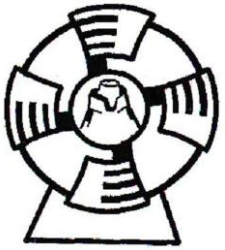

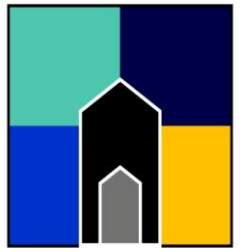

An Daras Multi Academy Trust

Windmill Hill Academy

Curriculum Scheme of Learning – Science

Integrated Curriculum Scheme of Learning - 2015	
Scheme of Learning:	Science
National Curriculum Subjects:	Science
Domain Leader:	J. Young
Agreed and Approved:	Sept 2015
Leader In Year Review Dates:	Sept 2016
Related Documents and Guidance:	National Curriculum 14 Dimensions Skill Ladders 14 WHA Science Policy 15 WHA Science Curriculum Statement 14/15 Rising Stars Progression Statement for Science 14 WHA Aims for Pupils/Non-Negotiable 15 ADMAT Aims

Windmill Hill Academy **Science** *Scheme of Learning – 2015*	
Curriculum Statement	At Windmill Hill Academy, an enriched science curriculum that provides opportunities for practical lessons on a weekly basis is key. Learners are exposed to a wide variety of topics that support their curiosity for learning. Our curriculum aims to broaden the learners' scientific view of the world around them, whilst promoting a love for enquiry and wanting to explore new things. Below you will find an overview of what your child will be expected to learn in each of the Key Stages. **Key stage 1** The principal focus of science teaching in key stage 1 is to enable learners to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos. **Lower key stage 2 – years 3-4** The principal focus of science teaching in lower key stage 2 is to enable learners to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out. **Upper key stage 2 – years 5-6** The principal focus of science teaching in upper key stage 2 is to enable learners to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Learners should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
KS1 - Year A **Unit Title**	**Shiver Me Timbers** Sc4 Light and Sound Sc1 Collecting Evidence	**Bright Sparks** Sc4 Electricity Sc1 Perform Simple Tests	**Can we Fix it? Yes we Can!** Use of Every day Materials Sc1 Identifying and classifying	**Walking in the Jungle** Year 1 Seasonal Changes Sc1 Ask simple questions and know there are different answers	**Let's Cook** Sc2 Year 2 Plants Sc1 Gather and record data to answer questions	**Oh I do like to be by the Seaside** Sc2 Yr1 Humans and Other animals SC1 Ask simple questions and know there are different answers
A. Nat Curriculum 14	N/A KS1 P146-47	N/A- KS1 P146-47	N/A- KS1 P146-47	N/A- KS1 P146-47	N/A- KS1 P146-47	N/A- KS1 P146-47
B. Academy Aims Link	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity
C. Scheme Reference	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning
D. Working Scientifically	**Science Working Scientifically** Focus - Collecting Evidence WS2 I can observe closely using simple equipment WS3 I can perform simple tests WS6 I can gather and record data to help in answering questions	**Science Working Scientifically** Focus - Collecting Evidence WS2 I can observe closely using simple equipment WS3 I can perform simple tests WS6 I can gather and record data to help in answering questions	**Sc1 Gather and record data to answer questions** I can observe closely using simple equipment I can perform simple tests I can identify and classify I can use observations and ideas in answer to questions I can gather and record data to help answer a question	**Sc1 Ask simple questions and know there are different answers** I can ask simple questions and recognise that they can be answered in different ways I can observe closely, using simple equipment I can perform simple tests I can identifying and classify I can use my observations	**Sc1 Gather and record data to answer questions** I can observe closely using simple equipment I can perform simple tests I can identify and classify I can use observations and ideas in answer to questions I can gather and record data to help answer a question	**SC1 Ask simple questions and know there are different answers** WS I ask simple questions and recognise they can be answered in different ways I can identify and classify I can use observations and ideas to suggest answers to questions I can gather and record data in help to ask questions

