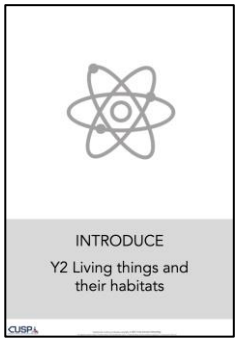
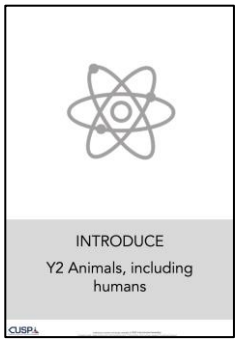
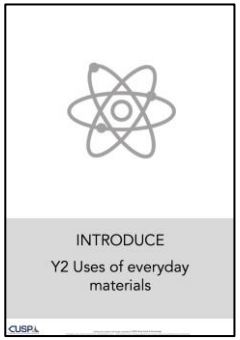
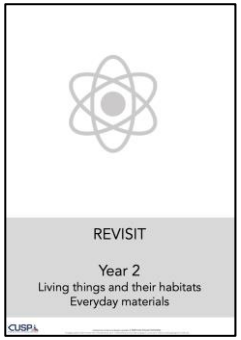
Science Curriculum for St Breward Community Primary School

At St Breward we use CUSP Science as the basis of our science curriculum. We then tailor this to fit the needs of our mixed age classes, ensuring progression and full coverage of the National Curriculum

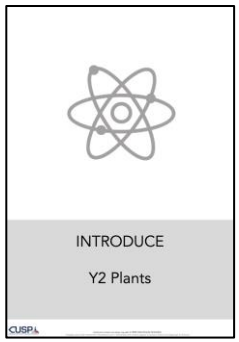
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y2 Living things and their habitats |  	Biology | The study of living things, including Characteristics of living things Relationship of living things and their environment.	EYFS – Natural Word Y1 Plants Y1 Animals including humans Y1 Revisit Animals, including humans Y1 Second revisit of Animals, including human and plants	Characteristics of living things What is alive and what is not? What do all living things have in common? Location of living things Where do plants and animals live? What plants and animals live in our local environment? How living things are connected What are food chains? How are they connected? Why do plants and animals need each other?	thrive depend producer consume prey predator	oxygen nutrition respiration sensitivity reproduction excretion

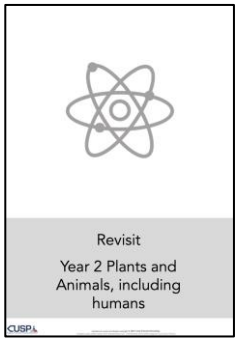
Year group, Unit Title and Name	Substantve concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y2 Animals, including humans  	Biology The study of living things, including Reproduction Basic needs Diet and exercise for human	EYFS – Natural Word Y1 Plants Y1 Animals including humans Y1 Revisit Animals, including humans Y1 Second revisit of Animals, including human and plants	Animals and change REMEMBER: what is an animal? How do animals change as they mature? Air, water and food How do we change as we mature? What do all animals need to stay alive? Health and food Keeping healthy: why do we exercise? Keeping healthy: why do we eat different types of food?	healthy survive exercise heart lungs muscles	hygiene larva pupa vertebrates invertebrates metamorphosis

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y2 Use of everyday materials |  	Chemistry* | the study of the composition, behaviour and properties of matter *Adapted from BBC Bitesize	EYFS Natural world Y1 Everyday materials	Materials What are materials used for? Categorise and compare wood, metal, plastic and glass. What are materials used for? Categorise and compare ceramics, rock, paper and card, and fabric. Changes What happens when we squash, bend, twist or stretch a material? Purpose What's the right material for the job? What's the most absorbent material? Who invented waterproofing?	artificial brittle extracted fabric manufactured natural	ceramic durable inflexible reflective rigid translucent

