

Year 8 – Organisms - Digestion

| Name of unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Expected Outcomes</b> <ul style="list-style-type: none"><li>• Students will understand the structure and function of the human digestive system.</li><li>• Students will describe the journey of food through the digestive tract.</li><li>• Students will identify the roles of enzymes in breaking down nutrients.</li><li>• Students will explain the importance of a balanced diet and nutrient absorption.</li><li>• Students will carry out investigations related to food breakdown and enzyme activity.</li></ul> |                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Developmental Focus Opportunities</b> <ul style="list-style-type: none"><li>• Scientific modelling: Using diagrams and physical models to understand digestion.</li><li>• Practical science: Investigating the effects of enzymes and testing for nutrients.</li><li>• Health literacy: Making connections between diet, digestion, and wellbeing.</li><li>• Analytical thinking: Interpreting data on digestion rates or dietary composition.</li></ul>                                                                  |                                                                                                                                                                                                                                                                                                                                                                           |
| Key Learning Points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Powerful Knowledge                                                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"><li>• Digestion breaks food into smaller molecules that can be absorbed.</li><li>• Different organs (e.g. stomach, small intestine) have specific roles.</li><li>• Enzymes catalyse the breakdown of carbohydrates, proteins, and fats.</li><li>• A healthy diet provides the nutrients the body needs for energy and repair.</li></ul>                                                                                                                                                    | <ul style="list-style-type: none"><li>• Understanding how the body gains nutrients to support life processes.</li><li>• Applying biological knowledge to everyday choices around food and health.</li><li>• Recognising the biochemical and physical nature of digestion.</li><li>• Laying a foundation for GCSE biology topics such as enzymes and metabolism.</li></ul> |
| Subject-Specific Vocabulary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Reading Opportunities                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"><li>• Digestion</li><li>• Enzyme</li><li>• Stomach</li><li>• Small intestine</li><li>• Large intestine</li><li>• Nutrients</li><li>• Absorption</li></ul>                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"><li>• Food and nutrition labels to explore dietary content.</li><li>• Case studies on digestive disorders or enzyme use in industry.</li><li>• Leaflets on healthy eating and government dietary guidelines.</li></ul>                                                                                                                  |

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- Amylase
- Protease
- Lipase

**Possible Misconceptions**

- Thinking digestion happens only in the stomach.
- Believing enzymes are alive or that they work on all nutrients the same way.
- Assuming food turns directly into energy without being broken down.
- Confusing the roles of different digestive organs.

**Cross-Curricular Links**

- **PSHE:** Promoting healthy eating habits and lifestyle choices.
- **PE:** Understanding energy release and nutrition in sport.
- **Food Tech:** Exploring ingredients and digestion in food preparation.