				and ideas to suggest answers to questions I can gather and record information to help answer questions		
E. Key Knowledge	**Light and Dark** I can identify different light sources, including the sun I know that darkness is the absence of light **Sound** Making and detecting sounds I know that there are many kinds of sound and sources of sound I know that sounds travel away from sources, getting fainter as they do so, and that they are heard when they enter the ear	**Electricity Physical Processes** I know about everyday appliances that use electricity I know about simple series circuits involving batteries, wires, bulbs and other components (e.g. buzzers, motors) I know how a switch can be used to break a circuit **Objectives Year Four Electricity (NC 2014)** I can identify common appliances that run on electricity I can construct a simple series circuit identifying and naming its basis parts including cells, wires, bulbs, switches and buzzers I can identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery I recognise that a switch opens and closes a circuit and associated this with the whether or not a lamp lights in a simple series circuit	Year 1 - I distinguish between an object and the materials from which it is made I identify and name a variety of everyday materials I can describe the simple physical properties of everyday materials I can compare and group together a variety of everyday materials on the basis of their simple physical properties Year - I can identify and compare the suitability of a variety of everyday materials I can find out how the shapes of solid objects made from some materials can be changed I can to find out about people who developed new materials e.g. John Dunlop/ Charles Macintosh	I can observe changes across the four seasons I can observe and describe weather associated with the seasons and how day length varies	Year 1- I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees I can identify and describe the basic structure of a variety of common flowering plants, including trees Year 2 - I can observe and describe how seeds and bulbs grow into nature plants I can find out and describe how plants need water, light and a suitable temperature to grow and to stay healthy	**Animals including humans** Year 1- I can identify and name a variety of common animals I can identify and name a variety of common animal that are carnivores, herbivores and omnivores I can describe and compare the structure of a variety of common animals I can identify, name and draw and label basic parts of the human body saying which part is associated with each sense Year 2 -I notice that animals including humans have offspring that grow into adults I can find out about and describe the basis needs of animals including humans for survival I can describe the importance for humans of experience, eating the right amounts of different foods and hygiene
F. Key Skills and Understanding - Year 1 Working Scientifically	WS - Recording Evidence I can share what I see, hear, feel and touch I can talk about what happens and record using words and pictures	WS - Recording Evidence I can share what I see, hear, feel and touch I can talk about what happens and record using words and pictures	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS Planning - I can ask simple questions I can describe what I see, hear, feel, touch and taste I can carry out instructions for a simple investigation	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS Planning - I can ask simple questions I can describe what I see, hear, feel, touch and taste I can carry out instructions for a simple investigation

G. Key Skills and Understanding - Year 1 Subject Content	I can observe and name sources of light I can talk about features of light and dark I can observe and name a variety of sources of sound I can use everyday words to describe sounds	I can identify the brightness blub I recognise that a light switch turns a blub on and off I name equipment that uses electricity I identify some electrical dangers	I can use my sense to explore a wide range of materials I can identify and name a variety of everyday materials I can describe the physical properties of a range of everyday materials	I can observe and talk about changes cross the four seasons	I can use my sense to explore and talk about plants I can describe what a plant looks like I can identify and name common plants I can identify and describe the basic structure of a flowering plant I can describe in simple terms what a plant needs to grow	I can identify and name parts of the body I can talk about and describe animals that I know I can identify and name common animals such as birds/ fish and reptiles, mammals and amphibians I can describe the structure of common animals I can name and talk about the young of humans and other animals I can identify and name common animals that are carnivores and herbivores PSHE Link I can describe how to look after my teeth I can describe how to keep myself clean
H. Key Skills and Understanding - Year 2 Working Scientifically	WS - Recording Evidence I can talk about and record what I see and observe I can use simple drawings to record my findings I can record data using simple charts, tables and block graphs I can talk accurate measurements using simple equipment	WS - Recording Evidence I can talk about and record what I see and observe I can use simple drawings to record my findings I can record data using simple charts, tables and block graphs I can talk accurate measurements using simple equipment	WS - I can talk about what happened I can identify and classify data and information I can involve simple key words	WS - I recognise that questions can be answered in different ways I can talk about similarities and differences I can describe what happens when taking part in a fair test	WS - I can talk about what happened I can identify and classify data and information I can involve simple key words	WS - I recognise that questions can be answered in different ways I can talk about similarities and differences I can describe what happens when taking part in a fair test
I. Key Skills and Understanding - Year 2 Subject Content	I can describe the link between brightness and distance I can describe how shadow is formed I can talk about how sound travels I can recognise that sounds get fainter as the distance from the sound source increases	I can explain in simple terms how a circuit works I can make a draw a simple parallel circuit I recognise that batteries are a source of electricity I can make circuits with more than one blurb I can explain simply how the number of batteries a=effects the amount of electricity I can talk about the effect	I can compare and group everyday materials based on simple physical properties I can identify and compare the uses of a range of compare everyday materials and their properties I can talk about what common materials are used for	I can observe and describe weather associated with the seasons and how the day length varies	I can find out about and describe what plants need to grow and stay healthy I can identify and name a variety of common plants including classifying and deciduous and evergreen trees I can identify and describe the basis structure of a variety of common flowering plants I can describe how seeds	I can draw and label the main parts of human body and link to the associated senses I can describe simple features of the human skeleton I can name foods that help to make healthy diet I can describe the link between exercise and health I can recognise and name