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y2 Revisit Living things and their habitats | Use of everyday materials |  	Biology | The study of living things, including Characteristics of living things Relationship of living things and their environment Chemistry* | the study of the composition, behaviour properties of matter	Y1 Animals, including humans Y1 Plants Y2 Living things and their habitats Y2 Uses of everyday materials	Materials What is it made from? Characteristics of living things Compare: what is alive, what is not alive and what has never been alive? Apply it What materials do our pets have or need? Why is that?	artificial brittle extracted fabric manufactured natural	ceramic durable inflexible reflective rigid translucent
				thrive depend producer consume prey predator	oxygen nutrition respiration sensitivity reproduction excretion

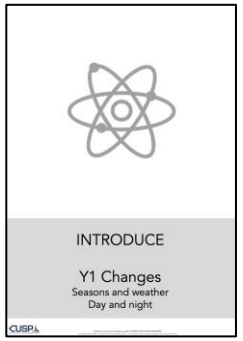
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary

Y2 Plants |  	Biology | The study of living things, including Growth Health Relationship of living things and their environment	EYFS – Natural Word Y1 Plants Y1 Animals, including humans Y2 Living things and their habitats	Growing from a seed How do seeds germinate and what happens? Growing from a bulb What happens when bulbs sprout? Healthy plants What do plants need to thrive and be healthy? What can happen if plants don't get the things they need? What do I notice about plants around the school? How are they healthy? How are they unhealthy? Show what you know How do seeds and bulbs grow? What do plants need to be healthy?	wither dormant mature bulb anchor sustain	germination perennial carbon dioxide glucose clone

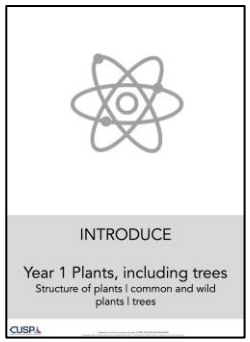
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y2 REVISIT Plants, and Animals, including humans |  	Biology | The study of living things, including Growth Health Relationship of living things and their environment Reproduction Basic needs Diet and exercise for humans	EYFS – Natural Word Y1 Plants Y1 Animals, including humans Y2 Animals, including humans Y2 Living things and their habitats Y2 Revisit Living things and their habitats	EXPLAIN-IT How do seeds and bulbs grow? SUMMARISE-IT What do I know about animals, including humans? INTERLEAVING and EXPLAIN-IT What do plants need to thrive and be healthy?	wither dormant mature bulb anchor sustain healthy survive exercise heart lungs muscles	germination perennial carbon dioxide glucose clone hygiene larva pupa vertebrates invertebrates metamorphosis

KS1 Science Cycle 2 (Year 1 Content)

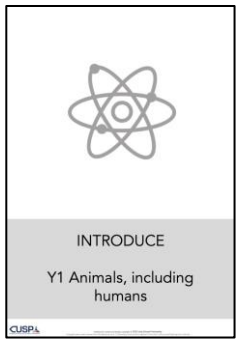
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary

Y1 Seasons and weather Day and night |  	Physics* | The study of energy forces mechanics waves structure of atoms physical universe | Earth in Space *Adapted from BBC Bitesize	Managing Self Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices. The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants. Explore the natural world around them, making observations and drawing pictures of animals and plants. Understanding some important processes and changes in the natural world around them, including seasons and changing states of matter.	Seasons and weather What are the four seasons? What's the weather like in Autumn, Winter, Spring and Summer? Day to night Why does day become night?	dawn dusk mild rotate soaked weather	month season spring summer autumn winter

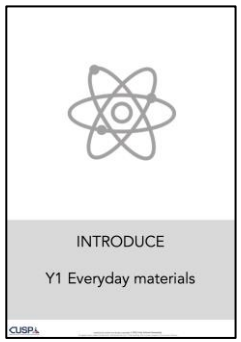
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary

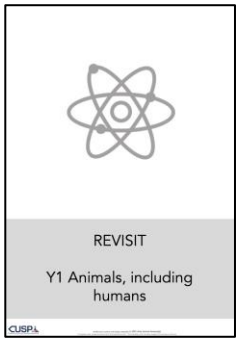
Y1 Plants, including trees  	Biology The study of living things, including Common plants and trees in a local environment	Managing Self Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices. The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants. Explore the natural world around them, making observations and drawing pictures of animals and plants. Understanding some important processes and changes in the natural world around them, including seasons and changing states of matter.	Structure of plants What are the parts of a plant? Wild and common plants What are wild plants and where do you find them? What are garden plants and where do you find them? Trees What makes a tree? What types of tree are there? (Trees that live around my school) What's the difference between trees?	bud trunk branch bark seed wild	nutrients stem deciduous evergreen

