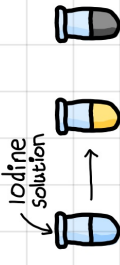
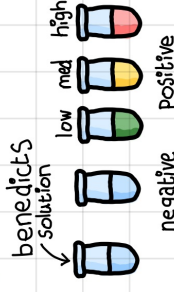


Food tests / chemical reactions

Starch

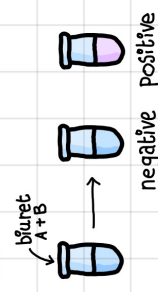


Glucose

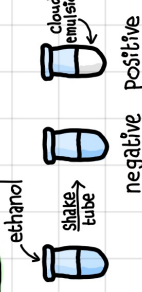


the test for glucose is quantitative

Protein



lipids



Stomach function of acid

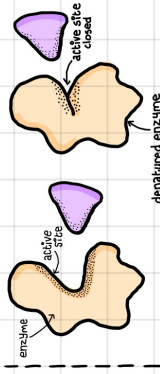
- Stomach acid kills bacteria in food.
- It does NOT break down food
- The only food group digested in the stomach is protein
- mucus lining the stomach prevents damage by the acid

major digestive enzymes / substrates and products

Digestion is the breakdown of large insoluble molecules into small soluble molecules which are absorbed by the blood. The breakdown of the large molecules is carried out by enzymes.

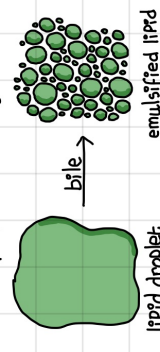
Denatured / enzyme loss of function

- when enzyme loses its shape, it is denatured
- An enzyme is denatured by high temperatures and a change in pH
- The substrate can no longer bind to the active site

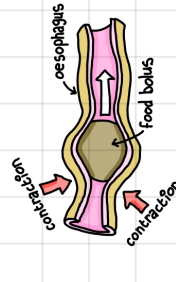


Bile Functions

- Bile is made in the liver and stored in the gall bladder
- Bile is alkaline and neutralises acid from the stomach
- Bile emulsifies lipids into small droplets which increases the surface area of lipids (faster digestion)



