

P	AUTUMN 1	AUTUMN 2	SPRING 1	Spring 2	SUMMER 1	SUMMER 2
Unit of Work National curriculum	Earth and space	Forces	Properties and Changes of Materials	Properties and Changes of Materials	Living things and their habitats	Animals including humans
Switched on Science	Topic 1 Out of this world	Topic 4 Let's get moving	Topic 2 Material world	Topic 2 Material world	Topic 3 Circle of life	Topic 5 Growing up and growing old
Substantive knowledge Key knowledge	Describe the movement of the Earth and other planets relative to the sun in the solar system  Describe the movement of the moon relative to the Earth	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	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird  Describe the life process of reproduction in some plants and animals.  Pupils should study and raise questions about their local environment throughout the year. They should observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. They should find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall.	Describe the changes as humans develop to old age.  Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty.

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Describe the sun,	and friction, that	response to	response to	Dupile should find out shout different	
Earth and moon	act between	magnets	magnets	Pupils should find out about different types of reproduction, including sexual	
as approximately	moving surfaces			and asexual reproduction in plants, and	
spherical bodies		Know that some	Know that some	sexual reproduction in animals.	
	Recognise that	materials will	materials will		
Use the idea of	some mechanisms	dissolve in liquid to	dissolve in liquid to		
the Earth's	including levers,	form a solution, and	form a solution,		
rotation to	pulleys and gears	describe how to	and describe how		
explain day and	allow a smaller	recover a	to recover a		
night and the	force to have a	substance from a	substance from a		
apparent	greater effect	solution	solution		
movement of the					
sun across the sky		Use knowledge of	Use knowledge of		
		solids, liquids and	solids, liquids and		
		gases to decide	gases to decide		
		how mixtures might	how mixtures		
		be separated,	might be		
		including through	separated,		
		filtering, sieving and	including through		
		evaporating	filtering, sieving		
			and evaporating		
		Give reasons, based			
		on evidence from	Give reasons,		
		comparative and	based on		
		fair tests, for the	evidence from		
		particular uses of	comparative and		

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		everyday materials,	fair tests, for the	
		including metals,	particular uses of	
		wood and plastic	everyday	
			materials,	
		Demonstrate that	including metals,	
		dissolving, mixing	wood and plastic	
		and changes of		
		state are reversible	Demonstrate that	
		changes	dissolving, mixing	
			and changes of	
		Explain that some	state are reversible	
		changes result in	changes	
		the formation of		
		new materials, and	Explain that some	
		that this kind of	changes result in	
		change is not	the formation of	
		usually reversible,	new materials,	
		including changes	and that this kind	
		associated with	of change is not	
		burning and the	usually reversible,	
		action of acid on	including changes	
		bicarbonate of	associated with	
		soda	burning and the	
			action of acid on	

				1		
				bicarbonate of		
				soda		
Disciplinary	Pupils might work	Pupils might work	Pupils might work	Pupils might work	Pupils might work scientifically by:	Pupils could work
knowledge	scientifically by:	scientifically by:	scientifically by:	scientifically by:	observing and comparing the life cycles	scientifically by
	comparing the	exploring falling	carrying out tests to	carrying out tests	of plants and animals in their local	researching the
	time of day at	paper cones or	answer questions,	to answer	environment with other plants and	gestation periods of
Working	different places	cupcake cases,	for example, 'Which	questions, for	animals around the world (in the	other animals and
scientificall	on the Earth	and designing and	materials would be	example, 'Which	rainforest, in the oceans, in desert areas	comparing them with
У	through internet	making a variety of	the most effective	materials would	and in prehistoric times), asking	humans; by finding out
	links and direct	parachutes and	for making a warm	be the most	pertinent questions and suggesting	and recording the length
	communication;	carrying out fair	jacket, for wrapping	effective for	reasons for similarities and differences.	and mass of a baby as it
	creating simple	tests to determine	ice cream to stop it	making a warm	They might try to grow new plants from	grows.
	models of the	which designs are	melting, or for	jacket, for	different parts of the parent plant, for	
	solar system;	the most effective.	making blackout	wrapping ice	example, seeds, stem and root cuttings,	
	constructing	They might explore	curtains?' They	cream to stop it	tubers, bulbs. They might observe	
	simple shadow	resistance in water	might compare	melting, or for	changes in an animal over a period of	
	clocks and	by making and	materials in order to	making blackout	time (for example, by hatching and	
	sundials,	testing boats of	make a switch in a	curtains?' They	rearing chicks), comparing how	
	calibrated to	different shapes.	circuit. They could observe and	might compare materials in order	different animals reproduce and grow.	
	show midday and the start and	They might design and make	compare the	to make a switch		
	end of the school	products that use	changes that take	in a circuit. They		
	day; finding out	levers, pulleys,	place, for example,	could observe		
	why some	gears and/or	when burning	and compare the		
	people think that	springs and explore	different materials	changes that take		
	structures such as	their effects.	or baking bread or	place, for		
	Stonehenge		cakes. They might	example, when		
	might have been		research and	burning different		
	used as		discuss how	materials or		
	astronomical		chemical changes	baking bread or		
	clocks.		have an impact on	cakes. They might		
			our lives, for	research and		