		of making and breaking contact in a circuit I recognise common conductors and insulators			and blub grow into mature plants	what humans and animals need to survive I can identify and name a variety of common animals such as amphibians mammals I can describe and common the structure of a variety of common animals such as amphibians and mammals I can describe in simple terms the changes that take place as animals grow I can describe the link between the animals diet and their type of teeth I can identify and describe a variety of common animals that are carnivores, herbivores and omnivores
J. Cross Curricular Links (Core non-negotiable standards)	Use of ICT Links with Project. Links with English and the spoken word. Links with maths and understanding of measurement.	Use of ICT Link with Project. Links to Design Technology and creativity. Link to Maths and understanding of number.	Use of ICT Link with Project and Links to Design Technology.	Use of ICT Links with Project and understanding of where jungles can be found in the world. Links with English with understanding what a question.	Use of ICT Links with project. Links with maths and recording of data. Links to PSHCE and healthy eating.	Use of ICT Links to Project. Links to English and non-chronological reports. Links to PSHCE and the need to care for the environment.
K. Assessment Pathway	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
KS1 - Year B **Unit Title**	**<u>All Aboard!</u>** Sc4 Forces and Motion SC1 Perform Simple tests	**<u>Superheros!</u>** Sc3 Year 1 Every day Materials Sc1 Identifying and Classifying	**<u>Walking with the Dinosaurs</u>** Sc2 Year 1 Plants Sc1 Gather and record data to answer the question	**<u>Green Fingers</u>** Sc2 Year 1 Plants Sc1 Gather and record data to answer the question	**<u>Walking in Windmill Woods</u>** Sc2 Living things Habitats Sc1 Use observations and ideas to suggest answers to questions	**<u>Knights and Dragons</u>** Sc2 Year 2 Humans and Animals Sc1 Use observations and ideas to suggest answers to questions
A. Nat Curriculum 14	N/A KS1 P146-47	N/A KS1 P146-47	N/A KS1 P146-47	N/A KS1 P146-47	N/A KS1 P146-47	N/A KS1 P146-47
B. Academy Aims Link	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity	**ADMAT**: Accelerating and sustaining children's progress towards higher achievement. Ensuring achievement gaps for disadvantaged children are addressed. Ensuring children are equipped for the next phase of learning. Creating an enjoyable and creative curriculum that meets the learning needs of children. Providing for children a safe, stimulating, caring but challenging learning environment. **WHA:** Create Challenge Develop Citizenship Encourage Creativity
C. Scheme Reference	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning	Windmill Project Planning
D. Working Scientifically	**Focus - Identifying and classifying** I ask simple questions and recognise that they can be answered in different ways I can observe closely using simple equipment I can perform simple tests I can identify and classify I can use my observations and ideas to suggest	**Focus - Identifying and classifying** I can ask simple questions and recognise that they can be answered in different ways I can observe closely, using simple equipment I can perform simple tests I can identify and classify I can use my observations	**Sc1 - Gather and record data to answer questions** I can observe closely using simple equipment I can perform simple tests I can identify and classify I can use observations and ideas in answer to questions I can gather and record data to help answer a	**Sc1 Gather and record data to answer questions** I can observe closely using simple equipment I can perform simple tests I can identify and classify I can use observations and ideas in answer to questions I can gather and record data to help answer a	**Sc1- Ask simple questions and know there are different answers** WS I ask simple questions and recognise they can be answered in different ways I can identify and classify I can use observations and ideas to suggest answers to questions I can gather and record	**Sc1 - Ask simple questions and know there are different answers** WS I ask simple questions and recognise they can be answered in different ways I can identify and classify I can use observations and ideas to suggest answers to questions I can gather and record

