycomb like projections These increase S.A Also contains many microbes to break down food Anaerobic
Omasum 3rd stomach	More microbes - more digestion Many folds to increase S.A Digested food and water is absorbed into the blood stream

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Abomasum 4th stomach	True stomach Contains HCl to kill microbes Contains pepsin to digest protein (microbes)
Cow small intestines	Pancreas & liver secrete enzymes & bicarbonates = break down protein & neutralise Second part contains villi to increase absorption S.A
Cow caecum	Large and contains many microbes, finishing off anaerobic cellulose digestion
Cow large intestines	Absorption of water and minerals / vitamins Short = runny faeces
Cow rectum	Stores waste prior to exit out the anus (egestion)

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Earth worms are....	Deposit feeders
Earth worm pharynx	Strong muscle which pulls soil into the mouth, as they have no teeth or tongue
Calciferous glands	Enzymes come from here into the oesophagus
Crop	Thin walled storage area Food moves here from the oesophagus No digestion occurs here
Gizzard	Tough thick walled grinding organ Muscles here continually relax and contract This rubs food against small sand particles to increase S.A.

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Intestines	Enzymes are secreted in these to break down the food, and then it is absorbed
Typhlosole	Located in the intestines has a simple fold Increases S.A for absorption
Omnivore	Eats both plant and animal matter
Human teeth	Incisors to cut food Canines to stab and tear Premolars to grind food Molars to crush food
Human saliva	Contains amylase to break down starch

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Epiglottis	Flap of skin over the top of the trachea to prevent food going into your lungs
Human oesophagus	Food moves down here by peristalsis
Human stomach	Little digestion occurs here Sphincter muscles hold food in Muscles crush food here Pepsin breaks down protein to amino acids HCl is released for pepsin
Human small intestines	Divided into 2 parts Duodenum and Ileum
Human duodenum	Contains pancreatic juices (enzymes and bicarbonates) Bile Intestinal Juices

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Pancreatic enzymes	<u>Amylase</u> Starch → Glucose <u>Trypsin</u> Peptides → Amino acids <u>Lipase</u> Lipids → Fatty acids + glycerol
Human ileum	Area is lined by villi which increase the absorption S.A.
Human caecum	Basically redundant in humans as we do not digest cellulose
Large intestines	Water and dissolved minerals are absorbed here into the blood stream
Human rectum	Stores waste which is later egested out of the anus