			example, cooking, and discuss the creative use of new materials such as polymers, supersticky and super-thin materials.	discuss how chemical changes have an impact on our lives, for example, cooking, and discuss the creative use of new materials such as polymers, super-sticky and super-thin materials.		
Cultural Capital Scientist	Dr Sian Proctor- Analog Astronaut  Margaret Hamilton- Computer scientist (Moon Landings)  Stephen Hawking- Black Holes  Mae Jemison – Astronaut  Claudius Ptolemy and Nicolaus Copernicus - Heliocentric vs Geocentric Universe  Neil Armstrong- First man on the Moon  Helen Sharman- GB astronaut	Isaac Newton-Gravity Albert Einstein- The Theory Of relativity  Galileo Galilei - Gravity and Acceleration  Archimedes of Syracuse- Levers	Sir Humphrey Davy- Separating gases  Jamie Garcia (BP website)- Invention of a new plastic  Becky Schroeder - fluorescence material  Spencer Silver, Arthur Fry and Alan Amron - Post-It Notes  Ruth Benerito - Wrinkle-Free Cotton	Sir Humphrey Davy- Separating gases  Jamie Garcia (BP website)- Invention of a new plastic  Becky Schroeder - fluorescence material  Spencer Silver, Arthur Fry and Alan Amron - Post-It Notes  Ruth Benerito - Wrinkle-Free Cotton	Jane Goodall- naturalist  Sylvia Earle - Marine biologist  Dr. Paula Kahumbu-wildlife conservationist  Mangala Mani – Antarctic scientist  Sir David Attenborough- Animal Behaviourist	Alexander Fleming- Penicillin Louis Pasteur- Vaccination Eva Crane -Reproduction in Bees Virginia Apgar- obstetrical anaesthesiologist

	Caroline Herschel- First to find a comet Valentina Tereshkova- Cosmonaut					
Suggestion s for school visits						
Teacher CPD links	Resources - Google Docs  https://assets.pub lishing.service.go v.uk/government /uploads/system/ uploads/attachm ent data/file/425 618/PRIMARY nat ional curriculum - Science.pdf	https://www.reach outcpd.com PLAN Progression - Staff Drive - Google Drive	https://my.risingstars  uk.com/CourseHom e.aspx?csid=978151 0446151	https://classroom.t henational.acade my/subjects-by- key-stage	Science - Staff Drive - Google Drive Science - Staff Drive - Google Drive	

# Year 5- Living things and their Habitats

	Pupils previously learnt:	

		<ul> <li>Yr 4: Recognise that living things can be grouped in a variety of ways. (Y4 - Living things and their habitats)</li> <li>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Y4 - Living things and their habitats)</li> <li>Recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats)</li> </ul>		
Lesson number	Lesson question	Pupils will led	arn	Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1	Rising stars assessment Front cover (KWL) Knowledge organiser	Teacher assessment		
2	What do plants need to grow? (Recap)	What plants need to allow themselves to grow.	Identifying scientific evidence that has been used to support or refute ideas or arguments.	<ul> <li>germination</li> <li>roots</li> <li>leaves</li> <li>flowering</li> <li>seed dispersal</li> </ul>
3	How do new plants grow from different parts of a parent plant?	To observe the processes of germination and growth.	Investigation/ comparative/ observation	<ul> <li>seed</li> <li>shoot</li> <li>germinate</li> <li>root</li> <li>leaves</li> <li>growth</li> </ul>

