

	Year 7 Biology Module – Cells You must be able to complete /understand all the previous pathway information to reach your pathway
7-9	Apply understanding of structure and function of cells to new and novel specialised cells. Confidently prepare and observe microscope slides. Identify the limitations of different types of skeletons.
6-8	Justify the classification of cells as animal or plant. Make accurate drawings of specimens. Explain how and why a cell is good at its job. Identify similarities between the functions of different organs (including common life processes). Justify the classification of an organism as an animal based on cell structure. Justify the classification of an organism as a plant based on cell structure.
5-7	Explain how structure is linked to function in specialised cells. Observe objects with a microscope without assistance. Describe how to use a light microscope to examine a slide. Describe how to prepare a microscope slide. Describe the functions of different tissues in an organ. Identify the contents of plant cells in unfamiliar plants. Convert measurements between units. Explain why antagonistic muscles are used to operate bones in many joints.
4-6	Describe the functions of different parts of the cells and specialised cells, and state the organisation levels in living organisms. Use life processes to justify whether something is an organism or is non-living. Describe the functions of a large range of human, animal and plant organs. Identify and recall named tissues in human and plant organs. Prepare a slide with instruction. State and correctly use a unit of measurement. Classify joints as different types.
3-5	Describe differences between animal and plant cells. Make drawings with some accuracy. Describe the life processes. Describe the functions of major human and plant organs. Relate the properties of bones to their functions. Describe the basic parts of joints. Describe what happens when muscles contract and relax.
2-4	State the 7 life processes. Identify the basic parts of a microscope. Know all organisms are made of cells Correctly use the word: tissue. Identify the cell nucleus, cell membrane and cytoplasm on a diagram of a cell. List the main features commonly found in animal cells. Describe how organs work together as organ systems. Describe the functions of individual bones. Describe how muscles and bones work together to allow movement. Recall that muscles are controlled by the nervous system.
1-3	Identify living and non-living objects, and whether a cell is from an animal or plant. Observe objects with a microscope with some assistance. Correctly use the word: organ. State the use of a microscope. Correctly use the term: organ system. Recall the main functions of the skeleton.

	Year 7 Biology Module – Reproduction You must be able to complete /understand all the previous pathway information to reach your pathway
7-9	Link changes during puberty and the menstrual cycle to the production of reproductive hormones. Explain the links between scientific advances and survival rates of humans. Suggest reasons for differences between the same types of specialised cells from different organisms. Evaluate the advantages and disadvantages of sexual and asexual reproduction in plants in different conditions. Evaluate different methods of pollination.
6-8	Suggest advantages and disadvantages for different reproductive mechanisms. Describe how the fusing of gametes and their nuclei during fertilisation forms a fertilised egg cell. Use knowledge of the positions or shapes of reproductive organs to make deductions about reproductive processes. Identify and explain the points in reproduction where difficulties in becoming pregnant could occur. Use knowledge of the menstrual cycle to predict timings. Evaluate different methods of seed dispersal in plants.
5-7	Explain how changes in puberty are linked to reproduction. Explain how sperm cells and egg cells are adapted to their functions. Explain the purpose of the menstrual cycle. Explain the difference in outcomes of asexual and sexual reproduction in plants. Explain how some pollen grains are adapted to their functions.
4-6	Describe the importance of the menstrual cycle in human reproduction. Explain how identical and non-identical twins occur. Describe how materials are supplied and removed from the foetus. Describe the effects of some substances that may harm a developing foetus. Describe the functions of plant reproductive organs.
3-5	Describe changes during puberty in humans. Identify sperm cells and egg cells as gametes. Describe the functions of the structures and organs of the human reproductive system. Describe what happens during labour and birth in humans.
2-4	State that a woman becomes pregnant after fertilisation, and correctly use the term implantation. Describe how different animals care for their offspring. Identify the structures and organs in the human reproductive system. Recall the names of substances in a mother's blood that may harm a developing foetus. List the main stages in giving birth in humans. Identify the role of sex hormones in puberty. State the function of plant reproductive organs.
1-3	Know that animals and plants reproduce in different ways. Identify animals that reproduce sexually and correctly use the term: sexual reproduction. Identify the placenta and umbilical cord. Recall the length of the gestation period in humans and correctly use the term: gestation period.