	answers to questions I gather and record data to help in answering questions	and ideas to suggest answers to questions I can gather and record data to help in answering questions	question	question	data in help to ask questions	data in help to ask questions
E. Key Knowledge	(Link to Year 3 Objectives) I can compare how things move on different surfaces I notice that some forces need contact between two objects	Year 1 - I distinguish between an object and the materials from which it is made I identify and name a variety of everyday materials I can describe the simple physical properties of everyday materials I can compare and group together a variety of everyday materials on the basis of their simple physical properties Year 2 - I can identify and compare the suitability of a variety of everyday materials I can find out how the shapes of solid objects made from some materials can be changed I can to find out about people who developed new materials e.g. John Dunlop/ Charles Macintosh	Year 1 - I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees I can identify and describe the basic structure of a variety of common flowering plants, including trees Year 2 - I can observe and describe how seeds and bulbs grow into nature plants I can find out and describe how plants need water, light and a suitable temperature to grow and to stay healthy	Year 1 - I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees I can identify and describe the basic structure of a variety of common flowering plants, including trees Year 2 - I can observe and describe how seeds and bulbs grow into nature plants I can find out and describe how plants need water, light and a suitable temperature to grow and to stay healthy	I can explore and compare the differences between things that are living, dead and things that have never been alive I can identify that most living things, live in habitats to which they are suited and describe how different habits provide for the basic needs of different kinds of animals and plants and how they depend on each other I can identify and name the variety of plants and animals in their habitats including micro habitats I can describe how animals obtain their food from plants and other animals using the idea of a simple food chain and identify and name different sources of food	**Animals including humans** Year 1 - I can identify and name a variety of common animals I can identify and name a variety of common animal that are carnivores, herbivores and omnivores I can describe and compare the structure of a variety of common animals I can identify, name and draw and label basic parts of the human body saying which part is associated with each sense Year 2 - I notice that animals including humans have offspring that grow into adults I can find out about and describe the basis needs of animals including humans for survival I can describe the importance for humans of experience, eating the right amounts of different foods and hygiene
F. Key Skills and Understanding - Year 1 Working Scientifically	WS Planning - I can ask simple questions I can describe what I see, hear, feel, touch and taste I can carry out instructions for a simple investigation	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS - Planning I can ask simple questions I can describe what I see, hear, feel, touch and taste I can carry out instructions for a simple investigation	WS - Planning I can ask simple questions I can describe what I see, hear, feel, touch and taste I can carry out instructions for a simple investigation
G. Key Skills and Understanding - Year 1 Subject Content	I can talk about and describe movements I make I can talk about and	I can use my sense to explore a wide range of materials I can identify and name a	WS - I can talk about what happened I can identify and classify data and information	WS - I can talk about what happened I can identify and classify data and information	I can talk about and describe plants and animals found in my environment I can identify where some	I can identify and name parts of the body I can talk about and describe animals that I