4	What do the parts of the flowers do?	<ul> <li>To identify the different parts of the plants and the function of each part</li> <li>Why some plants have flowers</li> </ul>		<ul> <li>fertilisation</li> <li>stamen</li> <li>sepal</li> <li>petal</li> <li>seed dispersal</li> <li>germination</li> <li>pollination</li> </ul>
5	How do plants reproduce?	<ul> <li>To be able to name and place in order the different parts of the life cycle of a plant.</li> <li>To explain how some flowering plants reproduce</li> </ul>		<ul> <li>pollination</li> <li>pollen</li> <li>cross pollination</li> <li>flower</li> <li>nectar</li> <li>anthers</li> </ul>
6	Do all fruits have similar seeds?	To compare seeds of different fruits or plants		
7	What are the different methods of seed dispersal?	How seeds disperse and find new places to germinate and grow.	Prediction	<ul><li>disperse</li><li>germinate</li><li>grow</li></ul>
8	What is the life cycle of an animal? How does it compare to a human?	<ul> <li>To understand the lifecycle of a mammal</li> <li>To compare different life cycles</li> </ul>	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	<ul><li>embryo</li><li>young</li><li>adult</li><li>mammals</li></ul>
9	How does the life cycle of an insect compare to an amphibian?	<ul><li>Describe metamorphosis</li><li>Describe and compare the main</li></ul>	Recording data and results of increasing complexity using scientific diagrams and	<ul><li>amphibians</li><li>metamorphosis</li><li>embryos</li></ul>

		stages of the life cycle of an insect and an amphibian	labels, classification keys, tables, scatter graphs, bar and line graphs	<ul> <li>larva</li> <li>pupa</li> <li>Insect</li> <li>nymphs</li> <li>tadpole</li> <li>life cycle</li> </ul>
10	Why do birds lay eggs?	<ul> <li>To identify the stages of a bird's life cycle</li> <li>To label the parts of an egg</li> <li>To describe how some birds attract a mate.</li> </ul>	Choose activities from switched on science resource	<ul><li>chicken</li><li>chicks</li><li>hatchling</li><li>fledgling</li><li>nestling</li></ul>
11 12	Are the life cycles of all mammals the same?  What are the differences in the life cycles of a mammal, an amphibian, an insect and a bird?	<ul> <li>Describe the process of sexual reproduction</li> <li>Describe and compare the lifecycle of different types of mammal</li> <li>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</li> </ul>	Report and present findings from enquiries, including conclusions.	<ul> <li>sexual reproduction</li> <li>gestation</li> <li>placental</li> <li>marsupials</li> <li>mammals</li> <li>monotremes</li> <li>species</li> </ul>
13	Cultural Capital Visit, visitor, scientist			
14	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap		

# **Year 5**- Animals Including Humans

	Pupils previously learnt:	

		<ul> <li>Yr 3: Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</li> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</li> <li>Yr 4: Describe the simple functions of the basic parts of the digestive system in humans.</li> <li>Identify the different types of teeth in humans and their simple functions.</li> <li>Construct and interpret a variety of food chains, identifying producers, predators and prey.</li> </ul>		
Lesson number	Lesson question	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1	Rising stars assessment Front cover (KWL) Knowledge organiser	Substantive knowledge  Teacher assessment	Disciplinary knowledge	
2	Front cover (KWL)		Disciplinary knowledge	

				<ul><li>child</li><li>teenanger</li><li>adult</li><li>elder</li></ul>
4	How does the gestation period of humans and other animals compare?  split in to two lessons. lesson 1 - gestation period of humans lesson 2- compare gestation period of other animals	To understand the difference between the gestation period of other animals and compare them with humans	research	<ul> <li>gestation</li> </ul>
5	How do our bodies change from birth to adulthood?	<ul> <li>To explore body changes from birth to adulthood.</li> <li>To be able to explain the four developmental stages for humans.</li> </ul>	Researching the gestation periods of other animals and comparing them with humans	<ul><li>Organism</li><li>Adolescent</li><li>Life cycle</li><li>foetus</li></ul>
6 7	What happens to the skeletal system as humans grow older?	<ul> <li>To be able to set up a comparative test.</li> <li>To make connections with human growth and changes in the skeletal system</li> <li>Pupils should draw a timeline to indicate stages in the growth and development of humans.</li> </ul>	Comparative testing  Find out and record the length and mass of a baby as it grows.	
8	What is puberty? Why does it occur? (SRE)	<ul> <li>To explain the main physical and emotional changes that happen during puberty.</li> <li>To be able to ask questions</li> </ul>		<ul><li>sex hormones</li><li>female reproductive system</li><li>Male reproductive</li></ul>

		about puberty with confidence.	system     oestrogen     Testosterone     progesterone
9	Cultural Capital Visit, visitor, scientist	-	
10	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap	

