

Stomata on Leaves - Syllabus

Year 7:

Classification helps organise the diverse group of organisms

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

- identifying the contributions of Australian scientists to the study of human impact on environments and to local environmental management projects

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

- considering how human activity in the community can have positive and negative effects on the sustainability of ecosystems

Year 8:

Cells are the basic units of living things; they have specialised structures and functions

Multi-cellular organisms contain systems of organs carrying out specialised functions that enable them to survive and reproduce

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available

- investigating the development of the microscope and the impact it has had on the understanding of cell functions and division

People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity

- recognising the role of knowledge of the environment and ecosystems in a number of occupations

Year 9:

Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment

Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems

- investigating how ecosystems change as a result of events such as bushfires, drought and flooding
- People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities
- considering the impacts of human activity on an ecosystem from a range of different perspectives

Year 10:

The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence

- investigating changes caused by natural selection in a particular population as a result of a specified selection pressure such as artificial selection in breeding for desired characteristics
- relating genetic characteristics to survival and reproductive rates

Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community

- considering the role of science in identifying and explaining the causes of climate change

People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities

- considering the scientific knowledge used in discussions relating to climate change

	Demonstrated inquiry	Prescribed inquiry	Structured inquiry	Guided inquiry	Open inquiry
Questions	No question	Provided question	Sharpened question	Learner selects	Learner poses questions
Plans	No planning	Provided procedure	Discussion with teacher	Guided during planning	Learner determines plans
Conducts	Teacher conducts	Conducting and recording method told	Sharpened plan and conduct	Guided during conducting and recording	Learner conducts and records
Analyse	Teacher analyses	Analysis method told	Discussed analysis	Guided analysis	Learner analyses data studying trends
Problem Solve	No problem solving	Teacher provides reasoning and links	Discussed reasoning and conclusion	Guided reasoning and formulating conclusion	Learner reasons to formulate conclusions
Communicate	No conclusion	Teacher writes conclusion	Student writes	Guided justification and findings	Learner justifies findings and conclusions