

YEAR 7 & 8 SCIENCE

Biological Sciences – Cells, animals and plants

- Unit Outline -



Course Description:

In this unit students will explore the diversity of life on Earth and continue to develop their understanding of the role of classification in ordering and organising information based on observable differences between living things. The students are introduced to cells as microscopic structures that explain macroscopic properties of living systems. They link form and function at a cellular level and explore the organisation of body systems in terms of flows of matter between interdependent organs.

Course Outcomes:

By the end of this unit you should be able to:

- Identify observable differences within and between groups of organisms using a classification key;
- Understand that cells are the basic units of living things and have specialised structures and functions;
- Understand that multi-cellular organisms contain systems of organs that carry out specialised functions that enable them to survive and reproduce*;
- Describe the interactions between organisms in terms of food chains and food webs*;
- Recognise that human activity can affect these interactions*.

**Yr 8's only*

Course Organisation:

The organisation of the unit will be:

- The students are presented with both theoretical and practical work to develop their knowledge and skills.

Student's activities will include:

- Developing a knowledge base using notes, questions, bookwork/worksheets.
- Conduct practical activities to explore and visualise theoretical concepts.
- Practice using terminology and language in oral and written activities.

Course Timeline:

Wk	Activity	Assessment
1-3	<ul style="list-style-type: none">• The wonderful world of cells• Animal vs plant cells• Characteristics of living organisms	End of Wk 3 - Quiz
3-5	<ul style="list-style-type: none">• Animal Groups• Plant Groups	End of Wk 5 - Quiz
6-8	<ul style="list-style-type: none">• Classification• Dichotomous key	In class assignment
9-10	<ul style="list-style-type: none">• Food webs and food chains	

Course Vocabulary:

- Cell
- Nucleus
- Nucleolus
- Endoplasmic Reticulum
- Golgi apparatus
- Ribosomes
- Mitochondria
- Cell membrane
- Cytoplasm
- Cytoskeleton
- Cell wall
- Vacuole
- Chloroplast
- Chlorophyll
- Multicellular
- System
- Classification
- Dichotomous Key
- Vertebrate
- Reptiles
- Mammals
- Birds
- Fish
- Amphibians
- Flowering plants (angiosperms)
- Non-flowering plants (gymnosperms)

- Assessment Outline -

Course Assessment:

Wk	Assessment type	Weighting	Marks achieved	Your Total
3	Quiz/test	30%		
5	Quiz/test	30%		
8	In class assignment	20%		
	General class participation	20%		

*specific marks to be advised

Specific Equipment required for each lesson:

- File/book to write in
- Pens, ruler, calculator