	describe the movement of objects I can talk about why some objects will not move	variety of everyday materials I can describe the physical properties of a range of everyday materials	I can involve simple key words	I can involve simple key words	animals and plants are found I can talk about what animals eat	know I can identify and name common animals such as birds/ fish and reptiles, mammals and amphibians I can describe the structure of common animals I can name and talk about the young of humans and other animals I can identify and name common animals that are carnivores and herbivores PSHE Link I can describe how to look after my teeth I can describe how to keep myself clean
H. Key Skills and Understanding - Year 2 Working Scientifically	WS Planning - I can ask simple questions I can describe what I see, hear, feel, touch and taste I can carry out instructions for a simple investigation	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS - I can talk about what I hear, see, feel and touch I can talk about and describe simple similarities and differences	WS - I recognise that questions can be answered in different ways I can talk about similarities and differences I can describe what happens when taking part in a fair test	WS - I recognise that questions can be answered in different ways I can talk about similarities and differences I can describe what happens when taking part in a fair test
I. Key Skills and Understanding - Year 2 Subject Content	I recognise that actions such as throw, kick and blow are examples of pushes and pulls I can describe the way in which pushes and pulls can make objects speed up, slow down and change direction I can describe how pushes and pulls change the shape of an object	I can compare and group everyday materials based on simple physical properties I can identify and compare the uses of a range of compare everyday materials and their properties I can talk about what common materials are used for	WS - I can talk about what happened I can identify and classify data and information I can involve simple key words	WS - I can talk about what happened I can identify and classify data and information I can involve simple key words	I can talk about and describe the features of a habitat and how to supports the animals and plants that depend on it I can talk about the similarities and differences between living things in different places I can compare and local and non-local habitats I can describe how plants are used my animals (food chain)	I can draw and label the main parts of human body and link to the associated senses I can describe simple features of the human skeleton I can name foods that help to make healthy diet I can describe the link between exercise and health I can recognise and name what humans and animals need to survive I can identify and name a variety of common animals such as amphibians mammals I can describe and common

						the structure of a variety of common animals such as amphibians and mammals I can describe in simple terms the changes that take place as animals grow I can describe the link between the animals diet and their type of teeth I can identify and describe a variety of common animals that are carnivores, herbivores and omnivores
J. Cross Curricular Links (Core non-negotiable standards)	Use of ICT Links with Project. Links with English and the spoken word. Links with maths and understanding of measurement.	Use of ICT Link with Project. Links to Design Technology and creativity. Link to Maths and understanding of number	Use of ICT Links with project. Links with maths and recording of data. Links to PSHCE and healthy eating.	Use of ICT Links with project. Links with maths and recording of data. Links to PSHCE and healthy eating.	Use of ICT Links with project. Links with maths and recording of data.	Use of ICT Links to Project. Links to English and non-chronological reports. Links to PSHCE and the need to care for the environment.
K. Assessment Pathway	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
3– Unit Title	**Forces and magnets**	**Rocks**	**Animals including humans**	**Animals including humans**	**Plants**	**Light**
A. Nat Curriculum 14	Y3 PoS – Forces and magnets	Y3 PoS – Rocks.	Y3 PoS – Animals, including humans.	Y3 PoS – Animals, including humans.	Y3 PoS – Plants	Y3 PoS – Light
B. Academy Aims Link	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.
C. Scheme Reference	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC
D. Key Knowledge	To know and compare how things move on different surfaces. To notice that some forces need contact between two objects, but magnetic forces can act at a distance. To observe and understand how magnets attract and repel each other and attract some materials and	Recognise that soils are made from rocks and organic matter. To know and explore different soils and identify similarities and differences between them and investigate what happens when rocks are rubbed together or what changes occur when they are in water.	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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	Identify and describe the functions of different parts of flowering plants: roots, stem / trunk, leaves and flowers. Pupils should be introduced to the relationship between function and structure – the idea that every part has a job to do.	Recognise that humans need light to see things and that darkness is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect our eyes.