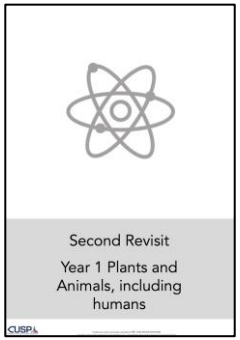
Year group, Unit Title and Name	Substantve concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y1 Animals, including	Biology	Managing Self Manage their own basic hygiene and personal needs, including	Animals What is an animal?	blood senses	mammal amphibian

humans  	The study of living things, including Types of animals Food animals eat Senses	dressing, going to the toilet, and understanding the importance of healthy food choices. The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants. Explore the natural world around them, making observations and drawing pictures of animals and plants. Understanding some important processes and changes in the natural world around them, including seasons and changing states of matter.	What types of animals are there? What is similar and what is different? Eating What does food tell us about an animal? Senses What makes me an animal? What senses do I have?	young feathers fur scales	reptile herbivore carnivore omnivore

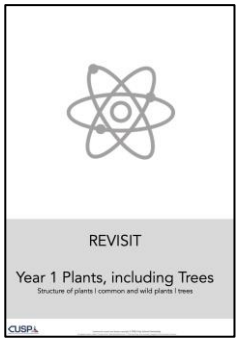
Year group, Unit Title and Name	Substantiv concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y1 Everyday	Chemistry*	Managing Self Manage their own basic hygiene and personal needs, including	Materials What are materials?	absorb rough smooth	materials properties flexible

materials 	the study of :he compositio ı, behaviour a ıd properties of matter *Adapted from BBC Bitesize	dressing, going to the toilet, and understanding the importance of healthy food choices. The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants. Explore the natural world around them, making observations and drawing pictures of animals and plants. Understanding some important processes and changes in the natural world around them, including seasons and changing states of matter.	What are things made of in school? Properties How can I describe materials? Which materials are waterproof and which are not? Which materials are transparent and which are opaque? Use what you know What's the best material for the job? Why?	waterproof metal plastic	transparent opaque physical

Year group, Unit Title and Name	Substantve concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y1 REVISIT Animals, including humans  	Biology The study of living things, including Types of animals Food animals eat Senses we have	Y1 Animals including humans	Revisit and name it What features do animals have? Use the cues and single words in knowledge note to focus on vocabulary. Consolidate by talking and writing sentences on the page next to the knowledge note. Describe it Retrieve and complete labels on the knowledge organiser. What are the features of the animal group? Go further by writing sentences or drawing diagrams on the page next to it. Describe it Continue to describe the features of each animal group. Go further by writing sentences / draw diagrams on the page next to it. Sort it Compare animal groups – what do you notice is similar and what is different? Go further by writing sentences / draw diagrams on the page next to it.	blood senses young feathers fur scales	mammal amphibian reptile herbivore carnivore omnivore

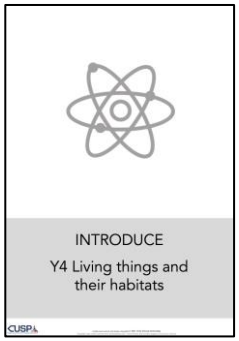
Year group, Unit Title and Name	Substantve concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y1 SECOND REVISIT | Plants and Animals, including humans |  	Biology | The study of living things, including Types of animals Food animals eat Senses we have Common plants and trees in a local environment	Y1 Animals including humans	Remember it Animals, including humans Elaborate it Animals, including humans	blood senses young feathers fur scales	mammal amphibian reptile herbivore carnivore omnivore
		Y1 Plants	Remember it Plants	bud trunk branch bark seed wild	nutrients stem deciduous evergreen

