

Year 10: Earth and Space- Global Systems

	Check	Date
Revise assumed knowledge: SC4-12ES describes the dynamic nature of models, theories and laws in developing scientific understanding of the Earth and solar system	<input type="checkbox"/>	
SC4-13ES explains how advances in scientific understanding of processes that occur within and on the Earth, influence the choices people make about resource use and management	<input type="checkbox"/>	
ES3 People use scientific knowledge to evaluate claims, explanations or predictions in relation to <u>interactions</u> involving the atmosphere, biosphere, hydrosphere and lithosphere. (ACSHE160, ACSHE194)		
SC5-8WS applies scientific understanding and critical thinking skills to suggest possible solutions to identified problems		
THE EARTH'S SPHERES AND NATURAL EVENTS and MATTER CYCLES AND INTERACTIONS BETWEEN SPHERES		
<i>5ES3a. outline how global systems rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere, including the carbon cycle (ACSSU189)</i>	<input type="checkbox"/>	
Define the terms lithosphere, atmosphere, hydrosphere, biosphere, cryosphere	<input type="checkbox"/>	
Describe the <u>water, carbon, oxygen, nitrogen and phosphorus</u> cycles	<input type="checkbox"/>	
CODE: 10ES20 First-hand Investigation Measuring transpiration (Oxford pg300)	<input type="checkbox"/>	
CODE: 10ES21 First-hand Investigation Make your own clouds (Oxford pg302)	<input type="checkbox"/>	
Describe the importance of each of these cycles to maintaining life	<input type="checkbox"/>	
Describe how each of the above cycles links the different spheres	<input type="checkbox"/>	
<i>5ES3b. describe some impacts of natural events, including cyclones, volcanic eruptions or earthquakes, on the Earth's spheres</i>	<input type="checkbox"/>	
Define the terms cyclone, volcanoes, earthquake, El Nino and La Nina	<input type="checkbox"/>	
Describe how <u>cyclones</u> affect the Earth's spheres using examples	<input type="checkbox"/>	
Describe how <u>volcanoes</u> affect the Earth's spheres using examples	<input type="checkbox"/>	
Describe how <u>earthquakes</u> affect the Earth's spheres using examples	<input type="checkbox"/>	
Describe how deep ocean currents regulate climate and how upwelling is vital for marine life. Using El Nino and La Nina as examples	<input type="checkbox"/>	
LITERACY SET 1: COSMOS ARTICLE	<input type="checkbox"/>	
Assessment: Oxford online test- The Earths spheres and natural events Students to achieve 100% in Support and Consolidate OR Consolidate and Extend	<input type="checkbox"/>	

CLIMATE CHANGE		
5ES3c. evaluate scientific evidence of some current issues affecting society that are the result of human activity on global systems, e.g. the greenhouse effect, ozone layer depletion, effect of climate change on sea levels, long-term effects of waste management and loss of biodiversity.	<input type="checkbox"/>	
Describe each of the following and identify the impact humans are having on each; <ul style="list-style-type: none"> the greenhouse effect ozone layer depletion sea level rise long-term effects of waste management loss of biodiversity 	<input type="checkbox"/>	
Research and evaluate the scientific evidence that exists to show the impact humans are having on each of the above	<input type="checkbox"/>	
Explain the differences between the greenhouse effect and enhanced greenhouse effect	<input type="checkbox"/>	
CODE: 10ES22 First-hand investigation: What factors affect a greenhouse? (Oxford pg316)	<input type="checkbox"/>	
Describe effects of global warming	<input type="checkbox"/>	
LITERACY SET 2: MIXED ACTIVITIES	<input type="checkbox"/>	
Assessment: Oxford online test- Matter cycles and interactions between spheres Students to achieve 100% in Support and Consolidate OR Consolidate and Extend	<input type="checkbox"/>	
5ES3d. discuss the reasons different groups in society may use or weight criteria differently to evaluate claims, explanations or predictions in making decisions about contemporary issues involving interactions of the Earth's spheres	<input type="checkbox"/>	
Water Cycle	<input type="checkbox"/>	
Case study: Water management <ul style="list-style-type: none"> Outline the importance of water management in Australian for both western and indigenous cultures Suggest a variety of reasons why water management is important to different groups of people Evaluate each groups claims 	<input type="checkbox"/>	
Carbon Cycle	<input type="checkbox"/>	
Case study: Mining and fracking for coal seam gas <ul style="list-style-type: none"> Compare and contrast geological and biological carbon Evaluate arguments for and against mining and fracking for coal seam gas 	<input type="checkbox"/>	
Nitrogen Cycle	<input type="checkbox"/>	
Case study: <ul style="list-style-type: none"> Explain how modern agricultural fertilisers have altered the natural nitrogen and phosphorus cycle Evaluate arguments for and against the use of agricultural fertilisers 	<input type="checkbox"/>	
NUMERACY AND SKILLS SET	<input type="checkbox"/>	
Assessment: Oxford online test- Climate change Students to achieve 100% in Support and Consolidate OR Consolidate and Extend	<input type="checkbox"/>	
Assessment: Global Systems Chapter Review	<input type="checkbox"/>	