

Fragile ecosystems: Rocky Shores (Excursion).

Economics and Business	Geography	Science	Maths
Biology	Biology AND Earth and Environmental Science		Earth and Environmental Science

Year 7	Year 8	Year 9	Year 10	Senior			
ACHGK041 The economic, cultural, spiritual and aesthetic value of water for people, including Aboriginal and Torres Strait Islander Peoples and peoples of the Asia region.	ACHGK050 The geomorphic processes that produce landforms, including a case study of at least one landform.	ACHGK069 The effects of people's travel, recreational, cultural or leisure choices on places, and the implications for the future of these places.	ACHGK070 The human-induced environmental changes that challenge sustainability.	ACHGE003 Collect geographical information incorporating ethical protocols from a range of primary and secondary sources.	ACHGE005 Evaluate the reliability, validity and usefulness of geographical sources and information.	ACHGE006 Analyse geographical information and data from a range of primary and secondary sources and a variety of perspectives to draw reasoned conclusions and make generalisations.	ACHGE010 Applies generalisations to evaluate alternative responses to geographical issues at a variety of scales.
ACHGK042 The causes, impacts and responses to an atmospheric or hydrological hazard.	ACHGK051 The human causes and effects of landscape degradation.	ACHGS069 Identify how geographical information systems (GIS) might be used to analyse geographical data and make predictions.	ACHGK073 The application of human-environment systems thinking to understanding the causes and likely consequences of the environmental change being investigated.	ACHGE011 Proposes individual and collective action, taking into account environmental, social and economic factors; and predicts the outcomes of the proposed action.	ACSBL001 ACSES001 Identify, research and construct questions for investigation; propose hypotheses; and predict possible outcomes.	ACSBL005 ACSES005 Interpret a range of scientific and media texts and evaluate processes, claims and conclusions by considering the quality of available evidence; use reasoning to construct scientific arguments.	ACSBL007 ACSES007 Communicate to specific audiences and for specific purposes using appropriate language, genres and modes, including compilations of field data and research reports.

ACHGS054 Reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal.	ACHGK052 The ways of protecting significant landscapes.	ACSHE157 Scientific understanding, including models and theories, are contestable and are refined over time through a process of review by the scientific community.	ACHGK075 The application of environmental economic and social criteria in evaluating management responses to the change.	ACSBL008 ACSES008 Science is a global enterprise that relies on clear communication, international conventions, peer review and reproducibility.	ACSBL010 ACSES010 Advances in science understanding in one field can influence other areas of science, technology and engineering.	ACSBL011 ACSES011 The use of scientific knowledge is influenced by social, economic, cultural and ethical considerations.	ACSBL013 ACSES013 Scientific knowledge can enable scientists to offer valid explanations and make reliable predictions.
ACSHE120 Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations.	ACHGK053 The causes, impacts and responses to a geomorphological hazard.	ACSIS174 Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations.	ACHGS078 Identify how geographical information systems (GIS) might be used to analyse geographical data and make predictions.	ACSBL012 The use of scientific knowledge may have beneficial and/or harmful and/or unintended consequences.	ACSBL015 Biodiversity includes the diversity of species and ecosystems; measures of biodiversity rely on classification and are used to make comparisons across spatial and temporal scales.	ACSBL016 Biological classification is hierarchical and based on different levels of similarity of physical features, methods of reproduction and molecular sequences.	ACSBL017 Biological classification systems reflect evolutionary relatedness between groups of organisms.

ACSHE121 Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management.	ACHGS062 Reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal.	ACSSU175 Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment.	ACSIS208 Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations.	ACSBLO18 Most common definitions of species rely on morphological or genetic similarity or the ability to interbreed to produce fertile offspring in natural conditions – but, in all cases, exceptions are found.	ACSBLO19 Ecosystems are diverse, composed of varied habitats and can be described in terms of their component species, species interactions and the abiotic factors that make up the environment.	ACSBLO20 Relationships and interactions between species in ecosystems include predation, competition, symbiosis and disease.	ACSBLO21 In addition to biotic factors, abiotic factors including climate and substrate can be used to describe and classify environments.
ACSSU111 There are differences within and between groups of organisms; classification helps organise this diversity.	ACSHE134 Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world.		ACSSU185 The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence.	ACSBLO22 The biotic components of an ecosystem transfer and transform energy originating primarily from the sun to produce biomass, and interact with abiotic components to facilitate biogeochemical cycling, including carbon and nitrogen cycling; these interactions can be represented using food webs, biomass pyramids, water and nutrient cycles.	ACSBLO23 Species or populations, including those of microorganisms, fill specific ecological niches; the competitive exclusion principle postulates that no two species can occupy the same niche in the same environment for an extended period of time.	ACSBLO24 Keystone species play a critical role in maintaining the structure of the community; the impact of a reduction in numbers or the disappearance of keystone species on an ecosystem is greater than would be expected based on their relative abundance or total biomass.	ACSBLO28 Human activities (for example, over-exploitation, habitat destruction, monocultures, pollution) can reduce biodiversity and can impact on the magnitude, duration and speed of ecosystem change.

ACSSU112 Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions.	ACSHE135 Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations.		ACSSU189 Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere.	ACSES015 Observation of present day processes can be used to infer past events and processes by applying the Principle of Uniformitarianism.	ACSES017 Precise dates can be assigned to points on the relative geological time scale using data derived from the decay of radioisotopes in rocks and minerals; this establishes an absolute time scale and places the age of the Earth at 4.5 billion years .	ACSES019 Rocks are composed of characteristic assemblages of mineral crystals or grains that are formed through igneous, sedimentary and metamorphic processes, as part of the rock cycle.	ACSES020 Soil formation requires interaction between atmospheric, geologic, hydrologic and biotic processes; soil is composed of rock and mineral particles, organic material, water, gases and living organisms.
	AC SIS148 Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate.			ACSES027 In any one location, the characteristics (for example, temperature, surface water, substrate, organisms, available light) and interactions of the atmosphere, geosphere, hydrosphere and biosphere give rise to unique and dynamic communities.			
	ACSSU153 Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales.						