Year group, Unit Title and Name	Substantve concepı	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
	Biology |	Managing Self Manage their own basic hygiene and personal needs, including	Structure of plants What are the parts of a plant?	bud trunk branch	nutrients stem deciduous evergreen

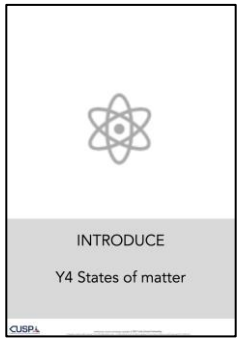
Y1 REVISIT Plants, including trees | MODULAR SEQUENCE 	The study of living things, including Common plants and trees in a local environment	dressing, going to the toilet, and understanding the importance of healthy food choices. The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants. Explore the natural world around them, making observations and drawing pictures of animals and plants. Understanding some important processes and changes in the natural world around them, including seasons and changing states of matter.	Wild and common plants What are wild plants and where do you find them? What are garden plants and where do you find them? Trees What makes a tree? What types of tree are there? (Trees that live around my school). What's the difference between trees?	bark seed wild	

LKS2 Science Cycle 1 (Year 4 Content)

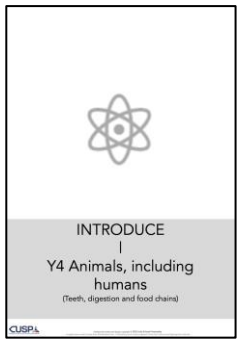
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y4	Biology |	Y1 Plants	Living things What are the characteristics of living things?	classification environment interdependence	vertebrate invertebrate biotic

Living things and their habitats 	The study of living things, including Grouping Classification and Environmental change and impact	Y1 Animals, including humans Y2 Living things and their habitats Y2 Plants Y3 Plants	Vertebrates and invertebrates What animals are vertebrates? What animals are invertebrates? Plants What groups are plants classified in? Classification keys What is classification? How do I use a key? Environmental changes What happens if the environment in a habitat changes?	interact beneficial hierarchy	ecosystem species niche

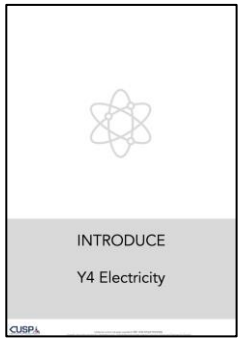
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y4 States of matter	Chemistry*	Y1 Everyday materials	What is matter?	permanent	evaporate condense

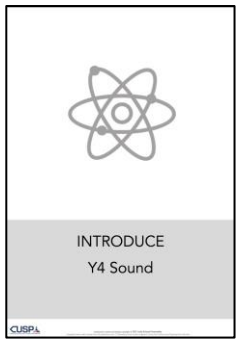
	the study of the composition, behaviour and properties of matter	Y2 Use of everyday materials Y3 Forces and magnets	What does 'state' mean? What are solids, liquids and gases? Melting: how do materials change state? [redacted]: how do materials change state? Condensing how do materials change state? Summary: how do materials change their state of matter?	particle solid liquid gas vapour	melt matter state volume

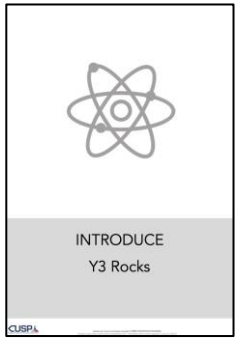
Year group, Unit Title and Name	Substantve concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y4 Animals, including	Biology	Y1 Plants	Teeth and eating	expel compact	incisor canine molar enzyme

humans  	The study of living things, including Structure of digestive system Function of digestive system Relationship in food chains	Y1 Animals, including humans Y2 Living things and their habitats Y2 Plants Y3 Plants Y4 Living things and their habitats	What teeth do humans have? What do they do? How does our mouth and teeth help digestion? What's the process? Can teeth tell us what animals eat? The digestive system What are the parts of the digestive system? What do they do? How does digestion work? What's the process? Food chains What are food chains How do they work? How do I construct and interpret a food chain? SUMMARY How are teeth, digestion and food chains connected?	digestion acid stomach intestines	saliva peristalsis