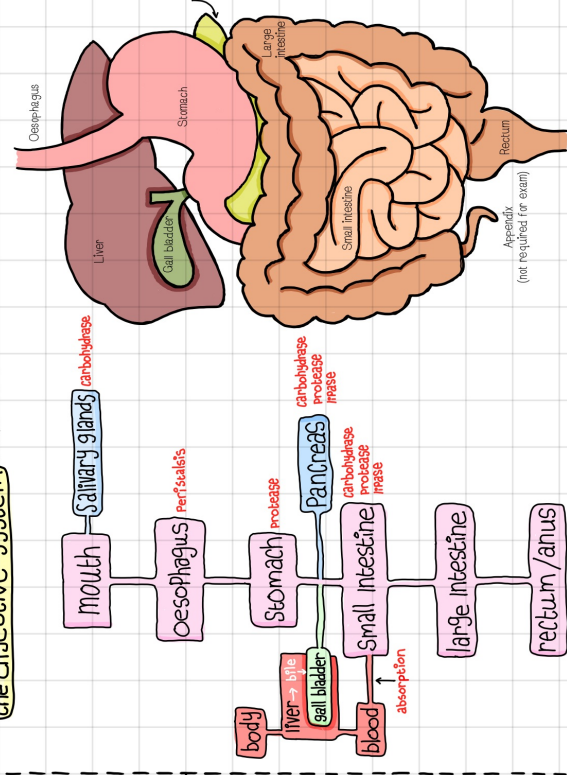
Peristalsis / muscular contractions



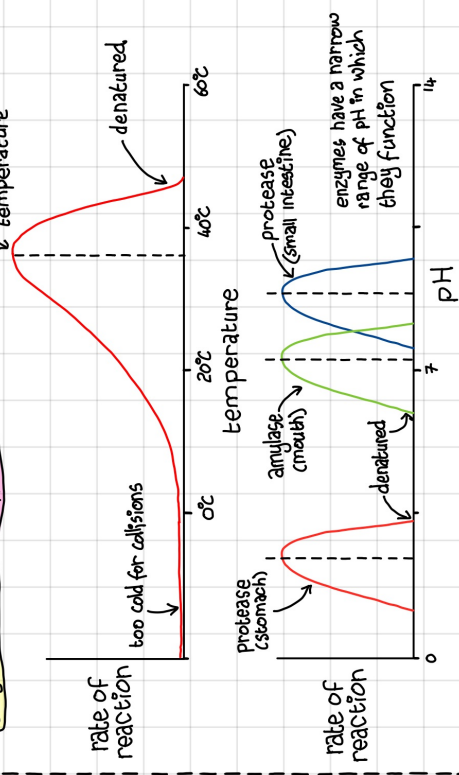
muscular contractions in the oesophagus, small intestine and large intestine ensure material is constantly moved along the digestive tract.

Digestion

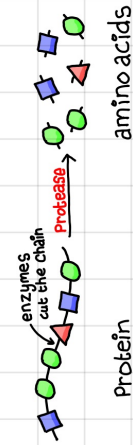
the digestive system / function and locations



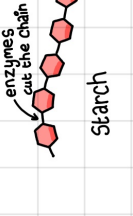
enzyme reactions / the effect of temperature and pH



Protein



Carbohydrates



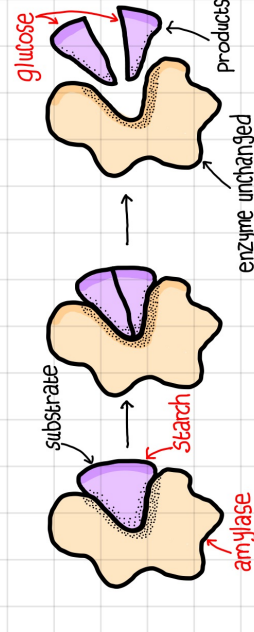
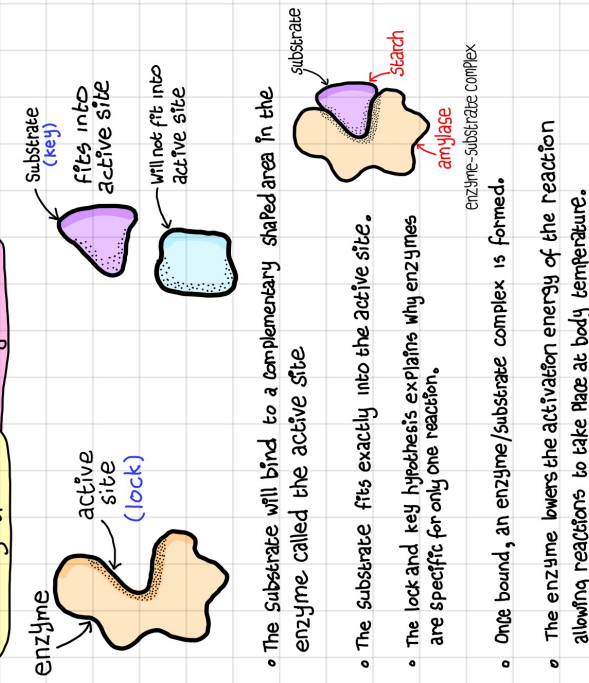
enzymes / introduction

enzymes are proteins with a uniquely shaped binding area called the active site. If the enzyme loses its 3D shape, it will also lose its function. This is called denatured.

enzymes / properties

- Enzymes are biological catalysts
- A catalyst speeds up the rate of a reaction but is not used up.
- Enzymes are specific for one reaction (one substrate)
- Enzyme activity is affected by temperature and pH.

lock and key hypothesis / how enzymes work



lipids

