UNITS OF WORK	STAGE 3	ODD YEAR	
Units	***Time Traveller***	***State of the Matter***	***A Change For the Better***
General Topics	• solar system • an ancient land • natural rapid changes to Earth	• solid, liquid, gas	• inventions • Australian products
Outcomes	**ST3-3VA, ST3 – 5WT, ST3 – 8ES, ST3 – 9ES**	**ST3- 1VA, ST3- 4WS, ST3- 5WT, ST3- 12MW, ST3-13MW**	**ST3- 1VA, ST3 – 2VA, ST3- 4WS, ST3- 5WT, ST3 – 14BE, ST3-16P**
Content	Students: • research the key features of the planets of the solar system and compare how long each takes to orbit the sun • demonstrate using models that the Earth revolves around the sun & moon revolves around the Earth • research the important contributions made by people from a range of cultures and organisations, using technologies of the time, to advancing scientific understanding of the solar system such as Aryabhata, Copernicus, Galileo, CSIRO and NASA • describe how Aboriginal and Torres Strait Islander peoples use observations of the night sky to inform decisions about some everyday activities, e.g. food gathering and ceremonies • describe using examples how natural geological events cause rapid changes to the Earth's surface, e.g. earthquakes\volcanic eruptions or tsunamis in Asian region or the world • research how some discoveries or inventions have increased scientific knowledge and provided evidence about natural events that cause rapid changes at the Earth's surface • investigate a recent Australian example of the effect on the Earth's surface of extreme weather conditions, e.g. cyclones, droughts or floods • identify ways that advances in science & technology have assisted people to plan for & manage natural disasters to minimise their effects, e.g. detection systems for tsunamis, floods & bush fires	Students: • observe and compare the differences in the properties and behaviour of solids and liquids, e.g. shape and ability to flow • demonstrate that air has mass and takes up space, e.g. in an inflated basketball, bubbles, balloons and beaten e.g. an egg white • observe and describe some readily observable reversible changes that materials can undergo, e.g. by melting and then solidifying chocolate, and dissolving and retrieving salt or sugar from water • make and test predictions about the effect of temperature on the state of some substances, e.g. adding and removing heat from water • observe some irreversible changes that common materials undergo to identify that the changes may result in new materials or products, e.g. rusting iron, burning paper, cooking a cake and making toffee • classify some observable changes that materials undergo as reversible or irreversible • identify the properties of materials used in a familiar product and relate them to its use • explore how materials are used in innovative ways for specific purposes, e.g. the use of soft fall materials in playgrounds and geotextiles to retain water in landscaping • describe how scientific and technological knowledge about the properties of materials can be used to inform decisions about use for their specific purposes • research the reasons for and the benefits of using solid, liquid and gaseous fuels for heating	Students: • identify elements that work together as a system to serve and support built environments and how they are designed to meet the needs of people, e.g. transport systems that provide access for people to get to work or systems that provide electricity to sites • draw a plan of, or model, a built environment that includes a range of systems to meet the needs & wants of a specific group of users, e.g. shade for a playground • consider ways that the design or use of places and spaces have changed over time and the social and/or environmental factors that have influenced these changes, e.g. changes in the design and use of a library due to technological developments or the design of buildings after an earthquake • generate and develop ideas about how built environments might be designed and constructed in the future to incorporate sustainable environmental practices, e.g. the use of recycled materials, natural lighting and solar energy • develop designs & solutions to meet specific social or environmental needs of users, e.g. an energy-efficient building or high-traffic airport terminal/train station • investigate a system to produce or manufacture a product, e.g. using an assembly line to produce a food product for sale in the school canteen, or use of robotics in manufacturing a product • compare the production process in a domestic setting to mass production, e.g. baking bread in the home to making it in a bakery • research the environmental impact of an everyday product from its production through to its use and disposal, e.g. a PET bottle, a car or newspaper • redesign a product to respond to a specific social or environmental consequence, e.g. redesign the packaging of a food product to reduce garbage