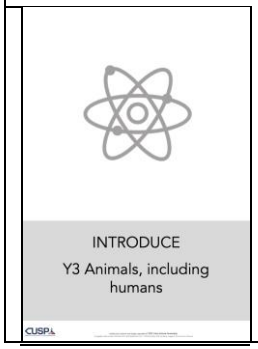
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y4 Electricity	Physics*	Y1 Seasonal changes	Sources of electricity	associate identify	component

	The study of energy forces mechanics waves structure of atoms physical universe | Earth in Space	Y1 Everyday materials Y2 Uses of everyday materials Y3 Forces and magnets	What appliances use electricity? What sort of power makes them work? Components Name it - what are the components in a simple series circuit? Apply what you know Diagnose it – what are the effects of changing circuit components and batteries?	portable effect appliance series	electrical insulator electrical conductor circuit hypothesis variable

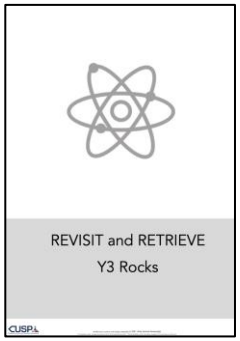
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y4 Sound | 	Physics* | The study of energy forces mechanics waves structure of atoms physical universe | Earth in Space	Y1 Seasonal changes Y1 Everyday materials Y2 Uses of everyday materials Y3 Forces and magnets Y4 Electricity	Properties What is sound? Movement How does sound travel? Pitch and loudness What is the pitch and loudness of sound?	produce property source frequent regular affect	vibrate pitch volume medium vacuum sound wave

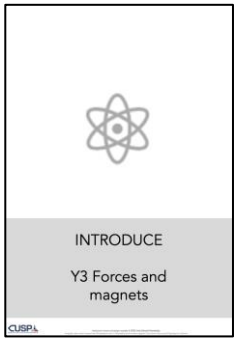
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y3 Rocks  	Chemistry* the study of the composition, behaviour and properties of matter *Adapted from BBC Bitesize	Y1 Everyday materials Y2 Use of everyday materials	Types How are rocks formed? What types of rocks are there? Change Can rocks change? How can we test a rock to see if it is limestone or chalk? Soil Is soil just dirt? What makes soil? Fossils How are fossils formed? Elaborate and remember rocks, soils and fossils.	cemented compacted decay prehistoric soil transform	fossil igneous magma metamorphic minerals sedimentary

Year group, Unit Title and Name	Substantve concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y3 Animals, including humans |	Biology | The study of living things, including Amount and type of nutrition Structure of humans and animals	EYFS Natural world Y1 Animals, including humans Y2 Animals, including humans Y2 Living things and their habitats	Food What effect does the food we eat have? Skeleton Where is my skeleton and what does it do? Muscle Where are my muscles and what do they do?	minerals skeleton skull voluntary involuntary nerves	biceps triceps vertebrae vitamins proteins carbohydrates

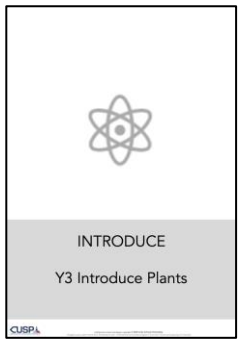


Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y3 Revisit rocks	Chemistry* |	Y1 Everyday materials Y2 Use of everyday materials	Types	cemented compacted	fossil

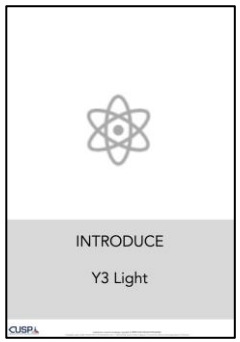
	the study of the composition, behaviour and properties of matter *Adapted from BBC Bitesize		How are rocks formed and what types are there? Change Remember: how can rocks change? Fossils Remember: how are fossils formed and how do we know?	decay prehistoric soil transform	igneous magma metamorphic minerals sedimentary