	not others. To compare and group together a variety of everyday materials on the basis of whether they are attracted by a magnet, and identify some magnetic materials. To know and describe how magnets have two poles.				To know how water is transported in plants	Recognise that shadows are formed when the light from a source is blocked by a solid object. Find patterns in the way that size of shadows change
E. Key Skills and Understanding	Be able to predict whether two magnets will attract or repel each other, depending on which poles are facing. To observe how magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (e.g. opening a door, pushing a swing). Explore the behaviour and everyday uses of different magnets (bar, ring, button and horseshoe). Work scientifically by: Comparing how different things move and to group them. Raiding questions and carrying out tests to find out how far things move on different surfaces, and gathering and recording this data. Finding fair ways to compare different magnets	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Observe rocks, including those used in building and gravestones, and exploring how they might have changed over time. Research and discuss the different kinds of living things whose fossils are found in sedimentary rock and explore how fossils are formed.	To know about the importance of nutrition and to be introduced to the main body parts associated with the skeleton and muscles for support, protection and movement. Work scientifically by identifying and grouping animals with and without skeletons and observing and comparing their movement. Compare and contrast the diets of different animals and decide ways of grouping them by what they eat.	To know about the importance of nutrition and to be introduced to the main body parts associated with the skeleton and muscles for support, protection and movement. Work scientifically by identifying and grouping animals with and without skeletons and observing and comparing their movement. Compare and contrast the diets of different animals and decide ways of grouping them by what they eat.	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 plant. 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. Work scientifically by comparing the effects of different factors on plant growth	To understand what happens when light reflects off a mirror or other reflective surfaces. Know why it is important to protect their eyes from bright lights. To be able to look for, and measure shadows, and find out how they are formed and what might cause shadows to change. To be able to work scientifically by looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes

	and their uses. Sorting materials into those that are and are not magnetic. To understand and look for the patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another. Identify how these properties make magnets useful in everyday items and suggesting creative uses for different magnets.					
F. Cross Curricular Links (Core non-negotiable standards)	Literacy – writing the myth of Magnus Opportunities to use accurate spelling and scientific vocabulary. Discussions – evaluating / questioning Maths – measuring how far car travels IT/E Safety	Literacy - Opportunities to use accurate spelling and scientific vocabulary. Discussions – evaluating / questioning Computing - Scratch ; the unit links to working scientifically; in particular, making systematic and careful observations, and using results to draw conclusions and suggest improvements	Literacy - Opportunities to use accurate spelling and scientific vocabulary. Discussions – evaluating / questioning Labelling diagrams IT/E Safety	Literacy - Opportunities to use accurate spelling and scientific vocabulary. Discussions – evaluating / questioning Writing explanation IT/E Safety	Literacy- Opportunities to use accurate spelling and scientific vocabulary. Writing explanation Discussions – evaluating / questioning	Literacy- Opportunities to use accurate spelling and scientific vocabulary. Discussions – evaluating / questioning Maths s turns and rotation – shadows /compass point IT/E Safety
G. Assessment Pathway	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
4– Unit Title	**Sound**	**Electricity**	**Living things and their habitats**	**Animals and humans**	**States of Matter**	**States of Matter**
A. Nat Curriculum 14	Y4 PoS –Sound	Y4 PoS –Electricity	Y4 PoS –Living things and their habitats	Y4 PoS – Animals and humans	Y4 PoS –States of Matter	Y4 PoS –States of Matter
B. Academy Aims Link	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.
C. Scheme Reference	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC
D. Key Knowledge	Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it.	Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series circuit, based on	To recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that environments can change	Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers,	Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)	Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)

	Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.	whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.	and that this can sometimes pose dangers to living things.	predators and prey.	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
E. Key Skills and Understanding	Explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways.	Construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols at this stage; these will be introduced in year 6. Explore precautions for working safely with electricity. Work scientifically by: observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.	Explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects. Explore examples of human impact (both positive and negative) on environments. Work scientifically by using and making simple guides or keys to explore and identify local plants and animals.	Explore the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine. Work scientifically by comparing the teeth of carnivores and herbivores, and suggesting reasons for differences; finding out what damages teeth and how to look after them. They might draw and discuss their ideas about the digestive system and compare them with models or images.	Explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container). Observe water as a solid, a liquid and a gas and note the changes to water when it is heated or cooled.	Explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container). Observe water as a solid, a liquid and a gas and note the changes to water when it is heated or cooled.

