

# KS3 Biology – Food & Digestion – Learning Objectives

	Beginning	Developing	Secure	Embedding	Extending	Excelling
<b>Balanced Diet</b>	Identify the main food groups present in different types of food.		Explain why each of the main food groups are needed in our diets (including some specific vitamins and minerals), and give examples of a selection of foods from each group. Interpret the nutritional information found on food packaging.		-	-
<b>Mal-nutrition</b>	Discuss the importance of a balanced diet.		Identify a range of malnourishment problems – link them to the excess or deficiency of certain food groups; explain why problems such as obesity are linked to poor diets. Explain that advice on food changes over time as a result of new research or changes in lifestyles.		Discuss case studies and historic evidence of malnutrition. Discuss preventative measures and cures for various malnourishment problems.	
<b>Food Additives</b>	-	Understand, in simple terms, why additives are sometimes added to foods.	Suggest a number of reasons why additives are added to food, and the effect of these chemicals on the food – discuss the benefits and drawbacks of using such substances.			-
<b>Food Tests</b>	Demonstrate safe handling of laboratory equipment and potentially hazardous chemicals.	Describe a simple test to show whether a food contains fat.	Know how to test foods for the presence of starch, sugar and protein, including the names of the reagents used, and how to identify positive tests.	Accurately perform laboratory tests to indicate the presence of fat, starch, sugar and protein in a range of solid and liquid foodstuffs.	-	-
<b>Digestive System</b>	Describe the role of the digestive system (as a whole).	Identify and locate some parts of the digestive system.	Identify and locate all major parts of the digestive system, and describe their roles in the digestion process.		Discuss the consequences of a malfunction of part of the digestive system.	-
<b>Digestion</b>	-	Explain the differences between mechanical and chemical digestion; suggest how and where these processes take place.	Describe which nutrients are absorbed in the various parts of the digestive system. Explain why the pH of the stomach is low, and why this is necessary. Explain how the small intestine is adapted to absorbing food, including the role of villi.		Discuss problems with the digestive system that prevent us from breaking down and digesting food properly, and the function of any treatments or medication that may be used (eg. diabetes).	
<b>Enzymes</b>	-	Understand that enzymes are chemicals produced in the body necessary for breaking down large molecules found in foods to aid absorption.	Name some enzymes and link them to the food groups they act on. Use the 'lock and key' model to explain how enzymes work, including the conditions needed for enzymes to function effectively. Complete an experiment to demonstrate the effect of a variable on the action of an enzyme (eg. factors that affect the action of amylase on starch molecules).			Discuss some other uses of enzymes not linked to the digestion of food in the body.

*\* Objectives covering more than one grade are assessed based on the level of scientific detail and language used by the learner.*