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y3 Forces and Magnets |  	Physics* | The study of energy forces mechanics waves structure of atoms physical universe | Earth in Space	Y1 Seasonal changes Y1 Everyday materials Y2 Uses of everyday materials	Contact force and friction What are contact forces? How do surfaces affect the motion of an object? How does friction affect moving objects? Non-contact force What is a non-contact force? How is this different to a contact force? Magnetic force How do magnets attract and repel? Which materials are magnetic? Forces and magnetism summary.	consequence contact force attract north south	magnet resistance friction repel pole magnetic field

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y3	Biology |	Y1 Plants	Flowering plants What are the parts of a flowering plant?	adapt essential	

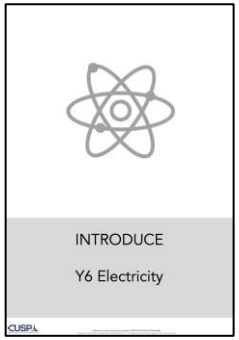
Plants 	The study of living things, including Structure and function Food and survival Life systems Reproduction	Y1 Animals, including humans Y2 Living things and their habitats Y2 Plants	What do they do? Food and survival Do all plants need the same things to thrive and grow? How do leaves make food for the plant? How does water move through a plant? Flower function What do flowers do? What is pollination?	glucose transport variety vital	transpiration stoma pollination stamen pistil photosynthesis

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y3	Physics*	Y1 Seasonal changes	Seeing	absence cast (shadow)	constant dependent

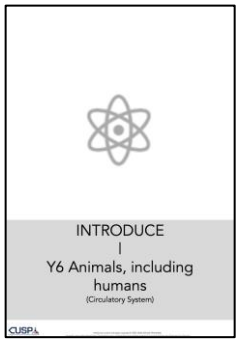
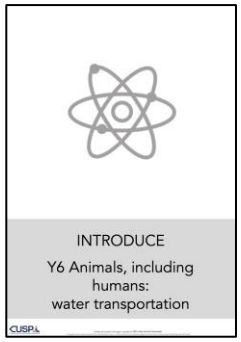
Light |  |	The study of energy forces mechanics waves structure of atoms physical universe | Earth in Space	Y1 Everyday materials Y2 Uses of everyday materials Y3 Forces and magnets	Do we need light to see things? Shadows How are shadows formed? Changing variables What happens to the size of a shadow when the object moves closer to, or away from, the light source?	impenetrable reflect shadow source (light)	independent illuminate translucent variable

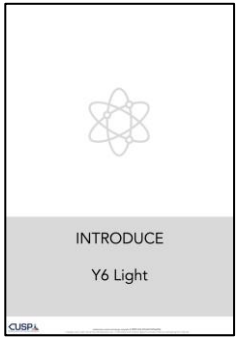
UKS2 Science Cycle 1 (Year 6 Content)

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary

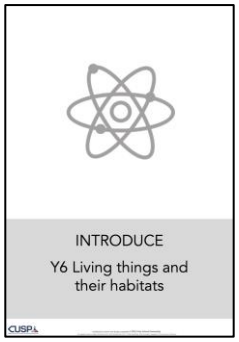
Y6 Electricity |  	Physics | Matter Forces and motion Sound, light and waves Electricity and magnetism	Y1 Everyday materials (chem) Y2 Uses of everyday materials (chem) Y3 Light Y4 States of matter Y4 Sound Y4 Electricity Y5 Forces Y5 Earth in Space	<u>Do-it</u> What is electricity? How does it work? How do we build and represent a series circuit? What are the components in a series circuit? <u>Test-it</u> How does the number of cells and voltage affect components in a circuit? <u>Diagnose-it</u> What are the effects and consequences of changing circuit components and batteries?	Component Consequence Systematic Represent Source Generate	Proton Neutron Electron Terminal Series Voltage