F. Cross Curricular Links (Core non-negotiable standards)	Literacy – instructions: How to make a musical instrument Maths / ICT – measuring sound levels Music – exploring sounds / pitch IT/E Safety	Literacy – circuit instructions & safety posters DT – making torches / alarms Maths – exploring 2d/3d shapes IT/E Safety	Literacy – Fiction – Wind in the Willows Literacy – non-chronological reports Maths – classification keys / venn and carroll diagrams ICT / Music – story sound tracks IT/E Safety	Literacy – persuasive posters Maths – measuring heart rates DT/ MFL French – cooking healthy food PSCHE – drug awareness	Literacy – Water cycle explanation text Maths / ICT – Excel and data handing graphs charts of observed temperature and rainfall measurements Geography / Art – weather paintings IT/E Safety	Literacy – Water cycle explanation text Maths / ICT – Excel and data handing graphs charts of observed temperature and rainfall measurements Geography / Art – weather paintings IT/E Safety
G. Assessment Pathway	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
5 – Unit Title	**Earth and Space**	**Forces**	**Properties and changes of material**	**Properties and changes of material**	**Animals and humans**	**Living things and their habitats**
A. Nat Curriculum 14	Y5 PoS –Earth and Space	Y5 PoS – Forces	Y5 PoS – Properties and changes of material	Y5 PoS –Properties and changes of material	Y5 PoS –Animals and humans	Y5 PoS –Living things and their habitats
B. Academy Aims Link	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.
C. Scheme Reference	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC
D. 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. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's	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.	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. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a	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. Know that some materials will dissolve in liquid to form a solution,	Describe the changes as humans develop to old age.	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.

	rotation to explain day and night and the apparent movement of the sun across the sky.	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. Explain 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.	and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. Explain 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.		
E. Key skills and Understanding	Explore a model of the Sun and Earth that enables them to explain day and night. Pupils should learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006).	Explore falling objects and raise questions about the effects of air resistance. Explore the effects of air resistance by observing how different objects such as parachutes and sycamore seeds fall. They should experience forces that make things begin to	Explore reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. Explore changes that are difficult to reverse, for example, burning, rusting	Explore reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. Explore changes that are difficult to reverse, for	Draw a timeline to indicate stages in the growth and development of humans. Explore the changes experienced in puberty. Work scientifically by researching the gestation periods of other animals and comparing them with	Observe life-cycle changes in a variety of living things. Find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals. Work scientifically by:

	Understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). Explore ideas about how the solar system has developed; understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus. Work scientifically by comparing the time of day at different places on the Earth, creating simple models of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.	move, get faster or slow down. Explore the effects of friction on movement and find out how it slows or stops moving objects, for example, by observing the effects of a brake on a bicycle wheel. Pupils should explore the effects of levers, pulleys and simple machines on movement. Work scientifically by exploring falling paper cones or cup-cake cases, and designing and making a variety of parachutes and carrying out fair tests to determine which designs are the most effective. Explore resistance in water by making and testing boats of different shapes. They might design and make products that use levers, pulleys, gears and/or springs and explore their effects.	and other reactions, for example, vinegar with bicarbonate of soda. Work scientifically by carrying out tests to answer questions, for example, 'Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?' Compare materials in order to make a switch in a circuit. They could observe and compare the changes that take place, for example, when burning different materials or baking bread or cakes. Research and 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.	example, burning, rusting and other reactions, for example, vinegar with bicarbonate of soda. Work scientifically by carrying out tests to answer questions, for example, 'Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?' Compare materials in order to make a switch in a circuit. They could observe and compare the changes that take place, for example, when burning different materials or baking bread or cakes. Research and 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.	humans; by finding out and recording the length and mass of a baby as it grows.	observing and comparing the life cycles of plants and animals in their local environment with other plants and animals around the world. Grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. Observe changes in an animal over a period of time, comparing how different animals reproduce and grow.
F. Cross Curricular Links (Core non-negotiable standards)	Maths scale – using decimal notation including scale; place value – read write and compare numbers to 1 000 000; count forwards and backwards in powers of 10; interpret data on a graph Literacy –identify audience	DT – Mechanical toy - Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Maths – interpreting graphs; convert between	ICT – We are architects – properties of building materials e.g. Hardness and transparency	ICT – We are architects – properties of building materials e.g. Hardness and transparency	PE – healthy lifestyle SMSC – SRE	SMSC – SRE

