Curriculum Map for Science 2017 / 18

	AUTUMN TERM	SPRING TERM	SUMMER TERM
Learning Group	**Theme/ topic/ Syllabus**	**Theme/ topic/ Syllabus**	**Theme/ topic/ Syllabus**
Sheeran	**Everyday Materials** distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties	**Seasonal Changes** observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies	**Plants** Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plan Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
Rowntree	**Plants** Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plan Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	**Rocks** 1. Types of Rocks Compare different kinds of rocks based on their appearance in the context of understanding the difference between natural and man-made rocks. • I can compare different types of rocks. 2. Grouping Rocks Making systematic and careful observations by examining different types of rocks. • I can make systematic and careful observations. Group together different kinds of rocks on the basis of their simple physical properties in the context of natural rocks. • I can group rocks based on their properties. 3. Fantastic Fossils Describe in simple terms how fossils are formed when things that have lived are trapped within rock by explaining the fossilisation process and by comparing fossils to the animals they belong to. • I can explain how fossils are formed.	**Forces and Magnets** Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing. Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Identify the effects of air resistance, water resistance and friction, that act between moving surfaces Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Hockney	**Component 2 – Biology: Environment, evolution and inheritance** The Sun as the source of energy and the role of plants in photosynthesis. Animals and plants may be adapted for survival in the conditions where they normally live Food chains and webs Decomposition and recycling Competition Environmental changes Pollution and the effects of human population growth Evolution, natural and artificial selection Sexual and asexual reproduction Human genetics Teacher Designed Assessment – "Growing mould on bread"	**Component 4 - Chemistry in our world** Acids and metal reactions Neutralisation Energy and rate of reaction Increasing the rate of a chemical reaction Changes in Earth's atmosphere The current atmosphere Crude oil and fuels Burning fuels Human influences on the atmosphere Water for drinking TDA – Investigate which indigestion remedy is the best	**Component 6 – Physics: Energy, forces and structure of matter** Changes in energy storage Energy transfers and efficiency Energy resources Types of forces Effects of forces Speed Stopping distances Reaction times and stopping distances Weather conditions and braking distances Radioactivity
Frayne	**Component 2 – Biology: Environment, evolution and inheritance** The Sun as the source of energy and the role of plants in photosynthesis. Animals and plants may be adapted for survival in the conditions where they normally live Food chains and webs Decomposition and recycling Competition Environmental changes Pollution and the effects of human population growth Evolution, natural and artificial selection Sexual and asexual reproduction Human genetics Teacher Designed Assessment – "Growing mould on bread"	**Component 4 - Chemistry in our world** Acids and metal reactions Neutralisation Energy and rate of reaction Increasing the rate of a chemical reaction Changes in Earth's atmosphere The current atmosphere Crude oil and fuels Burning fuels Human influences on the atmosphere Water for drinking TDA – Investigate which indigestion remedy is the best	**Component 6 – Physics: Energy, forces and structure of matter** Changes in energy storage Energy transfers and efficiency Energy resources Types of forces Effects of forces Speed Stopping distances Reaction times and stopping distances Weather conditions and braking distances Radioactivity
Ennis	**Technical Awards – STEM** Outline of the course and expectations Problem solving (inc. Egggnaughts) Fixperts process Energy and Power	**Component 2 – Biology: Environment, evolution and inheritance** The Sun as the source of energy and the role of plants in photosynthesis. Animals and plants may be adapted for survival in the conditions where they normally live Food chains and webs Decomposition and recycling Competition	**Component 4 - Chemistry in our world** Acids and metal reactions Neutralisation Energy and rate of reaction Increasing the rate of a chemical reaction Changes in Earth's atmosphere The current atmosphere Crude oil and fuels Burning fuels

		Environmental changes Pollution and the effects of human population growth Evolution, natural and artificial selection Sexual and asexual reproduction Human genetics	Human influences on the atmosphere Water for drinking TDA – Investigate which indigestion remedy is the best
Brownlee	**Practical** Scientific Investigation on Marsden Moor Pitfall traps **Theory** Ecosystems Adaptations Climate and living organisms Relationships between plants and animals Monitoring the environment Weathering, erosion and deposition Biodiversity Sampling species numbers and distribution	**Practical** Soil sampling Completion of portfolio (Growth rate of a chicken, animal healthcare, Chester Zoo, Marsden Moor) **Theory** Soil Soil structure and fertility Soil pH Weeds Intensive and extensive farming Other food production systems	**Practical** Completion of portfolio (Growth rate of a chicken, animal healthcare, Chester Zoo, Marsden Moor, Soil Samples, Pitfall tarps) **Theory** Past papers and revision

Science National Curriculum Mapping

	Stages						
	1	2	3	4	5	6	
Working scientifically	y	y	y	y	y	y	All
Plants	y	y	y				Sheeran
Everyday materials	y						Sheeran
Animals including humans	y	y	y	y	y	y	All
Seasonal changes	y						Sheeran
Living things and their habitats		y		y	y	y	All
Rocks			y				Rowntree
Light			y			y	Rowntree
Forces and magnets			y		y		Rowntree
States of matter				y			Hockney/Frayne
Sound				y			Hockney/Frayne
Electricity				y		y	Hockney/Frayne
Earth and space					y		Hockney/Frayne
Properties and changes of materials					y		Hockney/Frayne
Evolution and inheritance						y	Hockney/Frayne

NB. Rowntree are covering plants this year as they have not previously covered that topic