Year	Science Content Descriptors Biological Science	Design Technology Links Food and Fibre Production	Possible STEAM Activities
1	Living things have a variety of external features Living things live in different places where their needs are met	Plants and animals used for production have basic needs, such as food/nutrients, water, space, protection	Measure and Record Plant Growth Design a garden/farm Design an animal habitat
2	Living things grow, change and have offspring similar to themselves	Food and fibre choices for healthy living	Build a nest – use materials available to birds, I've done this at a PL Design and make a safe toy for a baby
3	Living things can be grouped on the basis of observable features and can be distinguished from non-living things	Types of food and fibre produced in different environments, cultures or time periods, including the equipment used to produce or prepare them	Explore farming materials, Design and build a fruit picker Design and build food utensils – look at lobster forks
4	Living things have life cycles Living things, including plants and animals, depend on each other and the environment to survive	Types of technologies used in food and fibre production or processing, including how they are used to help meet consumer needs	Wool – from sheep to jumper, look at spinning, knitting, felting – produce garments Mill flour and use the flour to make food
5	Living things have structural features and adaptations that help them to survive in their environment	People in design and technologies occupations aim to increase efficiency of production systems, or consumer satisfaction of food and natural fibre products Food safety and hygiene practices Principles of food preparation for healthy eating	Production line to make food Food preparation machines – sandwich robot! Adaptations to the environment in the textiles industry – design a garment
6	The growth and survival of living things are affected by the physical conditions of their environment	Past performance, and current and future needs are considered when designing sustainable food and fibre systems for products Principles of food preparation for healthy eating	Food preparation machines – sandwich robot! Design products to aid survival in extreme conditions

Year	Physical Science	Design Technology Links	Themes	STEAM Suggestions
1	Light and sound are produced by a range of sources and can be sensed		Light and Dark Sound	Musical Instruments *see Annie
2	A push or a pull affects how an object moves or changes shape	Explore how technologies use forces to create movement in products (ACTDEK002)	Push and Pull Floating Falling	Boats Parachutes **Enormous Turnip** **Who Sank the Boat**
3	Heat can be produced in many ways and can move from one object to another		Conduction, convention, radiation Insulation	Thermos cups Lunchboxes
4	Forces can be exerted by one object on another through direct contact or from a distance	Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011)	Newton's Laws Gravity Inertia Magnets	Moving Toys/products Spring Powered Air powered Magnetic games Simple machines
5	Light from a source forms shadows and can be absorbed, reflected and refracted		Light Optics Colour Rainbows	Periscopes Telescopes Sunglasses Solar ovens
6	Electrical circuits provide a means of transferring and transforming electricity Energy from a variety of sources can be used to generate electricity	Investigate how electrical energy can control movement, sound or light in a designed product or system(ACTDEK020)	Electricity Circuits and switches Renewable energy	Battery Operated products Torches Water wheels Windmills

Year	Earth Space Science	Themes	STEAM ideas
1	Observable changes occur in the sky and landscape	Seasons Day and Night Weather	Gardening / building tools Weather protection Landscaping
2	Earth's resources, including water, are used in a variety of ways	Water Recycling Sustainability Mining Farming	Water catching / measuring/ storage Water saving ideas recycling
3	Earth's rotation on its axis causes regular changes, including night and day	The Moon Shadows Months and Years Waves Seasons	Shadow clocks Shadow puppets
4	Earth's surface changes over time as a result of natural processes and human activity	Rocks Weathering Erosion Geology Farming	Rock polishers Sea walls How to protect river banks Remote truck driving – avoiding wheel ruts
5	The Earth is part of a system of planets orbiting around a star (the sun)	Space	Mars rover- coding and cameras Devices for use in zero gravity
6	Sudden geological changes or extreme weather conditions can affect Earth's surface	Volcanoes Tsunamis Cyclones	Earthquake proof structures, Warning systems – could use digital sensors and alarms

Year	**Chemical Science**	**Science Activities**	**Related Maths Activities**
1	Everyday materials can be physically changed in a variety of ways	Cutting, folding, drying, stretching, cooking	Measurement – How far things stretch, collect data and graph
2	Different materials can be combined, including by mixing, for a particular purpose	Mixing, filtering, cooking	Measurement - Cooking
3	A change of state between solid and liquid can be caused by adding or removing heat	Heating, cooling, freezing,	Measurement – time, millilitres, make and melt ice blocks, measure the time it takes, measure the water Gather data and graph it
4	Natural and processed materials have a range of physical properties; These properties can influence their use	Strength testing, water proofing, paper aeroplanes	Product testing – gather data and graph it Measurement – Weight (strength testing) Distance (planes flying)
5	Solids, liquids and gases have different observable properties and behave in different ways	Viscosity races, evaporation, oobleck	Measurement – surface area for evaporation Time – viscosity Gather data and graph it
6	Changes to materials can be reversible, such as melting, freezing, evaporating; or irreversible, such as burning and rusting	Melting, dissolving, evaporating, rusting	Measurement – Temperature (dissolving), Surface area, (evaporating, rusting) Gather data and graph it