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
	Biology				

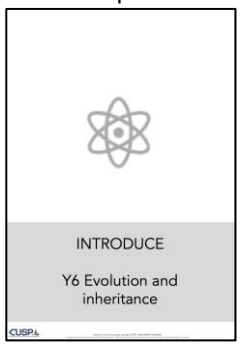
Y6 Introduce animals, including humans  	udy of things living icture tion of nd ulatory s the ealth a stem exercise d	Y1 Animals, including humans identify animals – mammal, reptile, bird, amphibian, fish Y2 Animals, including humans Reproduction and basic needs Y3 Animals, including humans Nutrition Structure of humans and animals Y4 Animals, including humans Human digestion Y5 Animals, including humans Lifespans and life cycles, growth and change	Blood and blood vessels What is blood made of and why do we need it? Why do our bodies need nutrients and how are they transported? What is our circulatory system? The functions of the heart What is our heart like inside? How does it work? Who influenced what we know about our circulatory system? The effect of exercise, drugs and lifestyle What can we do to keep healthy? Present and explain what we know about the circulatory system, nutrients and keeping healthy. Digestion and circulation Remember circulation and digestion: how are these two systems connected? Removal of waste Where are the kidneys and what do they do? Keeping healthy How do kidneys keep us healthy?	Cell Chamber System Circulation Vessel Clot Filter Expel Substance Function Regulate Transform	Plasma Platelet Artery Capillary Vein Ventricle Kidney Bladder Urine Excretion Toxin Nutrient

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y6 Light |  	Physics | Matter Forces and motion Sound, light and waves Electricity and magnetism | Earth in Space	Y1 Everyday materials Y2 Uses of everyday materials Y3 Light Y4 States of matter Y4 Sound Y4 Electricity Y5 Forces Y5 Earth in Space	<u>Properties of light</u> How does light travel? What colour is light made of? <u>Reflection</u> Reflection - how does light help us to see objects? Which surfaces make the best reflectors? <u>Colour</u> Why do we see objects as a particular colour? <u>Refraction</u> What happens to the appearance of objects when placed in water?	Impurity Emit Absorb Constituent Filter Artificial	Refraction Incidence Spectrum Prism Lux Piment

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
	things,Biology			Characteristic	Fungus

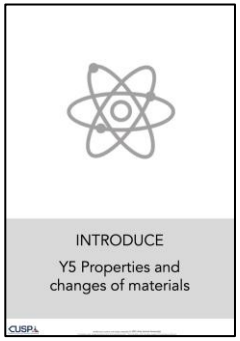
Y6 Living things and their habitats  	| e study including living ioneering scientists Classification	Y1 Plants Y2 Plants Y3 Plants Y3 Living things and their habitats Year 4 Living things and their habitats Y5 Living thing and their habitats	<u>Pioneering scientists</u> Who was the scientist Carl Linnaeus and what did he do? <u>Classification</u> How do we classify vertebrates? How do we classify invertebrates we know? How do we classify invertebrates we don't know? How do we classify invertebrates we don't know? <u>Apply</u> What animals can I classify? What animals and plants exist in my local environment?	Interdependence Specific Categorise Primitive Hierarchy	Arthropod Taxonomy Kingdom Phylum Genus

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
	Biology	Y3 Plants			

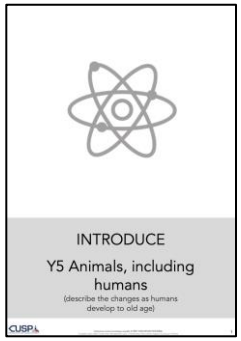
Y6 Evolution and Inheritance 	udy of things living Change volutio daptio n nvironm n ent	Y4 Living things and their habitats Y5 Living things and their habitats Y6 Living things and their habitats	<u>Change over time</u> How have living things changed over time? How do we know? How has life evolved over time? <u>Biological change</u> What is DNA and what does it do? Are all offspring identical to their parents? <u>Theories of evolution</u> Darwin and Wallace – what evidence did they share to argue the case for evolution? Survival of the fittest - how have animals adapted and evolved to suit their environment?	Characteristic Adaptation Acquire Theory Modify Generation	Evolve Survival Species Clone Inherit Fossil

UKS2 Science Cycle 2 (Year 5 Content)

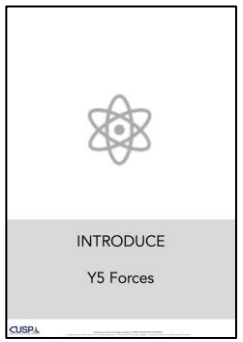
Year group, Unit Title and Name	Substantiv concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y5	Chemistry*	Y1 Everyday materials	Properties, mixtures and solutions What properties do materials have?	property particle separate	atom molecule chemical (changes)

