

KS3 Biology – Cells & Life Processes – Learning Objectives

	Beginning	Developing	Secure	Embedding	Extending	Excelling
Life Processes	Recall the names of the seven life processes displayed by all living things ('MRS GREN').	Describe, in simple terms, each of the life processes.	Give examples stating how living things exhibit each of the life processes. Discuss why non-living things may exhibit some, but not all, of the life processes (eg. a car).		-	-
Organ Systems	Name some of the main organs and organ systems in the human body. Explain what is meant by tissue.	Describe the location of human organs and organ systems. Name some of the organs and systems found in plants.	Describe the function of each animal and plant organ system.	Discuss the similarities and differences between the organ systems of plants and animals.	Detailed knowledge of organs and organ systems.	
Animal and Plant Cells	Recall that all living things are made from tiny cells. Identify the main parts of a cell (found in both animal and plant cells).	Identify the parts of plant cells, and describe the differences between animal and plant cells.	Describe the functions of each part of the animal and plant cell.		-	-
Using Microscopes	Explain the function of a microscope, and when it may be used.	Name the main parts of a microscope. With assistance, prepare a slide and focus a microscope.	Prepare a simple slide, explaining why staining the sample is sometimes necessary. Focus a microscope correctly to give a clear image. Make an accurate sketch of the object observed through a microscope.		Calculate the magnification of a microscope image.	-
Specialised Cells	-	Identify some specialised cells, and describe where they are found. Explain that different cells may have different shapes or parts, depending on their functions.	Explain how specialised cells are adapted to their roles.		-	-
Cell Division	-	Explain that cells are needed for repair, replacement and growth.	Explain why the nucleus of a cell always divides first. Represent the cell division process using description or simple diagrams. Explain that information from the nuclei is duplicated when cells divide.		Discuss specific applications requiring cell division (eg. division of cancer cells).	Explain mitosis in detail.

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