	and purpose of the writing, selecting the appropriate form	different units of measure				
G. Assessment Pathway	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
6 – Unit Title	**Electricity**	**Light**	**Animals and humans**	**Animals and humans**	**Evolution and inheritance**	**Living things and their habitats**
A. Nat Curriculum 14	Y6 PoS –Electricity	Y6 PoS –Light	Y6 PoS – Animals and humans	Y6 PoS –Animals and humans	Y6 PoS – Evolution and inheritance	Y6 PoS –Living things and their habitats
B. Academy Aims Link	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.	Accelerating and sustaining children's progress towards higher achievement. Challenge children by setting aspirational goals to ensure they grow into confident individuals who can succeed. Provide children with a broad, balanced, stimulating and relevant curriculum which allows children every opportunity to develop into healthy and well-adjusted individuals. Ensure children see failure as not a negative but an opportunity to grow and learn.
C. Scheme Reference	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC	2014 Primary NC
D. Key Knowledge	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.	Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Use the idea that light	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function Describe the ways in which nutrients and water are transported within animals, including humans.	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function Describe the ways in which nutrients and water are transported within animals, including humans.	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics.

		travels in straight lines to explain why shadows have the same shape as the objects that cast them.			adaptation may lead to evolution.	
E. Key skills and Understanding	Construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors. Represent a simple circuit in a diagram using recognised symbols. Work scientifically by systematically identifying the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit	Explore the way that light behaves, including light sources, reflection and shadows. Work scientifically by: deciding where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works. Investigate the relationship between light sources, objects and shadows by using shadow puppets. They could extend their experience of light by looking a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters.	Explore the main body parts and internal organs (skeletal, muscular and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function. Explore how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body. Work scientifically by exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.	Explore the main body parts and internal organs (skeletal, muscular and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function. Explore how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body. Work scientifically by exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.	Explore how living things on earth have changed over time. Introduced to the idea that characteristics are passed from parents to their offspring, for instance by considering different breeds of dogs, and what happens when, for example, labradors are crossed with poodles. They should also appreciate that variation in offspring over time can make animals more or less able to survive in particular environments, for example, by exploring how giraffes' necks got longer, or the development of insulating fur on the arctic fox. Work scientifically by observing and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. Analyse the advantages and disadvantages of specific adaptations, such as being on two feet rather than four, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.	Explore grouping living things. They should be introduced to the idea that broad groupings, such as micro-organisms, plants and animals can be subdivided. Classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals). Discuss reasons why living things are placed in one group and not another. Work scientifically by using classification systems and keys to identify some animals and plants in the immediate environment. Research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system

F. Cross Curricular Links (Core non-negotiable standards)	Literacy – writing up of scientific investigation History – WW2 Computing – circuits Maths – handling data and measure	Literacy – writing up of scientific investigation Geography – mountain habitats Maths – handling data and measure	Literacy – writing up of scientific investigation PSHE - body changes PE – healthy lifestyle/fitness	Literacy – writing up of scientific investigation Geography – extreme environments PSHE – body changes PE – healthy lifestyle/fitness	Literacy – writing up of scientific investigation	Literacy – writing up of scientific investigation Maths – handling data and measure
G. Assessment Pathway	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment	Elicitation task (at the beginning of a unit) On-going teacher assessment of knowledge skills and understanding End of unit assessment