Properties and changes of materials 	the study of the compositio n, behaviour properties of matter	Y2 Uses of everyday materials Y3 Rocks Y3 Light Y4 States of matter	How do we use them? What is a mixture? What is a solution? (Solubility) Separation of materials How can we separate materials from a mixture? (Sieving and filtration) How can we separate materials from a solution? (Evaporation) Reversible and irreversible change What changes are reversible? What changes are irreversible?	combine recover comparative	physical (changes) reversible reaction

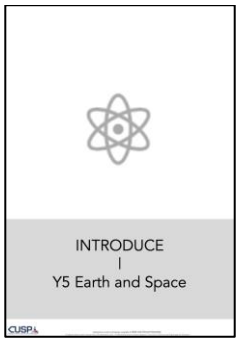
Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
	Biology				

Y5 Animals, including humans 	| e study ng thin of gs d an an cycle ife Change a growthnd	Y1 Animals, including humans Y2 Animals, including humans Y3 Animals, including humans Y4 Animals, including humans	Life What is the human timeline? Growth How do we change into adults? Compare How do human and animal lifespans compare?	development diverse unique generation mature equipped	adolescence puberty gestation embryo foetus womb

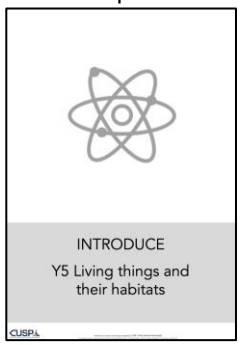
Year group, Unit Title and Name	Substant ve t concep	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y5	Physics |	Y3 Forces and magnetism	Non-contact and contact forces Remember gravity.	opposite reaction advantage	pulley gear pivot fulcrum

Forces  	Matter Forces a nd motion Sound, ligh : and waves Electricity and magneti m Earth in S ace	Y3 Light Y4 States of matter Y4 Electricity Y4 Sound	When is friction helpful and when is it not? Resistance What is the effect of air resistance? Air resistance investigation Inspirational scientist Who was Galileo Galilei? Resistance What's the effect of water resistance? Levers, pulleys and gears How do levers help us? How do pulleys and gears help us?	displace weight mass	lever upthrust

Year group, Unit Title and Name	Substant ve t concep	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y5 Earth and Space	Physics	Y3 Forces and magnetism	Position, relationship / movement of planets / spherical bodies. What are the	luminous phenomenon	orbit axis crescent gravitational

	Matter Forces a nd motion Sound, light and waves Electricity and magneti m ace Earth in S	Y3 Light Y4 States of matter Y4 Electricity Y4 Sound Y5 Forces	planets in our solar system? (Planet comparison) How does the view of the Moon change in a solar month? (Moon phases, moon diaries) The effect of the Earth's rotation, tilt and orbit has on day, night and seasons. Why does the rotation of the Earth result in day and night? Why is the Earth's tilt (axis) responsible for the seasons?	attraction approximately relative apparent	waxing waning

Year group, Unit Title and Name	Substantive concept	Previous Learning	Big Ideas/Key Questions/Learning Foci	Tier 2 Vocabulary	Tier 3 Vocabulary
Y5	Biology	Y1 Plants	Mrs GREN – Recap of life processes		

Living things and their habitats  	study th ıding living Structure Order fe cycles eproductic	Y2 Plants Y3 Plants Y3 Living things and their habitats Year 4 Living things and their habitats	<u>Life Cycles</u> What's the difference between a mammal and amphibian? What's the difference between an insect and a bird? What is similar and what is different between the life cycle of a mammal, amphibian, insect and bird? <u>Inspirational scientists</u> Who was Maria Merion and what did she do? <u>Reproduction</u> How do living things reproduce? Plants and animals – what's the life process of reproduction.	deduce process re-form transform adolescence contrast	embryo sexual metamorphosis incubate biochemical fertilisation