**Year 5-** Properties and Changes of Materials

Lesson number	Lesson question	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1	Rising stars assessment Front cover (KWL) Knowledge organiser	Teacher assessment		
2	What are the different states of matter?	<ul> <li>Recap knowledge on different states of matter from previous years.</li> </ul>	Use the <b>PLAN matrices</b> to look back at previous learning	<ul><li>Matter</li><li>Air</li><li>Gas</li><li>Liquid</li></ul>
3 4	What are the properties of everyday objects?	To compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs  Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	<ul> <li>Properties</li> <li>Solid</li> <li>Liquid</li> <li>Gas</li> </ul>
5 6	Do all materials dissolve?  combine with lesson 12 and 13.	Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	<ul> <li>Dissolving</li> <li>Solution</li> <li>Substance</li> <li>Soluble</li> <li>Transparent</li> <li>Fair test</li> </ul>

			Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	
7	What variables affect the time in which a substance takes to dissolve?	<ul> <li>Know how different variables affect time taken for sugar to dissolve in water</li> <li>Explain that changing the variable can affect how quickly a substance dissolves.</li> </ul>	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	dissolve, elastic, electrical conductor, evaporate, filter, flexible, hard, insoluble, mixture, plastic, rigid, soluble, solute, solution, solvent, strong, thermal conductor, thermal insulator, tough
7	How do you conduct a fair test?  bags experiment, dissolving experiment	<ul> <li>To understand the different processes involved in both organising and conducting a fair test.</li> <li>Different materials dissolve at a faster and slower rate, dependent on the variable used.</li> </ul>	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables when necessary.	<ul> <li>Variable</li> <li>Fair</li> <li>Independent and dependent variable</li> <li>Controlled variable</li> </ul>
12 13	What types of substances can be separated using filtering?	Use of knowledge of solids, liquids and gases, to decide how mixtures might be separated, including through filtering, sieving and evaporation.	Using test results to make predictions to set up further comparative and fair tests.  Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	<ul> <li>Filtering,</li> <li>Solution</li> <li>Dissolve</li> <li>Solvent</li> <li>Soluble</li> <li>Mixture</li> <li>funnel</li> </ul>

10	How can we separate a solution?	<ul> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</li> </ul>	use test results to make predictions to set up further comparative and fair tests identify scientific evidence that has been used to support or refute ideas or arguments	<ul><li>Dissolve</li><li>Soluble</li><li>Solution</li><li>Solvent</li></ul>
14	What is the best material for filtering?	use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	<ul><li>Filtering</li><li>Mixtures</li><li>Sieving</li><li>Evaporating</li></ul>
15	What is a thermal insulator?	<ul> <li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li> </ul>	Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat findings when appropriate.	<ul> <li>Thermal</li> <li>Insulator</li> <li>Pattern-seeking</li> <li>Temperature</li> </ul>

16	Are changes of state reversible?	Demonstrate that dissolving, mixing and changes of state are reversible changes.		<ul> <li>Reversible</li> <li>Melting</li> <li>Boiling</li> <li>Freezing</li> <li>Dissolution</li> <li>Change</li> <li>State</li> <li>Dissolving</li> </ul>
17 18	Why that material?	<ul> <li>To give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li> </ul>	Identifying scientific evidence that has been used to support or refute ideas or arguments.	<ul> <li>Thermal insulator</li> <li>Transparent</li> <li>Elastic</li> <li>Electrical conductor</li> <li>Absorbant</li> <li>Rigid</li> <li>Flexible</li> </ul>
19 20	How can we create new materials?	That some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	Identify scientific evidence that has been used to support or refute ideas or arguments.	changes, formation, new materials, reversible, irreversible, burning, acid, action

21	Cultural Capital Visit, visitor, scientist		
22	Recap and review whole unit	Revision lesson	Whole unit vocabulary
23	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap	

## Year 5-Earth and Space

		Pupils previously learnt:  - Yr 3: Describe in simple terms how fossils are formed when things that have lived are trapped within rock. (Y3 - Rocks)		
Lesson number	Lesson question	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1	Rising stars assessment Front cover (KWL) Knowledge organiser	Teacher assessment		
2 3	What is the distance of each planet in relation from the sun?  How does the Earth, and other planets move in relation to the Sun in the solar system?	<ul> <li>How each planet is situated in our solar system</li> <li>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system</li> </ul>	Taking measurements, using a range of specific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	<ul> <li>Scale</li> <li>Planets</li> <li>Solar system</li> <li>Approximately spherical</li> <li>Rotating</li> <li>distance</li> </ul>

4	What is at the centre of our solar system?	To understand how our solar system is distributed.	Choose scientific skills and activities from switched on science resources.	<ul><li>Rotation</li><li>Orbit</li></ul>
5	How do we get day and night?	<ul><li>How the earth's rotation affects daylight.</li><li>How to create a sundial.</li></ul>		<ul><li>Daylight</li><li>Length</li></ul>
6	How are the moon phases created?	To understand how the moon's orbit affects the phases of the moon.	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.	<ul> <li>Phases</li> <li>Orbit</li> <li>Geocentric</li> <li>Heliocentric</li> <li>Time zone</li> <li>Sun</li> <li>Star</li> </ul>
7	What are the moon phases?	<ul> <li>To understand the different phases of the moon.</li> <li>To describe the movement of the Moon relative to the Earth</li> </ul>	Choose activities from switched on science resources.	
8	How is our knowledge of space changing?	To carry out research on how our knowledge of space is evolving		Contemporary
9	Cultural Capital Visit, visitor, scientist	Science Museum		
10	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap		

## Year 5- Forces

		Pupils previously learnt:  - Nursery: Explore how things work.  • Explore and talk about different forces they can feel.  • Talk about the differences between materials and changes they notice.	
Lesson number	Lesson question	Pupils will learn	Key Vocabulary

		Substantive knowledge	Disciplinary knowledge	
1	Rising stars assessment Front cover (KWL) Knowledge organiser	Teacher assessment  Recap learning from previous years		
2	What is force?  Is gravity a force?	<ul> <li>How forces interact</li> <li>What a force is</li> <li>The effects a force can have</li> <li>What gravity is and how it impacts our world.</li> </ul>	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	Force, Gravity, Earth Push, Pul, Squeeze Stretch, Catch Twist, Mass, Weight
3 /4	What does a Newton Meter measure?	<ul> <li>How to use a Newton Meter</li> <li>What a Newton Meter measures</li> <li>How a newton metre works</li> <li>The relationship between mass, weight and gravity.</li> </ul>	Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeated readings when necessary.	Newton Meter Units of force Mass Weight Force, gravity
4/5	What is the difference between air resistance and gravity?	To notice the differences between different forces, such as air resistance and gravity.		
4/5	How does the surface area of a material affect air resistance?	<ul> <li>To consider what affects air resistance</li> <li>To explore how air resistance can be helpful/unhelpful</li> </ul>	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables.  Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar	Air resistance Gravity Units of force Galileo Helpful and unhelpful forces Opposing forces Surface area Controlled variables Independent variables

			and line graphs.  Using test results to make predictions to set up further comparative and fair tests.	Dependent variables
6	What is friction?	<ul> <li>What friction is</li> <li>To identify friction in our everyday lives</li> <li>Consider how friction can be useful/unhelpful</li> <li>Investigate which materials affect friction</li> <li>Make links between friction and resistance forces (air and water)</li> </ul>	Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Drag Friction Resistance Pull Push Surfaces Heat Force Opposite direction Prediction
7	How do we lift heavy items?	<ul> <li>What a lever is</li> <li>How levers work</li> <li>Where might we use levers?</li> <li>That there are different types of levers</li> </ul>	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.  Using test results to make predictions to set up further comparative and fair tests.	Lever Force Load Fulcrum Simple machine
8	How do forces interact on a pulley?	<ul> <li>What is a pulley?</li> <li>Why do we use pulleys?</li> <li>How pulleys work - what makes pulley's efficient</li> <li>Where can we see pulleys in everyday lives</li> </ul>	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables.	Pulley Simple machine Wheel Groove Axel
9	Cultural Capital			

	Visit, visitor, scientist		
10	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap	