

Beech Hyde Curriculum - Skills Provision by Subject

Art and Design

Early Years:

A variety of opportunities are carefully planned to explicitly teach children the following skills and techniques and then deepen their knowledge and understanding through planned and purposeful play as continuous provision.

Nursery	Reception
Expressive arts and design: ● Explore different materials freely, in order to develop ideas about how to use them and what to make. ● Develop own ideas and then decide which materials to use to express them. ● Create closed shapes with continuous lines, and begin to use these shapes to represent objects. ● Draw with increasing complexity and detail, such as representing a face with a circle and including details. ● Use drawing to represent ideas like movement or loud noises. Show different emotions in drawings and paintings eg happiness, sadness, fear ● Explore colour and colour-mixing. ● Explore and experiment with a range of media (tools and materials including sound) and whole body movement, through multi-sensorial exploration. ● Notice and show interest in the transformative effect of actions on materials and resources. ● Experiment with ways to enclose a space, create shapes and represent actions, sounds and objects. ● Enjoy and respond to playing with colour in a variety of ways, for example combining colours. ● Use 3D and 2D structures to explore materials and/or to express ideas. Physical Development: ● When holding crayons, chalks etc., make connections between movement and the marks made. ● Use large scale muscle movements to wave flags and streamers, paint and make marks. ● Use one-handed tools and equipment eg making snips with scissors ● Use a comfortable grip with good control when holding pens and pencils ● Show a preference for a dominant hand	Expressive arts and design: ● Explore, use and refine a variety of artistic effects to express ideas and feelings. Return to and build on previous learning, refining ideas and developing ability to represent them. ● Create collaboratively sharing ideas, resources and skills. ● Continue to explore colour and how colours can be changed. ● Develop an understanding of using lines to enclose a space, and begin to use drawing to represent actions and objects based on imagination, observation and experience. ● Use tools for a purpose. ● Use increasing knowledge and understanding of tools and materials to explore interests and enquiries and develop thinking. ● Develop own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate discoveries and understanding. ● Express and communicate working theories, feelings and understandings using a range of art forms, e.g. movement, dance, drama, music and the visual arts. ● Create representations of both imaginary and real-life ideas, events, people and objects. ● Choose particular movements, instruments/sounds, colours and materials for own imaginative purposes. ● Use combinations of art forms, e.g. moving and singing, making and dramatic play, drawing and talking, constructing and mapping. ● Respond imaginatively to art works and objects. Physical Development: ● Develop small motor skills to use a range of tools competently, safely and confidently eg pencils for drawing and writing, paintbrushes, scissors.

• Show increasing control in holding, using and manipulating a range of tools and objects such as mark making tools • Hold a writing tool with thumb and all fingers; begin to use a tripod-grip Understanding the world: • Use senses in hands-on exploration of natural materials. • Talk about what is seen, using a wide vocabulary. Personal, Social and Emotional Development: • Select and use activities and resources, with help when needed • Show a sense of autonomy through asserting ideas and preferences, making choices and decisions.	• Manipulate a range of tools and equipment in one hand, tools include paintbrushes, scissors, hairbrushes, toothbrush, scarves or ribbons. • Use simple tools to effect changes to materials. • Handle tools, objects, construction and malleable materials safely and with increasing control and intention. • Show a preference for a dominant hand. Personal, Social and Emotional Development: • Show confidence in choosing resources and perseverance in carrying out a chosen activity
Core and essential vocabulary: Colour, texture, shape, portraits, mark-making, drawing, painting, models, materials, media, tools, imagination, expression, image	
ELG: Fine Motor Skills Children at the expected level of development will: • Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. • Use a range of small tools, including scissors, paint brushes and cutlery. • Begin to show accuracy and care when drawing Expressive Arts and Design ELG: Creating with Materials Children at the expected level of development will: • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. • Make use of props and materials when role playing characters in narratives and stories. ELG: Being Imaginative and Expressive Children at the expected level of development will: • Invent, adapt and recount narratives and stories with peers and their teacher. • Sing a range of well-known nursery rhymes and songs. • Perform songs, rhymes, poems	

Computing

The 3 Pillars of Computing:

- computer science; the fundamentals of computing, how computers work and how to use them creatively, coding, problem solving and digital literacy
- information technology; how to use technology effectively, responsibly, and safely. How to create, organize, and manipulate digital content, understanding the principles of computing and developing digital citizenship
- digital literacy: how to use digital technologies safely, effectively, navigating the internet, finding and evaluating information, communicating online, and creating digital content.

KNOWLEDGE (Know...)

	YR	Y1	Y2	Y3	Y4	Y5	Y6
Programming	-how to give basic instructions -that there are consequences to every action	-that a programmable robot can be controlled by inputting a sequence of instructions -that a robot can be programmed, using an algorithm -programmes can be debugged	-what a Sprite is and how to programme them to move -what input and output means and how it is used in Scratch	-how to create an algorithm for a specific purpose, building on Y2 -to confidently de-bug a computer programme	-what variables are and how they can be used	-what sequence, selection, variables and repetition mean in programming and how to use them	-how to apply all that has been learnt to programme a game
Computational thinking	-how to play games and stick to the rules -how to predict what might happen when playing games		-how to use games safely and in balance with other activities -use strategies to play a game well -how to use reasoning, critical thinking and make predictions	-how to use Scratch to make something happen -about the different types of bugs in software	-and develop a deeper understanding of Scratch to link a sequence of events -how to de-bug in more challenging contexts	-about semaphore and Morse code - and understand the need for private information to be encrypted appreciate the need to use complex passwords and to keep them secure -about how encryption works on the Internet	-use and apply all that has been learnt to develop a game with more independence and confidence -how to de-bug with a more complex programme
Creativity	-how to explore age-appropriate technology (iPads) through planned and purposeful play	-how to use a mouse to create digital artwork	-how an iPad can be used to take digital photos and how to edit them	-how a deepening knowledge of web-based research skills can be used -about the importance of preparing talks and providing	-how technology can be used to create music -how to edit, refine, improve -how to evaluate and provide feedback for others and act upon what has been received	-what an architect, engineer and designer does -and develop a deeper aesthetic awareness	-how to convey messages about the importance of e-safety for younger children in an accessible way

				constructive feedback to others -to create a video	-how to use data to inform a news report		
Computer networks	-that the internet is a tool that can be used to find things out with adult guidance	-how to collaborate and communicate effectively as part of a team/group -to use a search engine -how to plan and present effectively to an audience	-to use the internet to carry out research in a particular area -how to receive and send email with an attachment safely	-how messages and information is sent on the internet/what a server does	-what HTML is and how to create a webpage	-the name and function of components making up the school's network -how information is passed between the components that make up the Internet -what the source code for a web page looks like, and how it can be edited -how a website can be structured -how to add content to a series of web pages	-to create a more comprehensive set of webpages with hyperlinks to video clips and animations etc with more confidence and independence
Communication and collaboration	-to talk about their learning to friends and the class -play and collaborate with peers, taking turns and giving and receiving instructions	-how to combine images and text	-that emails can be used to communicate information with people	-to prepare and present a video to an audience and create different effects	-to prepare and present a weather forecast video using the data that has been collected	-how to plan a non-linear presentation -how to create text as part of a presentation -how to add and edit images in a presentation -how to use hyperlinks for navigation between the slides of a presentation	-prepare and deliver a range of presentations to different audiences in collaboration with others making full use of technology with confidence and independence

						-how to record and add audio narration to a presentation -how to use commenting tools to give feedback on a presentation	
Productivity	-to gather information and carry out a simple survey with adult support -to communicate what they have found out	-how to collect and record simple data in order to answer a specific question or make a decision	-Why and how we sort and classify a group of items by answering questions -how data can be collected using tick charts or tally charts -how to take, edit and enhance photographs -how to use Google Sheets or Microsoft Excel to produce basic charts -how to record information on a digital map -how to summarise and present	-about some elements of survey design -about some ethical and legal aspects of online data collection -how to use the internet to facilitate data collection -how to use charts to analyse data -how to interpret results	-how we measure the weather; both analogue and digital -how computer-based data logging can be used to automate the recording of some weather data -how to use spreadsheets to create charts -how to analyse data, explore inconsistencies in data and make predictions		-how to set up and use a spreadsheet to gather information -how to set up a Google doc. -what a shared drive is
SKILLS (be able to...):							
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Programming	-input commands using a mouse to control a cursor and use the left click to select options OR use finger control to interact with a tablet (double tap, swipe)	-develop and record sequences of instructions as an algorithm -program a robot to follow an algorithm -debug a program	- plan a sequence of instructions to move sprites in ScratchJr - create, test and debug programs for sprites in ScratchJr	-plan and create an algorithm for animated scene in the form of a storyboard -write a program in Scratch to create the animation,	-develop an educational computer game using selection and repetition -use variables -Start to debug computer programs	-create original artwork and sound for a game -design and create a computer program for a computer game, which uses	-apply all skills that have been learnt to programme a game

	-input commands using the space bar, backspace, enter, letters and numbers on a keyboard on any device (including on a tablet).	-predict how a program will work	-use repetition in programs -design costumes for sprites	including characters, dialogue, costumes, backdrops and sound. -Review animation programs and correct mistakes	-Recognise the importance of user interface design, including consideration of input and output	sequence, selection, repetition, and variables -detect and correct errors in a computer game -use iterative development techniques (making and testing a series of small changes) to improve a game	
Computational thinking	-operate simple software and hardware, such as drawing programs or interactive whiteboards, developing basic mouse and keyboard skills		-observe and describe carefully what happens in computer games -use logical reasoning to make predictions of what a program will do and test these predictions -think critically about computer games and their use -create sequences of instructions for a virtual robot to solve a problem -work out strategies for playing a game well	-use different strategies for finding errors in programs -be resilient and use strategies for problem solving -recognise a number of common types of bug in software	-link a sequence of events in Scratch -de-bug in more challenging contexts	-encrypt and decrypt messages in simple ciphers	-use and apply all skills that have been learnt to develop a game with more independence and confidence -de-bug a more complex programme
Creativity	-explore technology through play-based activities and resources such as Bee-bots,	-use a mouse to create art	-use an iPad camera app. to take digital photographs	-structure, prepare and deliver a talk about a given topic or subtopic studied	-create a repeating percussion rhythm -play music using virtual instruments	-use a simple CAD (computer-aided design) tool	-convey messages about the importance of e-safety for

	coding critters, or simple apps.		- review, reject or pick images -edit and enhance photographs	in another curriculum area - record a piece to camera -edit a movie using static images and green screen footage -give constructive, critical feedback on recorded presentations	-compose or edit tunes using the piano roll (pitch and duration) tool -perform electronic music using pre-recorded loops, and create their own loops -create a multi-track composition or performance using multiple instruments -give feedback to others on their compositions and performances	-explore and experiment with a 3-D virtual environment	younger children in an accessible, age-appropriate way
Computer networks	-use the internet with adult supervision to find and retrieve information of interest -manage a device by correctly closing websites or apps and safely turning on and off -operate simple equipment	-collaborate and work as a team/group -develop research skills through searching for information on the Internet - evaluate online information -note-take/use mind mapping -present a short multimedia presentation	-use the internet to carry out research in a particular area -receive and send email with an attachment safely	-talk about how messages and information is sent on the internet/what a server does	-talk about what HTML is and how to create a webpage	-add content to a web page	-create a more comprehensive set of webpages with hyperlinks to video clips and animations etc with more confidence and independence
Communication and collaboration	-explore various forms of information, including pictures, videos, text, and sound.	-to combine images and text -structure a story -share a story	-use emails to communicate information with people	-prepare and present a video to an audience and create different effects	-prepare and present a weather forecast video using the data that has been collected	-plan a non-linear presentation -create text as part of a presentation -add and edit images in a presentation	-prepare and deliver a range of presentations to different audiences in collaboration with others making full use of

						-use hyperlinks for navigation between the slides of a presentation - record and add audio narration to a presentation -use commenting tools to give feedback on a presentation	technology with confidence and independence
Productivity	-to gather information and carry out a simple survey with adult support -to communicate what they have found out	-sort and classify a group of items by answering questions -collect data using tick charts or tally charts -take, edit and enhance photographs -use Google Sheets or Microsoft Excel to produce basic charts -record information on a digital map -summarise what has been learned in a presentation	- sort and classify a group of items by answering questions -collect data using tick charts or tally charts -take, edit and enhance photographs -use Google Sheets or Microsoft Excel to produce basic charts -record information on a digital map -summarise and present	-use the internet to facilitate data collection -Use charts to analyse data - interpret results	-use computer-based data logging to automate the recording of some weather data -use spreadsheets to create charts - analyse data, explore inconsistencies in data and make predictions -practise using presentation and video software		- set up and use a spreadsheet to gather information -set up a Google doc. -use a shared drive is
KEY CONCEPTS/GOLDEN THREADS:							
E-safety:		The computing curriculum has been carefully sequenced to ensure that pupils learn how to keep themselves safe online. They revisit and embed this knowledge, age-appropriately, during their time at the school, in their computing lessons but also as part of the whole-school curriculum.					
Computational thinking:		Each unit of learning has been planned to allow pupils to experience, develop and embed pupils' knowledge and skills in: logic and logical thinking, algorithms and algorithmic thinking, patterns and pattern recognition, abstraction and generalisation, evaluation and automation.					

Computing in a diverse world:	The computing curriculum has been designed to ensure that, in every unit, pupils deepen their knowledge and understanding of how what they have learnt can contribute positively to our technologically diverse and changing world.
Contexts:	The curriculum has been planned to provide pupils with opportunities to experience both new and repeated encounters and build on prior learning. In this way they deepen their schemata of context and apply what they have learnt in different ways.

Design Technology

	EYs	Y1	Y2	Y3	Y4	Y5	Y6
THEMES:	AUTUMN: Me, Myself and I SPRING: My World SUMMER: Changes PRODUCTS: a range of models demonstrating different joining and strengthening techniques	AUTUMN: How do simple moving mechanisms work? (mechanisms; levers and sliders) PRODUCT: a Winter picture with a slider and lever SPRING: How do we make a 3D structure? Freestanding structures PRODUCT: a photo frame SUMMER: How do we make fruit salad? (food, differences between fruit and vegetables) PRODUCT: fruit salad	AUTUMN: How can I make a Christmas biscuit to sell? (food, following a recipe, precise measuring) PRODUCT: christmas biscuits SPRING: How can fabrics be joined together to create a hand puppet? (textiles, using a template, running stitch in pre-punched felt, plastic needle) PRODUCT: puppet SUMMER: How do wheels and axles make a vehicle move (mechanisms; wheels and axles, nets) PRODUCT: simple moving vehicle	AUTUMN: How can you make a healthy sandwich? (food) How can I make a package for my sandwich? (construction) PRODUCT: a sandwich in a sandwich box SPRING: How can I make a model light up? (mechanisms, electricity) PRODUCT: 'Light up' Alien Space Ship SUMMER: How do gears and pulleys work? PRODUCT: model with gears and a pulley	AUTUMN: How can I make an attractive money holder? (textiles, no template, more complex stitches, metal needles) PRODUCT: fabric money holder SPRING: How can air produce movement? (pneumatics) PRODUCT: model with a part that moves with pneumatics SUMMER: How can I make a pizza for a particular person? (food; cutting, slicing, grating, chopping, make a tomato sauce) PRODUCT: pizza with home made tomato sauce	AUTUMN: What does bread look like around the world? (make bread rolls, link to harvest) PRODUCT: bread rolls SPRING: How does a cam mechanism make a toy move? (cams) PRODUCT: simple toy with a moving part created by a cam SUMMER: How can I design a picnic shelter (structures, designing for a purpose) PRODUCT: picnic shelter	AUTUMN: How can I make a hat to a specific design brief? (textiles, adding embellishments) PRODUCT: hat SPRING: How can I make a vehicle move with electricity? (building on Y4, more complex circuits and switches, using IT) PRODUCT: moving vehicle? SUMMER: Planning a two course meal for a family member, within a budget to include shopping (food) PRODUCT: 2 course meal

KNOWLEDGE:

DOMAIN:	EYs	Y1	Y2	Y3	Y4	Y5	Y6
TECHNICAL KNOWLEDGE construction-strengthening, stiffening and reinforcing structures	-how to make simple constructions in junk modelling by joining materials together using Sellotape, masking tape and glue -how to make constructions created in junk modelling stronger by adding and sticking together extra pieces or using different materials	-Basic strengthening techniques (folding, wider bases) and simple joins.		-How to use a net to make a shell structure		-How to make a strong structure using knowledge of forces.	
TECHNICAL KNOWLEDGE-sewing and textiles	- How to thread large beads, lacing cards, and weaving. -How to use simple tools with support (child-safe needles, large-hole fabrics). -Create simple textile collages by layering and attaching materials.		-How to use a template -How to use a running stitch to join two pieces of felt together -How to sew through pre-cut holes with a plastic needle		- How to use different types of stitching eg blanket stitch using a metal needle -how to measure out and cut fabric without a template -how to add a zip, buttons, velcro or press studs		-Understand how products are designed for specific users and functions -how to measure and cut out fabric on a larger scale -How to add embellishments
TECHNICAL KNOWLEDGE-mechanics + electrical systems	-How to recognise and safely use basic tools, like scissors and glue spreaders -To know how to use different electrical objects	-Know how to make simple mechanisms. e.g. sliders and levers -Understand how these create movement	-Know how wheels and axles work in everyday objects and vehicles	-Understand the function of simple electrical components (bulbs, batteries) -Know how simple circuits work -know how gears and pulleys work	-Know how a simple pneumatic mechanism works and how movement is created	-Know how cams work and how different cams create different movements	-Understand how to integrate mechanical and electrical systems -Know how to use computing to monitor or control systems
TECHNICAL KNOWLEDGE-Food and nutrition	- Know that food comes from plants and animals.	-Know that food comes from plants and animals	-Know about the importance of a balanced diet	-Understand food groups and healthy eating	-Know about seasonality and where food comes from.	-Know the principles of a varied and balanced diet	-Know how to plan a meal within a budget

	- Know basic food types (fruit, vegetables, bread, dairy). - Understanding simple hygiene: washing hands before cooking/eating.	-Identify healthy and unhealthy foods -know the names of different fruits -Recognise the need for hygiene in food preparation -Know how to peel, chop and slice	-Recognise the need for hygiene in food preparation -Know what a biscuit is and the different types available -know how to follow a recipe -know how to measure and weigh ingredients -know basic techniques for making biscuits	-Recognise the need for hygiene in food preparation -Know about kitchen tools and their functions, e.g. graters, peelers -know what a sandwich is and the different types available -know how to make a sandwich by buttering and cutting the bread, adding fillings etc	-Recognise the need for hygiene in food preparation -know how to design a pizza for a particular person -know how to make a tomato sauce from scratch and how the cooking process works (stove-top and baking) -know how to grate, chop, slice and prepare a range of ingredients	-Recognise the need for hygiene in food preparation -know how bread is made and the journey from wheat growing in the field to the final product -know about the different types of bread available and what they taste like -know how to make bread by proving and kneading -understand what proving is and the science behind it	-know how to go to the shops and buy food for a meal -Know how to prepare and cook a two-course meal for a particular person drawing upon all the knowledge gained during their time at the school
SKILLS:							
	EYs	Y1	Y2	Y3	Y4	Y5	Y6
DESIGNING	-talk with adults about ideas for models and drawings -talk about ideas for purposeful and functional products and models for themselves and other users -generate, develop, model and communicate their ideas through drawings	-design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, drawings, templates, and, where appropriate, information and communication technology -	-design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, more detailed drawings, templates, and, where appropriate, information and communication technology	-design a more complex purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, more detailed drawings, templates, where appropriate, information and communication technology -use a net	-design a more complex purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, more detailed and labelled drawings, templates, mock-ups, and, where appropriate, information and communication technology	-use pre-prepared resources to research and develop design criteria to inform the design of functional and appealing products that are fit for purpose/aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams. Mock-ups and pattern pieces	-use research to compare and contrast different products and models and develop more detailed design criteria to inform the design of more innovative, functional, appealing products that are fit for purpose/aimed at particular individuals or groups - generate, develop, model and PRESENT their ideas through discussion, more detailed annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
MAKING-sewing and textiles	- Explore joining materials using simple methods (tape, glue, staples). -Experiment with threading large		-Use simple joining stitches (running stitch, over stitch) with guidance. - Join two pieces of fabric using simple sewing techniques.		-Use a wider range of stitches (running stitch, whip stitch, blanket stitch introduction). -Strengthen textiles using interfacing, layered fabrics, or reinforced seams.		-Use a full range of stitching techniques accurately (running, whip, blanket, backstitch).

	beads, lacing cards, and weaving. -Use simple tools with support (child-safe needles, large-hole fabrics). -Create simple textile collages by layering and attaching materials.		- Use basic tools safely (scissors, plastic needles, fabric crayons). -Add simple enhancements (felt shapes, buttons, glued decorations).		- Accurately cut, pin, and join fabric. -Add a fastener (buttons, Velcro, zip, poppers). -Begin simple pattern drafting (drawing around templates, planning seam allowance).		- Produce high-quality textile products with refined finishes. -Create prototypes and refine them based on user needs. -Apply structural reinforcement (seams, interfacing, layered textiles) to improve durability. -Independently plan, create, evaluate, and improve sewing projects.
MAKING-construction	Early Learning Goals / Exploring Materials -Explore and use a variety of construction materials (blocks, recycled items, natural materials). -Experiment with stacking, balancing, and joining materials in simple ways. -Begin to notice why some structures fall down and others stay up. -Use simple tools (child-safe scissors, tape) with guidance.	-Build structures -Use basic strengthening techniques (folding, wider bases) and simple joins -Identify simple structures (walls, towers, bridges). -begin to use simple joining methods: glue, tape, split pins.			-Apply knowledge of Structures More Independently - Use a wider range of materials: wood, dowel, corrugated card. - Measure, cut and join more accurately to improve structural strength. - Evaluate how reinforcements (gussets, cross-bracing) improve stability.		
MAKING-cooking	-Use simple tools safely (spoons, plastic knives, cutters) with adult support. Participate in simple food preparation tasks such as assembling, mixing, or spreading. -Begin to talk about healthy and unhealthy foods.	-Wash hands and clean surfaces before preparing food. -Safely use simple tools such as peelers and butter knives with support. -Prepare basic cold dishes (fruit salads, sandwiches). -Follow simple sequencing in recipes (first, next, last).	- Follow more detailed recipes with support. -Use a wider range of utensils with increasing accuracy. -Chop, mix, and assemble ingredients. -Prepare simple dishes while considering taste, texture, and appearance. - Begin to understand how cooking changes ingredients.	-Use heat sources safely under supervision (boiling, baking, grilling). -Combine ingredients using basic cooking techniques. - Measure ingredients using standard units.	-mix and combine ingredients with accuracy. - Prepare and cook savoury dishes using a range of techniques. -Work with seasonal ingredients where appropriate. -Adapt dishes based on dietary needs.	- Independently select appropriate tools and equipment. -Apply more advanced cooking skills (dough kneading and shaping). -Read and interpret nutritional information. -make bread	-Plan and cook a balanced meal with multiple components. -Modify recipes for flavour, nutrition, or dietary requirements. -Use a full range of kitchen tools confidently and safely. - Evaluate dishes and suggest improvements.

mechanics + electrical systems	- Build simple models using construction kits (e.g., Lego, wooden blocks). - Explore simple sliding and rotating mechanisms through play. -Experiment with cause-and-effect actions (push a car, turn a wheel). -Join materials with tape, glue, and simple connectors.	-Create simple moving pictures using sliders and levers. -Assemble simple models that move using basic joins. -Use tools more independently (hole punch, split pins, scissors). -Follow simple instructions to make a mechanism work.	-Build and test simple wheel-and-axle vehicles. -Create mechanisms that move in a controlled way (rotating parts, sliders). -Improve precision when joining parts using split pins, clips, or tabs. -Evaluate a mechanism based on how effectively it moves.	-Build simple lever and linkage systems to create movement. -Construct basic circuits to power bulbs or buzzers. -Create models that integrate movement and simple electrical components. -Use tools with accuracy (saws for wood, screwdrivers, snips).	-Construct pneumatic systems using syringes and tubing. -create different types of movement using pneumatics -Combine electrical and mechanical systems to create movement. -Measure, cut, and join materials with increased precision.	-Build working cam mechanisms to produce different motions. -Experiment with motor-driven mechanisms. -Design prototypes incorporating cams, levers, gears, or pulleys. -Test and refine mechanical movements for smooth operation.	-Integrate motors, sensors, or switches into models. -Use coding or control software to operate mechanical systems. -Build complex mechanisms incorporating gears, pulleys, or cams. -Create functional products with moving parts and electronic control. -Independently design, refine, and evaluate technical systems.
EVALUATING	-talk about what works well in models and designs -talk about how work and designs could be improved	-talk in more detail about what works well in models and designs -talk about how work and designs could be improved	-talk about how effective final products are and how they could be improved -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria	-talk in more detail about how effective final products are and how they could be improved -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria	-investigate and analyse a range of existing products -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	-investigate and analyse in more detail a range of existing products -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	-investigate and analyse in detail a range of existing products/compare and contrast -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -understand and talk about how key events and individuals in design and technology have helped shape the world
CONCEPTS:							
The importance of designing and making for a purpose	Making a range of items and models for different purposes	Creating a puppet for a purpose	Cooking as a means of showing appreciation	Advertising; how to create appealing products, appreciating the concept of competition	Money holders for a purpose	Shelters for a purpose	Creating meals as a sign of appreciation for another
Sustainability and diversity	Know that some foods are grown in	Appreciating seasonality	Fair trade-sugar and how this is harvested and	Know about packaging and the impact of plastics on	Know about the origins of food and ingredients	Know about bread from around the world	Where food comes from; link to work in History on

	the UK but others come from overseas	Learning about where our food comes from, the impact of this on the environment	transported around the world Links to learning about Christmas	the environment, links to recycling	Know about how food is produced	Appreciating the cultural diversity of bread Links to work on Harvest	rationing in WW2 and Fair Trade Budgeting
Innovation and creativity	Exploring through play, being imaginative and creative	Creative ideas for puppets Appreciating the history and culture behind puppets, links to theatre	Creative ideas for biscuits	Gears and pulleys, lighting-creative and innovative design choices	Create ideas for money holders	Creative uses of mechanisms such as cams Creativity in breadmaking	Links to work on WW2 and how people had to be creative. Innovative and creative ideas for hats, the world and business of fashion

French

KNOWLEDGE:							
	Early Years	Y1	Y2	Y3	Y4	Y5	Y6
KNOWLEDGE-cross-curricular	N/A	N/A	N/A	What life was like in Ancient Briton (children say where who they are/where they live/what hunting tool they use as a Stone, Bronze or Iron age person)	What life was like as a Roman child (children write as if a rich/poor child in Roman times)	What café culture is like (children perform a role play)	What life was like as an evacuee (children write a letter in French)
KNOWLEDGE-cultural	N/A	N/A	N/A	Ancient Briton times including dwellings and hunting tools Identifying France on a map and other francophone countries	Life in Roman times including gods/goddesses and compare rich/poor people Places and weather in France	French currency Café culture and typical food and drink	Life as a child during WW2 including evacuation
SKILLS:							
	Early Years	Y1	Y2	Y3	Y4	Y5	Y6
LISTENING	-appreciate and actively participate in traditional short stories and fairy tales	-appreciate short stories and fairy tales and start to understand some of the familiar words	-appreciate short stories and fairy tales and start to understand more familiar words and respond to them with an action	-Listen and enjoy stories, nursery rhymes -recognise familiar words and short phrases	-Listen to longer passages and understand more of what is heard by picking out key words and phrases	-Listen more attentively and for longer periods of time -understand more of what we hear even when some of the language might be unfamiliar	-listen to longer texts and more authentic material -learn to pick out cognates and familiar words -learn to 'jist listen'

SPEAKING	-listen to and repeat the words heard with actions and accurate pronunciation	-learn to articulate the key words taught and understand their meaning	-learn to articulate a wider range of words taught and understand their meaning	-communicate with others using simple words and short phrases	-communicate with others with improved confidence and accuracy -learn to ask and answer questions and incorporate a negative reply when required	-communicate on a wider range of topics and themes -remember and recall a range of vocabulary with knowledge, confidence and spontaneity	-learn to recall previously learnt language incorporate it with new language with increased speed and continuity -engage in short conversations on familiar topics
READING -comprehension	-identify initial sounds and written versions of the words taught	-identify the written version of the words taught	-identify a wider range of words taught	-read familiar words and short phrases accurately by applying phonics knowledge -understand the meaning in English of short words	-read aloud short pieces of text applying knowledge from phonics -understand most of what we have read in French when based on familiar	-understand longer passages in French and start to decode meaning of unknown words using cognates and context	-tackle unknown language with increased accuracy by applying phonics knowledge including awareness of accents and silent letters -decode unknown language using bilingual dictionaries
READING - phonics	Introduce and listen to phonemes	Listen and repeat phonemes	Repeat and recognise phonemes	Focus on phonemes - ch,ou,on,oi in phonics lesson 1 (To be trailed for Sep 26)	Phonemes - i,in,iq,ue,ille in phonics lesson 2 (To be trailed for Sep 26)	Phonemes - eau,eux,e,e,e in phonics lesson 3 (To be trailed for Sep 26)	Focus on phonemes -qu,gne,c,en,an in phonics lesson 4 (To be trailed for Sep 26)
WRITING - composition	-copy words taught and consolidate letter formation	-start to reproduce nouns from a model	-start to reproduce nouns and determiners/articles	-write familiar words and short phrases using vocabulary lists	-write some short phrases based on familiar topics and begin to use connectives and conjunctions and the negative form	-write a paragraph using familiar language incorporating connectives and conjunctions, a negative response and adjectival agreement -learn to manipulate the language and be able to substitute words with suitable alternatives eg my name/age/where I live/pet I have/pet I no longer have/pet's name	-write a piece of text using language from a variety of units covered and learn to adapt any models provided to show a solid understanding of grammar covered -incorporate conjugated verbs -comfortably use connectives, conjunctions, adjectives and possessive adjectives
WRITING -grammar	-start to understand that French has a	-build on understanding that French has a	-start to deepen understanding that French has a different	-start to understand the concept of noun	-better understand the concept of gender and	-revision of gender and nouns	-consolidate understanding of gender and nouns, use of the negative, adjectival

	different grammatical structure to English	different grammatical structure to English	grammatical structure to English	gender and the use of articles -use the first person singular version of high frequency verbs eg 'I like,' 'I play,'	which articles to use for meaning -introduce simple adjectival agreement -use the negative form and possessive adjectives	-use and recognise the terminology of articles -understand better the rules of adjectival agreement and possessive adjectives -start to explore full verb conjugation eg 'I wear/he/she wears'	agreement and possessive adjectives -become familiar with a wide range of connectives, conjunctions and more confident with full verb conjugation both regular and irregular eg to go/to do/ to have/to be
WRITING -vocabulary	As listed in unit plans: 'Minibeasts'	As listed in unit plans: 'Under the Sea' (Trial from Sep 2026)	As listed in unit plans: 'In the Jungle'	As listed in unit plans: 'I'm Learning French' 'Animals' 'Fruits' 'Ancient Britain'	As listed in unit plans: Presenting Myself' 'Habitats' 'Weather' 'The Romans'	As listed in unit plans: 'In the Classroom' 'At the Café' 'What is the date?' 'Do you have a pet?'	As listed in unit plans: 'Healthy Lifestyle' 'Alphabet' and spelling bee 'At School' 'World War 2'
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CONCEPTS:	Democracy – linked to British Values – pupils are encouraged to give their own opinion from saying what their favourite subject is, expressing positive and negative opinions as well as listening and respecting others' opinions Rule of law – linked to British Values – rules are different in other countries – also rules exist in lesson time as the children listen to each other						

Geography

KNOWLEDGE (know about...):							
DOMAIN:	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
THEMES	AUTUMN: Me, Myself and I (where I go to school, where I live) SPRING: My World	AUTUMN: What is the geography of where I live? (our school, homes, high street, town) SPRING:	AUTUMN: Where is the UK in the world? (countries of the UK, capital cities of each, 7 continents and 5 oceans) SPRING:	AUTUMN: What more can we learn about our world and why it is so different? (countries and continents, latitude, longitude, equator, hemispheres,	AUTUMN: What are the physical features of the UK? (mountains and hills, rivers and lakes, National parks; in-depth study of one region of the UK) SPRING:	AUTUMN: How do earthquakes affect people? SPRING: Where are the world's biomes and vegetation belts?	AUTUMN: How does the geography of the Amazon compare to the UK? (comparison of UK and non-European) SPRING:

	(route to school, I live in the UK) SUMMER: Changes (seasons)	Where are the hot and cold places in the world and what are they like? SUMMER: What's it like at the seaside? (physical features)	What is the weather like in the UK? SUMMER: Where is Chembolli and what's it like to live there compared to London? (depth study comparison of two small areas: UK and non-European)	Arctic/Antractic circle) SPRING: Where are the world's mountains and how do they affect land use? SUMMER: Where is Iceland and how does this area compare to Hertfordshire? (comparison of UK region and European region)	Why and how does the weather differ around the world? (climate zones, time zones, day and night) SUMMER: What more can we learn about our local area? (Building on KS1; Wheathampstead; travel routes, different types of homes, roads, the community)	SUMMER: What is a river? (including water cycle)	How do volcanoes affect us? SUMMER: Why is fair trade fair? (Trade links, distribution of natural resources, economic activity)
KNOWLEDGE (know that...)							
LOCATIONAL KNOWLEDGE: The Local area (around the school and in Harpenden and St Albans)	-know the name of the school -know what the word 'route' means -know and talk about routes around the school and to school -know the school is in Wheathampstead	-know where home is in relation to the school -use a broader range of directional language, building on what was learnt in YR eg left, right, forwards and backwards -know where the nearest postbox is	-know how to use a local map and Google Earth maps to locate the school and other local features eg the shops -know where the local shops are by taking a walk there. Plot route on maps -know what a compass is and how it works	-know, locate on maps and describe key landmarks and features in the local area and St Albans using 4-figure grid references, symbols and keys -know the eight points of a compass	-know where the local library is by walking there. Plot route on maps and make own -know about the different types of houses and homes and how residential areas compare to commercial/trading areas and key transport routes -through fieldwork, know the key human	-know the names of local rivers -through a local river study, know how to use fieldwork skills to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs and digital technologies	

	-know and use basic directional language eg near, nearer, close, closer, next to, in front of, behind, up and down -know where the school is in relation to some nearby homes	to the school by taking a trip there to post a letter -know how to plot a route on maps	-know the four main compass points N.S, E and W		and physical features of the local area -deepen and consolidate knowledge of road and rail links, the importance of Harpenden and St Albans for easy access to London via train routes, the significance of St Albans historically and how transport and trade developed from this		
LOCATIONAL KNOWLEDGE: The UK (the Location of the UK and places within the UK)	-know that we live in England -know the names of the other countries that make up the UK -know that the capital city of England is London	-consolidate knowledge of the countries that make up the UK and the capital city of each -know how to locate the seaside on maps of the UK -know the names of seas surrounding the UK -know how to plot the route that will be taken when visiting the	-know the names of the 4 countries of the UK, the capital cities and surrounding seas -know how to locate the four countries of the UK, their capital cities and some other major cities, the surrounding seas on maps and in atlases and using positional language/compass points -know that the UK is part of Europe	-know the names of different types of settlements in the UK including hamlet, village, town, city and conurbation -know how to locate these different types of settlements on a UK map -know the names of the UK's major mountains and rivers and locate these on maps	-know the names of the counties and cities of the UK, national parks and key topographical features including hill, mountain, coast and river -know how to locate the counties and cities of the UK, national parks and key topographical features including hill, mountain, coast and river using the 8 points of a compass, 4-figure grid	-know and describe the human and physical features of the UK including coasts, rivers, mountain ranges, counties and cities -locate the human and physical features of the UK including coasts, rivers, mountain ranges, counties and cities using locational/directional language, 8 points of a compass, 6-figure grid references,	

		seaside on a map of the UK	-know that Wheathampstead is in a county called Hertfordshire		references, maps, symbols and keys -know, name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountain ranges and mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time	maps, symbols and keys -know the location/source and end point of a local river -through a local river study, know the key features of a local river	
LOCATIONAL KNOWLEDGE: The World (the location of places within the world, continents, countries, oceans, northern and southern hemispheres)	-know what the terms 'land' and 'sea' mean -know that there are different countries in the world -know what a map is and use them to spot the different countries and seas -know that seas and rivers are	-know and use a world map to find the location of the UK -know what the word 'continent' means and that the UK is part of the continent of Europe -know how to use a map to name and locate the hot and cold parts of the world	-know the name of and locate a non-European country and a small area within it (Chembolli, in India), the continent it is a part of and the surrounding seas		-consolidate knowledge of continents -know the names of and locate on maps, the countries that make up the continent of Europe and their capital city -know the names of and locate the major rivers and mountain ranges of Europe	-consolidate knowledge of the world's major rivers -locate these on maps using the 8-points of a compass, 6-figure grid references, maps, symbols and keys -know the location of the world's earthquake zones and why they happen where they do	-know, name and locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities

	coloured blue on maps and different colours are used for land -know that some parts of the world are hot and others are cold	-know how to locate the North and South Poles and the Equator -know how to locate Antarctica and the Arctic -know and locate the names of the countries and seas in the North and South poles/Arctic circle/Antarctica -know how to locate deserts			-know the key human and physical features of a region in Europe -know about different zones in the world (polar, tropical and temperate) -know about and locate the poles and equator, the tropics of Capricorn and Cancer	-know key facts about a particular area through a focused earthquake area study	-identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)
PLACE KNOWLEDGE (the characteristics and physical and human features of places and how these affect the area)	-know how to make simple comparisons between Harpenden and other places in the world where families come from and in relation to any topical news stories etc	-know where they live and their route to school know that Wheathampstead is near Harpenden and St Albans in Hertfordshire -know about the differences between the UK and the Antarctic	-know how to make comparisons between London and a small non-European country and a place within it (Chembolli) including weather, lifestyles, human and physical geography	- know about and make comparisons between Wheathampstead and a region in Europe including climate, land use, settlements and key physical features		-know about and make comparisons between the River Thames and other rivers. Link to learning about the water cycle -know how the river Thames has led to tourism	-know about and compare the human and physical similarities and differences between the UK and a North/South American country including climate, environmental regions, coasts, seas, rivers, mountains, capital cities, land use etc
HUMAN GEOGRAPHY (settlements and land use)	-know basic vocabulary including village, town, city,	- consolidate knowledge of basic vocabulary including village,	-know and describe key human features, including: city, town, village,	-know about different types of settlement and land use including	-know about the impact of tourism as part of the in-depth	-know why rivers were so important historically for settlers	-know about the different types of settlement and land use, economic

	country, road, house	town city. Extend vocabulary to include house, bungalow, flat, shop, postbox, road, path etc -know that Wheathampstead and the surrounding area, is used by people in different ways eg for shopping, leisure, tourism and commuters -know why the trainline is important -know that there are farms and large green spaces as well as busier areas in Harpenden and St Albans -know about how the land is used by humans at the seaside and how this compares to Harpenden -know about the importance of tourism	factory, farm, house, office, port, harbour and shop	hamlet, village, town, conurbation -know what rural and urban means -know why people settled in the local area historically and how this has changed over time -know about the factors influencing settlement globally -know about how humans have adapted to life in earthquake zones	study of a regional area (National park).	-know about the role of rivers in transport and industry -know about the history of the River Thames and the role it has played in history and over time how this has changed/through industrialisation/development of docks etc -know what imports and exports are	activity including trade links, and the distribution of natural resources including energy, food, minerals and water in contrasting areas -know about the impact of humans on the rainforests of the world -know about fair trade -know about supply chains -know what sustainability means -know what diversity means -know how humans have adapted to different biomes but also how they have tried to change the environment and the impact of this -know about the impact on settlements and land use around volcanoes
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PHYSICAL GEOGRAPHY: (weather and climate)	-know the names of the 4 seasons and associated weather -know how to record the weather daily	-deepen knowledge of the seasons and associated weather	-secure knowledge of the 4 seasons and associated weather; make connections to learning in Science -know what a weather forecast is -know the location of hot and cold areas in the world in relation to the poles and equator -know how the weather in the poles and near the equator areas compares with the weather in the UK	-	-know about the different climate zones of the world (tropical, temperate, polar) -know about and locate the tropics of Cancer and Capricorn and the significance of these in terms of climate -know what global warming is and the causes and consequences of it	-know what a biome is and how climate and vegetation is connected in biomes eg tropical rainforests and deserts -know about how animals and plants have adapted to the biome in which they are located -know and understand why biomes are important -know and understand how some biomes are threatened and why	-know about how the climate of N/S America compares with the UK-Amazon?
PHYSICAL GEOGRAPHY: (Physical features and processes)	-know basic vocabulary including forest, hill, mountain, sea, ocean, river, land, season and weather					-know how earthquakes are formed -know about the impact of earthquakes on people and settlements	-know the location of the world's volcanoes -know how to locate these on a world map and why they occur where they do
FIELDWORK: Local fieldwork	-know how to use observational skills to draw simple plans and routes around their classroom,	-know about the school grounds; where the field is, what this is used for, how this compares with the playground	-know where the local shops are by taking a walk there -know and talk about the human features seen on the journey and how the area is	-know how to use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods,	-know where the local library is by taking a walk there -know and talk about the human features seen on the journey eg residential;	-know how to observe, record, present and explain information about the changing locality using a range of graphs and written media, population	-Know how to use fieldwork skills to observe, measure, record and present the human and physical features in the local area using a range of methods,

	school, and local area. -know how to make simple models of the locality. -know how to take photos of buildings and places in school and locality (e.g. build a scene).	-know the names of some of the trees and collect leaves, make bark rubbings etc -plot and walk routes from the gate to the classroom, round the classroom etc, -know how to use simple fieldwork and observational skills to study the geography of the classroom and local area (e.g. note taking, videoing, taking photos, data collection, sketches, observations, and labelled maps and photos of roads, parks, nature spots, rivers, shops and buildings).	used by humans eg leisure and shopping/trade and industry, note traffic etc	including interviews with locals, annotated sketch maps, plans and graphs, and digital technologies --know how to use 4-figure grid references, symbols and keys when looking at maps of the local area	different types of houses etc. -recall knowledge of trip to the shops in Y2 and compare how the areas are used by humans	data, use of land in the school locality (e.g. classification of buildings into residential, commercial, industry, leisure, public buildings etc), and comparisons with old maps and photographs -know how to use fieldwork to study and present information about a local river as part of a local river study observe the physical processes involved -know how to use fieldwork skills to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs and digital technologies	including sketch maps, plans and graphs, and digital technologies -consolidate knowledge of how to use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied -consolidate knowledge of how to use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world
ELG (UW): Children know about similarities and differences in							

relation to places, objects, materials and living things.							
SKILLS (be able to):							
DOMAIN:	YR	Y1	Y2	Y3	Y4	Y5	Y6
LOCATIONAL: Harpenden and St ALBANS The Local area (around the school and in Harpenden and St Albans)	-say the name of the school -talk about what the word ‘route’ means -talk about routes around the school and to school -say the school is in Wheathampstead -use basic directional language eg near, nearer, close, closer, next to, in front of, behind, up and down -describe where the school is in relation to some nearby homes	-talk about where home is in relation to the school -use a broader range of directional language, building on what was learnt in YR eg left, right, forwards and backwards -talk about where the nearest postbox is to the school having taken a trip there to post a letter -plot a route on maps	-use a local map and Google Earth maps to locate the school and other local features eg the shops -talk about where the local shops having taken a walk there -plot routes on maps -talk about what a compass is and how it works -talk about the four main compass points N.S, E and W -use a compass to identify N, S, E and W	-locate key landmarks and features in the local area and St Albans on maps using 4-figure grid references, symbols and keys -talk about the eight points of a compass -use a compass to identify the eight points -through fieldwork, know the key human and physical features of the local area -deepen and consolidate knowledge of road and rail links, the importance of Harpenden and St Albans for easy access to London via train routes, the significance of St	-talk about where the local library is having taken a walk there. Plot route on maps and make own -know about the different types of houses and homes and how residential areas compare to commercial/trading areas and key transport routes	-know the names of local rivers -through a local river study, know how to use fieldwork skills to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs and digital technologies	

				Albans historically and how transport and trade developed from this			
LOCATIONAL: The UK (the Location of the UK and places within the UK)	-talk about where we live -name the other countries that make up the UK -name London as the capital city of England	-name the countries that make up the UK and the capital city of each -locate the seaside on maps of the UK -name the seas surrounding the UK -plot the route that will be taken when visiting the seaside on a map of the UK	- name the 4 countries of the UK, the capital cities and surrounding seas -locate the four countries of the UK, their capital cities and some other major cities, the surrounding seas on maps and in atlases and using positional language/compass points -name Europe as continent that the UK is a part of -name Hertfordshire as the county that Wheathampstead is a part of	-name the different types of settlements in the UK including hamlet, village, town, city and conurbation -locate these different types of settlements on a UK map -names of the UK's major mountains and rivers and locate these on maps	-name the counties and cities of the UK, national parks and key topographical features including hill, mountain, coast and river -locate the counties and cities of the UK, national parks and key topographical features including hill, mountain, coast and river using the 8 points of a compass, 4-figure grid references, maps, symbols and keys	-describe the human and physical features of the UK including coasts, rivers, mountain ranges, counties and cities -locate the human and physical features of the UK including coasts, rivers, mountain ranges, counties and cities using locational/directional language, 8 points of a compass, 6-figure grid references, maps, symbols and keys -describe the location/source and end point of a local river -name the key features of a local river	-name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountain ranges and mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time
LOCATIONAL : The World (the location of places within the	-use the terms 'land' and 'sea' -talk about some different	-use a world map to find the location of the UK -use the word 'continent' and	-locate a non-European country,(Chembolli) the continent it is	-describe the location of the world's mountains -locate these on a world map and why	-name the continents -names and locate on maps, the countries that make up the	-name the world's major rivers -locate these on maps using the 8-points of a	-name and locate the world's countries, using maps to focus on Europe (including the location of

world, continents, countries, oceans, northern and southern hemispheres)	countries in the world -use maps them to identify the different countries and seas and hot and cold parts of the world by looking at the colours	describe how the UK is part of the continent of Europe -use a map to name and locate the hot and cold parts of the world -locate the North and South Poles and the Equator -locate Antarctica and the Arctic -know and locate the names of the countries and seas in the North and South poles/Arctic circle/Antarctica	a part of and the surrounding seas -talk about how this area compares with Harpenden, St Albans and Wheathampstead.	they occur where they do	continent of Europe and their capital city -names and locate the major rivers and mountain ranges of Europe -describe the key human and physical features of a region in Europe -name and describe the different zones in the world (polar, tropical and temperate) -locate the poles and equator, the tropics of Capricorn and Cancer	compass, 6-figure grid references, maps, symbols and keys -describe the location of the world's earthquake zones and why they happen where they do -recall key facts about a particular area through a focused earthquake area study	Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities -identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)
PLACE: (the characteristics and physical and human features of places and how these affect the area)	-make simple comparisons between Harpenden and other places in the world where families come from and in relation to any topical news stories etc	-describe the differences between the UK and the Antarctic	-make comparisons between Wheathampstead and Chembolli including weather, lifestyles, human and physical geography	-make comparisons and talk about the characteristics of countries and locations on or near the equator, in the polar regions, in the Alps	-make comparisons and describe the physical and human features of the UK	-make comparisons between the River Thames and other rivers in the world	-compare the human and physical similarities and differences between the UK and a North/South American country including climate, environmental regions, coasts, seas, rivers, mountains,

							capital cities, land use etc
HUMAN GEOGRAPHY (settlements and land use)	-use vocabulary including village, town, city, country, capital, road, house	-use a broader range of vocabulary including village, town city. Extend vocabulary to include house, bungalow, flat, shop, postbox, road, path etc -describe how Harpenden and the surrounding area, is used by people in different ways eg for shopping, leisure, tourism and commuters -talk about why the trainline is important -talk about the different types of land use in the local area -talk about how the land is used by humans at the seaside and how this compares to Harpenden	-describe key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop	-talk about different types of settlement and land use including hamlet, village, town, conurbation -talk about what rural and urban means -talk about why people settled in the local area historically and how this has changed over time -describe the factors influencing settlement globally -talk about how humans have adapted to life in earthquake zones	-describe the features of Wheathampstead -describe how tourism has affected settlement as part of the in-depth study of a UK National Park	-describe and explain why rivers were so important historically for settlers -describe and explain the role of rivers in transport and industry -talk about the history of the River Thames and the role it has played in history and over time how this has changed/through industrialisation/development of docks etc -describe what imports and exports are	-describe and explain the different types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water in contrasting areas -talk about the impact of humans on the rainforests of the world -explain the concept of fair trade -describe what supply chains are -explain the concept of sustainability and how this relates to our daily lives and practices -explain the concept and importance of diversity; give examples of this in the world -describe and explain how humans have adapted to different

		-talk about why tourism is important					biomes but also how they have tried to change the environment and the impact of this -describe the impact on settlements and land use around volcanoes
PHYSICAL GEOGRAPHY (Physical features and processes)	-use basic vocabulary including forest, hill, mountain, sea, ocean, river, land, season and weather	-confidently use basic vocabulary from YR and also beach, cliff, coast, seaside	-describe key physical features including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather		-describe and explain the key physical features of Europe and the UK including coasts, rivers, mountain ranges, mountains, lakes, regions etc	-describe and explain the water cycle -describe and explain how rivers are formed -describe and explain the different stages of a river system and how these are created -describe and explain physical geography including: climate zones, biomes and vegetation belts, rivers, -describe and explain now the causes of earthquakes and tsunamis -describe and explain the different types of earthquakes and the physical and human effects they have	-describe and explain physical geography including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle

						-describe a particular earthquake through a focused earthquake study	
Local fieldwork	-use observational skills to draw simple plans and routes around their classroom, school, and local area -Make simple models of the locality. -Take photos of buildings and places in school and locality (e.g. build a scene).	-talk about and compare the different environments in the school eg the playground/field -identify some of the trees and collect leaves, make bark rubbings etc -plot and walk routes from the gate to the classroom, round the classroom etc, -use simple fieldwork and observational skills to study the geography of the classroom and local area (e.g. note taking, videoing, taking photos, data collection, sketches, observations, and	-talk about the human features seen on the journey and how the area is used by humans eg leisure and shopping/trade and industry, note traffic etc	-observe, measure, record and present the human and physical features in the local area using a range of methods, including interviews with locals, annotated sketch maps, plans and graphs, and digital technologies.	-know where the local library is by taking a walk there -know and talk about the human features seen on the journey eg residential; different types of houses etc.	-observe, record, present and explain information about the changing locality using a range of graphs and written media, including interviews with locals, population data, use of land in the school locality (e.g. classification of buildings into residential, commercial, industry, leisure, public buildings etc), and comparisons with old maps and photographs. Use fieldwork to study and present information about a local river; create a working river and observe the physical processes involved	-use fieldwork skills to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies -confidently use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied -consolidate knowledge of how to use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the

		labelled maps and photos of roads, parks, nature spots, rivers, shops and buildings).					United Kingdom and the wider world
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ELG (UW): Children talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes

Key Concepts and golden threads:

At Beech Hyde School, we want our pupils, through the Geography curriculum, we want our pupils to be:

- curious about the world; to ask questions about their locality, the wider world and global issues
- confident communicators; able to talk about what they have found out about their locality and the wider world and discuss and debate local and global issues
- critical thinkers; able to analyse, evaluate and summarise sources of evidence and data and form their own conclusions

We want our pupils, through the Geography curriculum and over time, to develop a deep understanding of:

- their place in the world and the role they can play in it
- sustainability
- real world, global issues and the causes and consequences of these
- diversity and the richness of life on earth

Experiences:

YR

Walk around the school, indoors and out

Y1	Walk to the local shops. Walk to the nearest postbox to post a letter
Y2	Walk to the Library
Y3	Link to work on sandwiches in DT
Y4	Link to trip to Nonna's to see pizza being made/make pizza in DT
Y5	Local river study
Y6	Residential

History

Domain	N (UW)	YR (UW)	Y1	Y2	Y3	Y4	Y5	Y6
EYFS: Understanding of the World	Autumn Term All about me: My family and I	Autumn Term All about me: Who I know and what they do.	Autumn Term Changes in my Lifetime	Autumn Term Changes over time - Alexander Bell	Autumn Term Stone Age to the Bronze Age	Autumn Term Significant individuals and events in Wheathampstead's History.	Autumn Term Life in Ancient Greece	Autumn Term Viking Britain
KS1 History Units	Spring Term Where I belong: My Nursery environment	Spring Term Where I belong: Where I live; home and local area.	Spring Term Changes over time (Toys)	Significant event 'Remembrance Day'	Spring Term Bronze Age, Iron Age and Celts		Spring Term Significant event: Trojan Horse - fact, legend or myth	Spring Term Mayan Empire
KS2 History Units	Summer Term Changes over time. How have I changed?	Summer Term Where have I come from and where am I going? (Baby - child - teen - adult). Changes over time: How does the world change around me?	Summer Term Significant individuals and events. Neil Armstrong *What memories have I made in Year 1? (log throughout year and revisit EoY)	Spring Term Local History 'Our School' Summer Term Significant Individuals Explorers (Sea, Land and Space)	Summer Term Ancient Egyptians	Spring Term Rise and fall of the Roman Empire Summer Term Roman Empire Legacy	Local history Significant individual: 'Apsley Cherry-Garrard' Summer Term Anglo Saxon Britain	Summer Term Significant event: WW2 - Battle of Britain
KNOWLEDGE								
	-Begin to have a sense of self, and know who is in their immediate family. -Begin to be aware of and learn about the world around them starting with a shared immediate setting and its routines.(CR). - make observations about how they have changed over time.	-Consider the people they know and the role they play. Such as wider family members and important people in their community who care for them. Teacher, TA, Police, Doctor, Nurse, Fireperson etc. - Describe their home and who they live with. Consider similarities and difference with homes.	-know the impact of the work of Gerald Durrell and Mary Anning.	-know the significance of Remembrance Day in more detail -Know the names and key events in the lives of sea, land and space explorers and Alexander Graham Bell	-Know the significance and key features of the Ancient Egyptian civilisation and society -Know the key features of the Iron Age Celtic civilisation -Know the key features of the Stone and Bronze ages	-know some significant local historical events -know the key features of the Roman Empire	-Know some key events and features of the ancient Greek civilisation	-Know some key events and features of the Vikings -Know some key events of the Mayan civilisation

		- Observe changes in weather, nature and seasons and animals. -How the local environment and objects can change over time. - Oracy - 'Then' and 'Now'						
SKILLS								
Chronology	-helping the children understand that things happen in order and that time is linked to their everyday experiences. - There is a "now" and a "next" -routines are a part of our daily lives. <i>Ordering photos of themselves to understand personal growth.</i> <i>Recognizing changes over time, such as growth in plants or animals.</i>	-knowing what comes first, next, and last - beginning to understand past, present, future -talking about events in order <i>"first, then, next, after"</i>	-revisit personal timelines in more detail to include 'big moments' -deepen understanding of chronology by mapping events throughout Year 1	-telephones have changed over time -older telephones were invented before modern mobile phones -communication technology developed within living memory -Remembrance Day happens every year -remembrance relates to events beyond living memory -wars happened in the past and are remembered today -their school has existed for many years -schools change over time -photographs and records can show changes from past to present -explorers lived in different time periods -some explorers lived long ago and some more recently -exploration has happened across history	-build on knowledge of timelines by mapping out the Stone age within different historical periods -introduced to BC/BCE and AC/AD -understand the term 'prehistoric' and what this means	-revisit embed knowledge of chronology placing Romans on timelines and comparing with other historical periods -revisit BC/BCE and AC/AD	-revisit timeline to include Ancient Greek period, compare to other eras	-complete a more complex world timeline to include Mayans and Vikings -confidently use the terms BC/BCE and AC/AD

				-journeys can be ordered from earliest to latest.				
Historical enquiry	-foundational, and play-based. -emerges through curiosity talk, questions which stem from their curiosity. -an exploration of time, people, and change.	-play-based and exploratory - more structured, intentional, and language-rich. - children initiate their own questions. -adult will move them on into deeper thinking. -opportunities for comparing sources old and new. Role play - castle, older home etc.	-use different sources to learn about key individuals (Attenborough, Anning) and the lessons we can learn from them	photographs and artefacts can show how telephones changed over time -historians use evidence to compare the past with today - questions help us investigate how people communicated in the past -memorials, photographs and artefacts help us learn about remembrance -historians use evidence to understand past events -questions help us learn why people remember wars -questions are developed to ask ex-pupils about their experiences in order to learn about the past -local history can be investigated through photographs, objects and interviews -questions help historians learn about the past -people's memories can provide historical information -historians ask questions to learn	-Why the ancient Egyptian civilisation was so important	-use different sources to learn about the rise and fall of the Roman Empire	-use sources to learn how Britain changed under Anglo Saxon rule -Compare Athens and Sparta; similarities and differences, why we have more evidence from Sparta. Summarise and form conclusions	-use sources to identify where and why the Vikings invaded Britain -carry out own research about the Viking invasion of Britain -explore why the Battle of Britain was a turning point

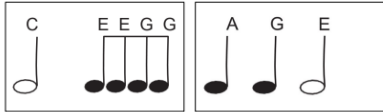
				about explorers -information about explorers comes from sources such as maps, diaries and photographs -sources can help us learn where explorers travelled and why				
Understanding of the past	-Beginning to recognise simple past events using vocabulary e.g., "yesterday," "long ago", "When I was little..." -Talking about events that have happened such as a birthday, holiday, trip, excursion - <i>Looking at photos over time, clothes and toys they had when they were younger.</i> - <i>Measuring/recording their height using objects or a chart.</i> - <i>Handling old items verses new items.</i>	-talk about the lives of the people around them and their roles in society. -in role play where the past is being explored, vocabulary is being used.	-in the context of work on Mary Anning, learn about fossils and what we can learn about the past -make observations and comparisons	-Alexander Graham Bell helped invent the telephone -communication was more difficult before telephones -inventions improve people's daily lives technology changes over time -Remembrance Day honours people who served in wars -poppies are symbols of remembrance people hold ceremonies to remember important events -remembrance encourages respect and reflection -school life in the past was different from today -classrooms, lessons and equipment have changed -some aspects of school life have stayed the same -understand what school was like when it first opened -explorers travelled by land, sea and air	-Explore historical sources to learn about the key features of life in Ancient Egypt	-Explore historical sources to learn about the key features of life in Roman Britain	-Use Sutton Hoo to learn about the Anglo Saxons -use evidence to learn about clothing in ancient Greece	-compare and contrast different civilisations-identify similarities and differences. Make judgements and evaluate -know why Viking ships were designed as they were

				travel in the past was slower and more dangerous -explorers discovered new places and routes -exploration changed people's understanding of the world.				
Interpretation of history	-Sequence events (first, then, after) -Describe differences (old/new, past/now) -Explain ideas in simple ways	-Compare and contrast characters from stories, including figures from the past	-Recognise that the past can be explored through photographs, artefacts, books and people's memories; -Talk about simple similarities and differences between accounts of the past; -Understand that different people may remember events in different ways; -Use simple historical sources to answer questions about the past; -Begin to explain why some people and events are remembered today.	Recognise that we find out about the past from a range of sources. Use simple evidence such as photographs, artefacts, stories and memories to answer questions about the past. Explain why some people and events are remembered today. Understand that people may remember or interpret the past in different ways. Begin to compare different accounts or sources about the same person, event or place.	-Understand what we can learn about the past from looking at sources	-Compare primary and secondary sources of evidence and the validity of them	-Deepen understanding of different historical sources by comparing myths and legends to facts	-Deepen understanding of different historical sources and comment critically on them
CONCEPTS								
Cause and consequence	-begin to understand why things happen eg leaves fall off the trees, we wear hats and coats when it's cold	-begin to understand why people with different jobs do what they do eg firefighter, police officer etc	-recognise that events and changes happen for a reason; -explain simple causes using words such as because, so and therefore; -identify a simple consequence of an event or change; - recognise that inventions, discoveries and	Identify simple reasons why events happened in the past. Explain some consequences of significant events, inventions and actions. Describe how people, places or ways of life changed as a result of past events.	-understand the consequences of status in ancient Egypt -know about the legacy of ancient Egypt	-know and understand the causes of the fall of the Roman empire and the consequences of this	-understand the reasons behind why the ancient Greeks wore what they did	-Understand the reasons why the Vikings invaded Britain

			people's actions can bring about change; -talk about why a person or event was important and what happened as a result.	Recognise that actions and decisions can have short-term and long-term effects. Begin to use language such as because, so, therefore, as a result, and this led to when discussing historical events and changes.				
Continuity and change	-begin to know the different seasons and how the weather etc changes -talking about how they've grown (baby → now) Noticing changes in growth and routines Saying things like: "I'm bigger now"	-understanding that some objects, experiences, settings stay the same (continuity) and some change. -learn about daily routines and how these might change as the year progresses.	Recognise that some things change over time and some things stay the same. Talk about simple similarities and differences between the past and present. Compare aspects of their own lives with those of people in the past. Describe changes within their own lifetime. Use simple language such as before, after, then, now, same, different, change, and stay the same when discussing history.	-compare the school then and now	-know how the Iron age changed Britain -engineering achievements of the ancient Egyptians	-Know about the legacy of the Roman invasion of Britain	-Know about the legacy of the Ancient Greek civilisation and how we see it in life today eg the Elgin marbles	Analyse and explain patterns of continuity and change across different historical periods. Identify what changed and what remained the same within societies, cultures and civilisations. Explain the pace and significance of change over time. Make connections between different periods of history and recognise long-term developments. Use historical vocabulary accurately, including continuity, change, development, legacy, progress, decline, transformation and impact. Evaluate how historical changes continue to influence life in Britain and the wider world today.

Music

KNOWLEDGE (know about...):

	Early Years	Y1/2	Y1/2	Y3	Y4	Y5	Y6
Singing	-nursery rhymes -The ABC song -how to use voices to make different sounds	-old school hip-hop, reggae, blues, baroque, Latin, funk, Bhangra, folk and funk -how to sing notes of different pitches (high and low) -how to rap or say words in rhythm -how to sing 5 songs by heart	-Afropop, South African, rock, reggae, pop and classical -how to use voices to sing a range of simple songs -how songs can tell a story -chorus/Response and answer -how songs have a musical style	-RnB, reggae, pop songs that tell a story, disco and classical -introduction, verse and chorus -know five songs from memory -texture -dynamics -tempo -rhythm -beat -pitch -the names of instruments they have heard in songs -pitch range do-so (A- G) -forte (f) loud and piano (p) soft	-pop music, grime, gospel, classical -know 5 songs from memory -texture -dynamics -tempo -rhythm -pitch -what an octave is (do-do) -crescendo (gradually louder) and decrescendo (gradually quieter) -time signatures (2, 3 and 4 time) -vocal harmony	-rock, Bossa nova and swing, pop ballads, old school hip-hop, Motown and classical -ensemble and performance -phrasing, accurate pitching and style. -three-part rounds, partner song, -verse and chorus	-music inspired by women, classical/neo soul, Bacharach and blues, classical or urban gospel, 70s ballads/pop, m -syncopated rhythms -phrasing, accurate pitching and appropriate style. -three and four-part songs
Composing	-pitch (high and low sounds) -use more than one note when playing instruments -the names of the instruments they are playing	-pulse -rhythm -pitch -rapping -the names of the instruments they are playing	-pulse -rhythm -pitch -how to create rhythms from words, names, favourite food, colours and animals -the names of notes A-G -that composing is like creating a story	-tuned and untuned percussion -on the spot responses -question and answer beginning, middle and end	-legato (smooth) Staccato (detached) -structure -pentatonic phrase -minim, crotchet, crotchet rest, paired quavers -2 – 3 – or 4 beat phrases -major and minor chords -graphic symbols in notation 	-drone -simple groove -beat -fortissimo, pianissimo - mezzo forte, mezzo piano	-8-16 beat melodic phrase -pentatonic scale -notate -G major E minor -ternary
Performing	-how to use voices and a range of materials	-what performing means	-the importance of performing and how to	-tuned percussion -melodic instrument -staff notation -solo	-melody, accompaniment, 2 parts -melodic phrase – pentatonic scale	-tuned percussion -staff notation, stave,	-melody -bass line

	and resources to make different sounds		perform in front of an audience	-trio -quartet -dot notation -question and answer phrase -stepwise melodic phrase -fast (<i>allegro</i>) and slow (<i>adagio</i>)		-how triads are formed -chordal accompaniment	
Notation	-marks can be made in response to music heard and listened to	-that sounds can be graphically represented	-that sounds can be graphically represented -that changes in pitch, length of note and volume can be graphically represented	-stave, lines, spaces, treble clef -crotchets, quavers -one syllable – one note	-minim, crotchet, paired quavers and rests -pitch notation C to G -steady beat, rhythmic score	-semibreve, minim, crotchet, crotchet rest -paired quavers -semiquavers -2/4, 3/4 and 4/4 time -octave -rhythmic phrase	-semibreve -minim -crotchet -quavers -semiquavers -pitch notation -rhythm -notation cards -4 bar phrase

SKILLS (be able to):

	Early Years	Y1/2	Y1/2	Y3	Y4	Y5	Y6
Singing	-sing (20) different nursery rhymes	-sing back -listen and clap back -sing 5 songs by heart	-sing back, listen and clap in response -sing using different pitches -how to rap -start and stop when following a leader	-Sing a widening range of unison songs and in simple two parts of varying styles and structures with a pitch range of do-so tunefully and with expression -perform actions confidently and in time to a range of action songs -move or clap a steady beat with others, changing the speed of the beat as the tempo of the music changes. -perform as a choir in school assemblies	-continue to sing a broad range of unison songs with the range of an octave (do–do) pitching the voice accurately and following directions for getting louder (<i>crescendo</i>) and quieter (<i>decrescendo</i>). -sing rounds and partner songs in different time signatures (2, 3 and 4 time) (e.g. Our Dustbin) and begin to sing repertoire with small and large leaps as well as a simple second part to introduce vocal harmony (e.g. Hear the Wind). -perform a range of songs in school assemblies.	-sing a broad range of songs from an extended repertoire with a sense of ensemble and performance. this should include observing phrasing, accurate pitching and appropriate style. -sing three-part rounds, partner	-sing a broad range of songs, including those that involve syncopated rhythms, as part of a choir, with a sense of ensemble and performance. This should include observing rhythm, phrasing, accurate pitching and

						songs, and songs with a verse and a chorus. -perform a range of songs in school assemblies and in school performance opportunities.	appropriate style. -continue to sing three- and four-part rounds or partner songs, and experiment with positioning singers randomly within the group – i.e. no longer in discrete parts – in order to develop greater listening skills, balance between parts and vocal independence. -Perform a range of songs as a choir in school assemblies, school performance opportunities and to a wider audience.
Composing	-invent a pattern to go with a song using one note	-improvise using notes C-G -different ways of writing down the notes being played in a composition	-improvise using notes A-G -how to write down the notes being used in a composition	-become more skilled in improvising (use voices, tuned and untuned percussion and instruments played in whole-class/group/individual/instrumental teaching), inventing short 'on-the-spot' responses using a limited note-range.	-improvise on a limited range of pitches on the instrument they are learning, making use of musical features including smooth (legato) and detached (staccato). -begin to make compositional decisions about the overall structure of improvisations.	-improvise freely over a drone, developing sense of shape and character, using tuned percussion and	-plan and compose an 8- or 16-beat melodic phrase using the pentatonic scale (e.g. D, E, F, G, A, B and C) and

				-structure musical ideas (e.g. using echo or question and answer phrases) to create music that has a beginning, middle and end. Pupils should compose in response to different stimuli, e.g. stories, verse, images (paintings and photographs) and musical sources -combine known rhythmic notation with letter names to create rising and falling phrases using just three notes (do, re and mi). -compose song accompaniments on untuned percussion using known rhythms and note values.	-combine known rhythmic notation with letter names to create short pentatonic phrases using a limited range of 5 pitches suitable for the instruments being learnt. -sing and play these phrases as self-standing compositions. -arrange individual notation cards of known note values (i.e. minim, crotchet, crotchet rest and paired quavers) to create sequences of 2-, 3- or 4-beat phrases, arranged into bars. -explore developing knowledge of musical components by composing music to create a specific mood, for example creating music to accompany a short film clip. -introduce major and minor chords. -include instruments played in whole-class/group/individual teaching to expand the scope and range of the sound palette available for composition work. -capture and record creative ideas using any of: graphic symbols rhythm notation and time signatures staff notation technology.	melodic instruments. -improvise over a simple groove, responding to the beat, creating a satisfying melodic shape; experiment with using a wider range of dynamics, including very loud (fortissimo), very quiet (pianissimo), moderately loud (mezzo forte), and moderately quiet (mezzo piano). Continue this process in the composition tasks below. -compose melodies made from pairs of phrases in either C major or A minor or a key suitable for the instrument chosen. These melodies can be enhanced with rhythmic or	incorporate rhythmic variety and interest. -play this melody on available tuned percussion and/or orchestral instruments. -notate this melody. -compose melodies made from pairs of phrases in either G major or E minor or a key suitable for the instrument chosen. Either of these melodies can be enhanced with rhythmic or chordal accompaniment . -compose a ternary piece; use available music software/apps to create and record it, discussing how musical contrasts are achieved.
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						chordal accompaniment. -working in pairs, compose a short ternary piece. -Use chords to compose music to evoke a specific atmosphere, mood or environment. -Capture and record creative ideas using any of: graphic symbols, rhythm notation and time signatures, staff notation or technology.	
Performing	-create a pulse when playing instruments -make high and low sounds when playing instruments and creating sounds	-choose a song to perform to others -record a performance and say how they feel about it when looking/listening back	-start and stop when singing and playing instruments and following a leader -choose a song to perform to others -record a performance and say how they feel about it when looking/listening back	-develop playing tuned percussion or a melodic instrument -play and perform melodies following staff notation using a small range (e.g. Middle C–E/do–mi) as a whole class or in small groups (e.g. trios and quartets). -use listening skills to correctly order phrases using dot notation, showing different arrangements of notes C-D-E/do-re-mi (see illustration):	-develop facility in the basic skills of a selected musical instrument over a sustained learning period. -Play and perform melodies following staff notation using a small range (e.g. Middle C–G/do–so) in whole-class/groups -perform in two or more parts (e.g. melody and accompaniment or a duet) from simple notation using instruments played in whole class teaching. Identify static and moving parts. -copy short melodic phrases including those using the pentatonic scale (e.g. C, D, E, G, A).	-play melodies on tuned percussion, melodic instruments or keyboards, following staff notation written on one stave and using notes within the Middle C–C'/do–do range. This should initially be done as a whole class with	-play a melody following staff notation written on one stave and using notes within an octave range (do–do); make decisions about dynamic range, including very loud (ff), very quiet (pp), moderately loud (mf) and moderately quiet (mp).

				-Individually (solo) copy stepwise melodic phrases with accuracy at different speeds; allegro and adagio, fast and slow. -extend to question-and-answer phrases.		greater independence gained each lesson through smaller group performance. -understand how triads are formed, and play them on tuned percussion, melodic instruments or keyboards. Perform simple, chordal accompaniments to familiar songs -perform a range of repertoire pieces and arrangements combining acoustic instruments to form mixed ensembles, including a school orchestra. -develop the skill of playing by ear on tuned instruments, copying longer phrases and familiar melodies.	-accompany this same melody, and others, using block chords or a bass line. This could be done using keyboards, tuned percussion or tablets, or demonstrated at the board using an online keyboard. -Engage with others through ensemble playing (e.g. school orchestra, band, mixed ensemble) with pupils taking on melody or accompaniment roles. The accompaniment, if instrumental, could be chords or a single-note bass line.
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Notation	-create marks in response to the music heard and listened to	-make notes and jottings as a way of recording compositions	-make notes and jottings as a way of recording compositions, including different volumes and pitch	-introduce the stave, lines and spaces, and clef. Use dot notation to show higher or lower pitch. -introduce and understand the differences between crotchets and paired quavers. -apply word chants to rhythms, understanding how to link each syllable to one musical note.	-introduce and understand the differences between minims, crotchets, paired quavers and rests. -read and perform pitch notation within a defined range (e.g. C–G/do–so). -follow and perform simple rhythmic scores to a steady beat: maintain individual parts accurately within the rhythmic texture, achieving a sense of ensemble.	-further understand the differences between semibreves, minims, crotchets and crotchet rests, paired quavers and semiquavers. -understand the differences between 2/4, 3/4 and 4/4 time signatures. -Read and perform pitch notation within an octave (e.g. C–C'/do–do). -read and play short rhythmic phrases at sight from prepared cards, using conventional symbols for known rhythms and note durations.	-further understand the differences between semibreves, minims, crotchets, quavers and semiquavers, and their equivalent rests. -further develop the skills to read and perform pitch notation within an octave (e.g. C–C'/do–do). Read and play confidently from rhythm notation cards and rhythmic scores in up to 4 parts that contain known rhythms and note durations -Read and play from notation a four-bar phrase, confidently identifying note names and durations.
Key Concepts and golden threads:							

Deepening a knowledge and appreciation of music from around the world and the cultural significance of it
 Deepening an appreciation, enjoyment and love of music; listening and responding to music in different ways
 Deepening a knowledge of different musical instruments

P.E

FUNDAMENTAL SKILLS (to be able to...):			
	EARLY YEARS	YEAR 1	YEAR 2
Throwing and catching	-(ELG) negotiate space and obstacles safely, with consideration for themselves and others -(ELG) demonstrate strength, balance and coordination when playing -throw and catch a balloon -use two hands to push and roll a balloon/large ball -roll and push a large ball fast and slow, hard and gently -bounce a large ball with one/two hands -bounce a large ball with left/right hands	-throw larger balls with accuracy to hit a target -roll larger balls carefully and stop them with two hands or a foot -catch larger balls with two hands -bounce different sized balls with one/two hands -bounce different sized balls with left/right hands	-throw different sized balls with increasing accuracy to hit a target -bounce a range of different sized balls with greater accuracy -catch different sized balls with two hands/left/right hands/one hand
Running	-(ELG) move energetically, such as running, jumping, dancing, hopping, skipping and climbing -run for a short distance in a straight line	-apply basic running techniques eg staying in the lanes on a track, looking ahead -know how to stop when running -run for a longer distance/period of time, building on YR	-apply basic running techniques more confidently eg staying in the lanes on a track, looking ahead, swinging arms, how to start and finish a race -run for longer distances and periods of time, building on Y1
Jumping	-(ELG) move energetically, such as running, jumping, dancing, hopping, skipping and climbing -jump off an object and land on two feet using arms for balance	-jump off a range of different objects/different heights, landing on two feet with greater balance and control	-jump off a range of different objects and apparatus/different heights, landing on two feet with greater balance and control -jump from two feet to one and one foot to 2, bend legs when landing
Hopping/skipping	-(ELG) move energetically, such as running, jumping, dancing, hopping, skipping and climbing -hop on one foot at least 5 times	-hop on one foot more than 5 times -hop on alternating feet -hop two feet to 1 and 1 foot to 2	-hop and skip over greater distances -alternate between hopping and jumping using 2 feet/1 foot
Balancing and climbing	-climb up and across climbing equipment -start to move under/over/across -balance for at least 5 seconds	-continue to travel and climb across equipment and apparatus with greater confidence, under/over/across/through -balance for 6-8 seconds	-travel with greater confidence across/over/along/under/'in and out equipment and apparatus creating longer pathways

			-climb higher and with greater confidence -balance for 10 seconds
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KNOWLEDGE (know how to...):							
	Early Years	Y1	Y2	Y3	Y4	Y5	Y6
Team work	-play alongside and with others as the year progresses -show confidence to try new activities and talk about what they are doing -say when they do or don't need help -help others to get out and put away resources -help others to complete tasks and solve problems	-talk about what teamwork means; including everyone and working together when playing different games and solving problems -talk about why it is important to listen when playing games in teams -talk about why we have rules in games and what would happen if we didn't -talk about why we have scoring in games and how to keep track of scores -talk about why it is important to take turns	-apply what has been learnt about teamwork in YR to different games and situations -talk about what it feels to be left out -communicate effectively in a team-asking for help and giving advice -solve problems in a team	-play competitive games, applying scoring systems and basic strategy	-play competitive games, applying scoring systems and showing a deeper understanding of strategy -talk about the roles different people take in team games	-play a range of competitive games and apply basic principles for attacking and defending with greater fluency and competence -use strategy more effectively -talk about the different roles people take in team games and the importance of everyone playing a part in the teams success	-play a wider range of competitive games and apply basic principles for attacking and defending with greater fluency and competence -apply the rules of different games -use and apply strategy within a team with greater proficiency -play to the strengths of different people in the team to ensure greater success
SKILLS APPLICATION (to be able to...):							
INVASION:	-find and move into spaces in order to receive a ball	-learn what attack and defend means -dodge -find a space	-apply rules of games -talk about the difference between attack and defence	-choose where to stand when attacking	-build on skills covered in Y3; become more competent in	-develop greater competence at receiving/passing a ball and when: -dribbling	-apply techniques and strategy to win games 6v6

		-run and move when playing invasion games -tag	-start to apply tactics -make good use of space -regain possession -shoot/aim at targets -combine passing and moving	-pass and move during invasion games -work more as a team to create opportunities to score	- attacking and defence -talk about the consequences of inaccurate throws and passes -combine passing and moving to create opportunities for scoring	-changing direction at speed - passing and moving to create opportunities for scoring -marking -using defensive tactics -create fluidity in attacks	-change tactics in response to the opposition -use a range of defensive tactics -use 'power' to take advantage and score
INVASION GAMES: football	-use feet to kick a balloon/larger ball -use feet to move a ball along the ground -move the ball quickly/slowly/softly/hard -aim a larger ball at a target	-use feet to move a ball with greater control, keeping it closer to the body -move into a space with a ball using feet -use the right part of the foot to move the ball -pass a ball slowly and quickly	-participate in team games passing and receiving balls with feet -dribble in order to keep possession -use scoring in games involving football skills -pass and receive the ball -make good use of space	-attack -defend -dribble -change direction with the ball and keep control -combine passing and dribbling whilst keeping control -pass and score	-attack -defend -dribble -change direction with the ball and keep control -combine passing and dribbling whilst keeping control -pass and score with increased accuracy; apply shooting techniques -turn at speed -use tactical strategies -regain possession	-regain and maintain possession -change direction and turn at speed -move away from a defender to receive the ball -mark -tackle -dribble -pressure the player with the ball -shoot -combine passing and moving to create a shot on goal -use greater fluidity	-play competitive games of football using and applying all taught skills, basic principles and tactics suitable for attacking and defending -talk about the attributes needed for good defenders and goalkeepers -talk about the rules referees use in football -analyse games and identify what tactics and strategies worked well and what didn't.
INVASION GAMES: netball	-throw and pass a balloon/larger ball -aim and hit a target with a larger ball -catch a balloon/larger ball	-hold a ball carefully with correct finger placement -bounce and dribble a ball with greater control	-make good use of space -pass and move -chest pass -attack and defend -underarm throw	-attack -defend -pass and move -pass and shoot -talk about how to get and keep	-develop confidence and competence in passing and receiving the ball, building on prior learning	-talk about how to win in netball -talk about how to create opportunities for scoring	-play competitive games of netball and apply basic principles suitable for attacking and defending

	-keep a simple score	-underarm/ overarm throws	-aim and hit a target with a ball	possession of the ball -talk about how to position oneself in netball -talk about the rules and how to win a game of netball	-talk about tactics in netball and how to make the team as effective as it can be -move into a space and away from the defender in order to receive a ball -shoot with greater accuracy and precision -talk about and apply footwork rules -mark	-bounce pass -shoulder pass -combine pass styles to create shooting opportunities -talk about what stinger netball is -talk about the role of the GK position -apply pressure when marking -talk about games and what was effective and what wasn't	-apply greater fluidity when playing -talk about and analyse games played and what was effective and what wasn't -talk about the role of the umpire and rules in netball
INVASION GAMES: cricket	-throw and pass a balloon/larger ball -catch a balloon/larger ball -aim and hit a target with a larger ball -keep a simple score	-push and move a ball along the floor with a bat -push the ball with a bat towards a target -throw a beanbag with accuracy into a hoop using an underarm throw -stop a ball rolling on the floor with a bat	-underarm/ overarm throwing and rolling a ball with greater accuracy -send and receive a ball with greater accuracy -catch a ball with greater accuracy -aim and hit a target with a ball -scoring	-talk about the role of the batter and fielder -basic batting and fielding techniques -how to win a game if batting -how to win a game if fielding -how to hold the bat correctly -strike with intent -how to get the batter out -use the body to throw with power -consequences of inaccurate throws -stop the ball	-bat and field with greater confidence and competence -work as a team to get the batters out -underarm bowl -use a barrier to stop the ball -run towards the ball when fielding -throw overarm with power and with greater accuracy -throw the ball to the wicket keeper or bowler -work as a team to return the ball -talk about the aim of the game for batters, fielders and bowlers		-play competitive games of cricket and apply basic principles suitable for attacking and defending

INVASION GAMES: rugby	-throw and pass a balloon/larger ball -catch a balloon/larger ball -aim and hit a target with a larger ball -keep a simple score		-explore dodging and the importance of it/consequences of not being able to dodge/where to dodge -attack and defence in basic rugby	-hold the ball in the middle with two hands -pass and receive the ball -run forwards to support the attack -tag/preventing scoring -stand and receive -what offside means	-develop passing and moving skills -what offside in rugby means -where to run and stand if there is a tag -apply techniques and strategy more effectively to games	-strike the ball -change batting depending on the situation of the game -vary bowling depending on how the game is going -be ready to receive the ball once bowled -position fielders tactically -return the ball with speed -use the signals for 'out,' 'wide,' 'no ball,' 'four' and 'six' -keep score	-play competitive games of rugby and apply basic principles all skills previously taught for attacking and defending -talk about different tactics and when to use them when playing cricket -change tactics as the game progresses -talk about bowling orders
ATHLETICS	-(ELG) move energetically, such as running, jumping, hopping and skipping -run for a short distance in a straight line -jump and land on two feet using arms for balance	-apply basic running techniques eg staying in the lanes on a track, looking ahead -know how to stop when running -run for a longer distance/period of time, building on YR -jump different heights, landing on two feet with greater balance and control	-apply and develop a range of skills, learning how to use them in different ways and to link them to make actions -communicate, collaborate and share success -use running, jumping, throwing and catching in isolation and in combination	-how to run fast and efficiently-arm/legs and feet technique and head positioning -what a false start is -how to accelerate and build up speed when running -effective relay techniques; how to pass a baton/what happens if a baton is dropped -correct body positioning and stance when throwing	-extending stride patterns when sprinting -running for distance/how to pace -the three phases of throwing -how to rotate and transfer weight when throwing a javelin -how to perform an effective triple jump	-sprint with head up and eyes on the destination -extend stride pattern -stop effectively when sprinting -talk about 'dipping' -talk about what a false start is -use body to accelerate quickly -change over quickly in relay races -use and refine correct body	-continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement -communicate collaborate and compete with each other and evaluate own success -use running, jumping, throwing and catching in

				-the difference between throwing for accuracy and throwing for speed -the correct technique for jumping		positioning when throwing -use the three phases of throwing -rotate and transfer weight when throwing -use correct technique when jumping over hurdles	isolation and in combination.
TENNIS:	-(ELG) move energetically, such as running, jumping, dancing, hopping, skipping and climbing -jump off an object and land on two feet using arms for balance	-use a racquet to push a ball around the playground -balance a ball on a racquet -pass and retrieve a bigger ball	-hit a ball with a racquet with intent -become more accurate when hitting a ball -score points -hitting the ball into a space	-throwing technique in tennis -underarm throws -forehand shots -recover to mid court -greater control of the racket and ball	-what the ready position is -develop competence when playing tennis and greater racket control -the consequences of throwing or hitting the ball off court	-talk about how to win in a game of tennis -use the ready position -return to the centre of the court -use correct technique for a volley with both sides of the body (forehand and backhand) -use correct technique when serving -play doubles	-play tennis, modified where appropriate and apply basic principles suitable for attacking and defending, use and apply all previously learnt skills -score and talk about tie-breaks -use and apply tactics when playing singles and doubles
DANCE:	-(ELG) move energetically, such as running, jumping, dancing, hopping, skipping and climbing		-perform dances using simple movement patterns. -Use movement imaginatively, responding to stimuli, including music and				-create dances using a range of movement patterns, including those from different times, place and cultures -Respond to a range of stimuli and

			performing basic skills -Change rhythm, speed, level and direction of their movements -Create and perform sequences and dances using simple movement patterns, including those from different times and cultures -Express and communicate ideas and feelings -control movements and co-ordinate body to tell a story -characterisation, expression and emotion in dance				accompaniment -develop flexibility, strength, technique, control and balance -Perform dances using a range of movement patterns
GYMNASTICS-rolling and moving	-combine different movements with ease and fluency -confidently and safely use a range of large and small apparatus indoors and outside, alone and in a group -make different shapes (high and low) -move under, over, through, along	-make wide, narrow and curled shapes using big and small body parts -Create a simple sequence of 3 moves, adapt and refine with practise	-develop core movement, become increasingly competent and confident and access a broad range of opportunities to extend agility, balance and co-ordination, individually and with others -create pathways and sequences of at least 3, high quality moves (zig-zag, curly,	-create symmetrical rolls and movements -apply extension to movements -travel in and out of rolls with good 'flow'		-work in canon -work in unison -move in and out of rolls and movements with 'flow' -move on and off apparatus with greater fluency	-develop flexibility, strength, technique and control

			straight) and at different speeds using different body parts -'Champion gymnast' straight body, pointy fingers -travel across apparatus under/over/through				
GYMNASTICS (jumping)	-combine different movements with ease and fluency -confidently and safely use a range of large and small apparatus indoors and outside, alone and in a group	-jump in different directions and fast/slow -bend knees and swing arms -create a sequence of 3 jumps	-apply effective jumping technique to games -combine jumping, skipping and hopping in games and sequences -competition; jump for distance and height -travel across apparatus creating different pathways/under/over/through			-work in canon -work in unison -move in and out of jumps and movements with greater flow -jump off apparatus from different heights, bending knees to land and using arms for balance	-work with a partner to use matching and mirroring -evaluate performances, adapt and develop to create high quality sequences of moves and jumps -work in canon and unison with greater confidence and competence -balance on and off apparatus -land correctly with bent knees and holding the position for longer before straightening up -make sure jumps are high quality
GYMNASTICS (balancing)	-combine different movements with ease and fluency -confidently and safely use a range of		-hold a balance for 4 seconds -travel across apparatus creating	-create symmetrical/asymmetrical balances	-bridge balances -apply extension to movements and balances	-create a counter balance with a partner -work in canon -work in unison	-work with a partner to use matching and mirroring

	large and small apparatus indoors and outside, alone and in a group		different pathways, under/over/through -use more than 1 piece of apparatus to balance	-hold a more complicated balance for 4 seconds -apply extension to balances -create flow between balances -create balances on and between apparatus	-moving in and out of bridge balances -creating paired bridge balances -travelling over and under bridge balances/working with others -bridge balances on apparatus/moving under/over/around	-move in and out of balances with greater flow -use greater fluency and precision to make balances and moves in-between of good quality -evaluate the quality of movement sequences, adapt and improve -move across and along/balance on and off apparatus	-evaluate performances, adapt and develop to create high quality sequences of moves -work in canon and unison with greater confidence and competence -balance on and off apparatus -hold balances for longer periods of time -make sure balances are high quality-straight legs and arms/head positioning/use of fingers and toes etc
Swimming							-swim competently, confidently and proficiently over a distance of at least 25 m -use a range of strokes effectively (EG: front crawl, backstroke and breaststroke) -Perform safe self-rescue in different water-based situations.

CORE CONCEPTS:

- Competition-in every lesson during their time at the school, pupils are encouraged to be competitive but demonstrate good sporting values
- Fitness-over time pupils develop and deepen their understanding of the importance of keeping physically and mentally fit and the role of physical fitness and sport in keeping strong and healthy. This links with learning in other areas of the curriculum such as PSHE and Science.
- Improvement/personal best-as each unit of learning in PE progresses and during their time at the school, pupils are encouraged to achieve their own personal best in physical activity; to practise, improve and get better and be proud of their achievements

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DOMAIN	Early Years	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
BELIEFS and PRACTICES	-know about some beliefs and festivals	-know and be able to describe beliefs, practices and festivals and why they are celebrated	-know and talk about at least three different beliefs, practices and festivals and why they are celebrated	-use appropriate terminology and vocabulary to describe key festivals, beliefs and practices and the meaning behind them. -reflect upon and talk about own beliefs and any customs, practices and festivals that are significant to them	-use appropriate terminology and vocabulary to describe key festivals, beliefs and practices and the meaning behind them. -reflect upon and talk about own beliefs and any customs, practices and festivals that are significant to them -make connections and comparisons between	-compare and contrast different beliefs, practices and festivals using appropriate terminology and vocabulary -talk about and explain the significance of pilgrimage	-talk about, describe and explain in detail the key beliefs and practices of the religions studied. -compare and contrast

					different beliefs, customs and festivals		
SOURCES of WISDOM	-listen to religious stories and talk about them	-listen to and talk about religious stories -begin to ask questions in order to deepen understanding of the meaning behind them	-re-tell religious stories -describe and explain the meaning behind the stories listened to -ask questions in order to deepen understanding -know about some sacred texts	-describe and explain the meaning behind at least 3 religious stories -know and talk about some religious texts from the religions studied and why these are important to believers	-develop own interpretations of a wider range of religious stories and texts including psalms, poems, hymns, prayers and artefacts -explain the significance of each	-talk about and explain how sacred texts and sources of wisdom shape and influence the lives of different faith groups and communities	-talk in more detail about and explain how sacred texts and sources of wisdom shape and influence the lives of different faith groups and communities -compare and describe similarities and differences between the sacred texts and sources of wisdom studied
SYMBOLS and ACTIONS	-look at and explore different symbols and artefacts	-talk about and describe at least one religious symbol eg the cross	-talk about and describe at least three different symbols and what they mean or represent	-describe the symbols studied and the meaning behind them -begin to compare and identify similarities across the different religions and faiths studied	-describe in more detail, using appropriate vocabulary the symbols studied and the meaning behind them -begin to compare and identify similarities across the	-describe in detail, using appropriate vocabulary, the significance and meaning behind the symbols and actions studied. -compare and contrast to describe similarities and differences	

					different religions and faiths studied		
PRAYER, WORSHIP. REFLECTION	-experience prayer and moments of stillness and reflection	-continue to experience prayer and moments of stillness and reflection -talk about and describe why people pray	-continue to experience prayer and moments of stillness and reflection -know and name some of the places where people of different faiths pray	-continue to experience prayer and moments of stillness and reflection - know and name some of the places where people of different faiths pray and how they do it	-continue to experience prayer and moments of stillness and reflection -describe where, how and why people of different faiths pray	-continue to experience prayer and moments of stillness and reflection -describe the impact of reflection on themselves -describe in more detail where, how and why people of different faiths pray	-continue to experience prayer and moments of stillness and reflection -through deeper research and reading, describe in detail with appropriate vocabulary the different places where people pray and how they do it
IDENTIFYING and BELONGING	-talk about what is important to them -know and talk about the fact that they are part of a class group which is part of the school	-talk about what is important to them and others and why -talk about the groups they belong to in the school and outside and why this is important -talk about faith groups	-know that there are different faith groups to which people belong -talk about the groups they belong to and why this is important -know and talk about what a leader does	-know the names of faith leaders and talk about their roles -know and talk about the leaders of the groups to which they belong or know about	-know the names of significant leaders in the religions studied -know and talk about some of their teachings	-know and talk about the word 'identity'	-talk in more detail about their own identity and how this might differ from others' views -talk about what it means to be led and to be a leader-when might this be difficult?

							-know and talk about what we can learn from the teachings of the religious leaders studied
ULTIMATE QUESTIONS	-use imagination to explore the world around them and ask questions about it	-continue to demonstrate curiosity about the world -ask and respond to questions about the world around them and why things happen/have happened	-ask and respond to 'how' and 'why' questions about belonging, meaning and events -begin to express their own ideas and opinions about these	-explore ultimate questions; reflect upon and articulate responses to these	-explore more challenging ultimate questions; reflect upon and articulate in more detail responses to these	-raise own challenging questions and suggest answers including a range of perspectives from different faith and belief groups	-present a range of views and answers to challenging questions about belonging, meaning and truth
HUMAN RESPONSIBILITY and VALUES	-know how people show concern for one another and the world around them	-talk about faith stories and examples of where people have shown care and concern for others and the world around them	-tell and share own stories and examples of how they and others have cared for people and the world around them -talk about why they have done this	-begin to know and talk about what values are -begin to know and talk about how groups of people can share the same concerns and values in different communities	-know and describe the values held by at least two different faith groups	-know and describe the values held by at least two different faith groups -explain the similarities between these groups in terms of the values they have -know and talk about how different communities can show	-explain in more detail about how different communities live respectfully together, identify common values and how respect is shown -talk about personal responses to challenge how responsibility is shaped by faith

						respect towards one another	
JUSTICE and FAIRNESS	-begin to know and talk about what is fair, right and wrong	-talk about what is fair, right or wrong -identify examples of this in stories	-know and talk about the importance of rules -read and respond to more stories with moral issues and talk about fairness, right and wrong	-know and talk about the importance of rules at school and in the wider world -respond to stories with moral issues, explain their views about what is right, wrong and fairness	-reflect, explore and talk about choices -use own examples of where choices about what is fair, right or wrong have to be made and the consequences	-identify and talk about the choices that people with religious beliefs make and why -reflect upon their own choices	-evaluate and ask own questions about responsibility, what is fair, right and wrong -consider and describe the consequences and moral effects of different choices

Science

How this document works:

This is a whole school overview. The accompanying document shows each year group along with suggested activities and links teachers can use to teach each skill, knowledge or enquiry type.

Page 1: demonstrates what a typical scientist will look like at the end of each year, combining the key skills and knowledge they will require.

Page 2: onwards has the National Curriculum objectives for each year group with key vocabulary for that module and also 'key indicators' which demonstrates what the children should know to achieve the objective.

Any text boxes in a different colour with a thick border shows that this skill/knowledge is taught in a different module but builds on from learning in that module e.g.

Recognise that living things can be grouped in a variety of ways.

The red writing in brackets underneath show where this objective was taken from. This is to allow teachers to make the links to prior learning.

This grid shows the types of enquiry suggested for each unit. The additional year group document gives suggested activities linked to each 'scientific enquiry'.

<u>Scientific Enquiry</u>	
Research	
Pattern Seeking	
Observing (Over time)	
Testing	
Identifying and Classifying	
Problem solving	

This is the National Curriculum Working Scientifically objectives. These are highlighted through the document in purple. This is to ensure teachers are teaching knowledge alongside skills.

Year 1 / 2 Working Scientifically

Asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.

Year 3 / 4 Working Scientifically

Asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings.

Year 5/6 Working Scientifically

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments.

PROGRESSION OF KNOWLEDGE AND SKILLS IN SCIENTIFIC ENQUIRY

DOMAIN	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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Gathering evidence and generating ideas	-explore the world through play; natural and man-made	-know that scientists find out about the world by asking questions	-know that scientists collect evidence by making observations and measurements in order to answer a question	-know why it is important to collect evidence by making observations and taking measurements to answer a question	-know that scientific ideas are based on evidence	- know, understand and describe how experimental evidence and creative thinking are combined to provide scientific explanations that has changed over time.	-Know, understand and describe how experimental evidence and creative thinking are combined to provide scientific explanations that change over time and has both positive and negative effects.
Asking questions	-ask some simple questions to find out about the world and how things work	-ask simple questions to find out about the world and make simple suggestions about the different types of enquiry that could be used to collect evidence to answer a question (observing changes over time, noticing patterns, grouping, classifying, simple comparative tests and using secondary sources)	-know how scientific ideas and concepts can be turned into relevant questions that can be investigated -put forward own ideas about how to find the answer to scientific questions using different types of enquiry (observing changes over time, noticing patterns, grouping, classifying, simple comparative tests and using secondary sources)	-know how scientific ideas and concepts can be turned into relevant questions that can be investigate and put forward their own ideas about how to find the answer to a scientific question using different types of enquiries (observing changes over time, noticing patterns, grouping/classifying comparative tests, fair tests and using secondary sources)	- know how to turn existing scientific ideas into a question form that can be investigated and begin to plan different types of scientific enquiries, including recognising and controlling variables with teacher guidance.	-form scientific questions for enquiry based on scientific ideas/concepts and recognise which can be investigated and those which are theoretical. Plan different types of enquiries to answer questions, including identifying and controlling variables.	-know how to explore scientific ideas/concepts and form clear enquiry questions about scientific phenomena, recognising which can be investigated and those which are theoretical. Select and -plan the most appropriate types of enquiry to answer questions, including identifying and controlling variables, where necessary.
Predicting and hypothesising	-make simple predictions about what might happen	-make a simple prediction, 'I think...'	-make a prediction with a simple	- make a prediction, giving a reason	-make a prediction, giving a reason which considers	-hypothesise, giving a reason which considers scientific	- hypothesise, giving a reason which is based on

			reason, 'I think...because...'	based on everyday experience	scientific ideas and is based on everyday experience	ideas and uses knowledge of a similar everyday experience applied it to a new situation, e.g. I think little bits of sugar dissolve faster than a sugar lump	scientific concepts and uses knowledge of a similar everyday experience, applied it to a new situation, e.g. I think little bits of sugar dissolve faster than a sugar lump
Planning a scientific enquiry	-with adult support, make a simple plan about what to do or how to find out about something...what might happen if...	-plan a simple test guided by the teacher	- make a simple plan for a test within a framework provided by the teacher, e.g. using a planning frame or set of questions, focusing on a limited number of variables	-make a simple plan which identifies the basic features of the test, e.g. what is being changed, what is being measured and which variables are being controlled to keep the test fair	-decide on a clear plan to answer the question which identifies the key features of a fair test, e.g. what is being changed, what is being measured and which variables are being controlled to keep the test fair	-decide on an appropriate way to collect data to answer a question and with guidance, create a clear plan which identifies the independent, dependent and control variables	-identify and plan an appropriate approach to answer a scientific question, identifying clear independent, dependent and control variables

Fair testing	-with adult help, explore keeping some things the same and changing others, observe the effects	- recognise unfairness and what is being changed in a test	-with teacher guidance, identify what is being changed, what is being measured, and one or two variables which need to stay the same in order to make the test fair	-carry out a fair test which identifies the variable being changed, measured and controlled. Recognise and explain why it is fair	-make a plan which identifies how one variable is changed, while all the others are kept the same	- identify key variables to be considered and with teacher guidance, choose one independent variable to change, decide how to measure the effect (dependent variable) and which variables to control	- identify key variables to be considered and choose an appropriate variable to be varied (independent variable), measured for effect (dependent variable) and variables that need to be controlled.
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PROGRESSION OF KNOWLEDGE AND SKILLS WITHIN EACH AREA OF LEARNING

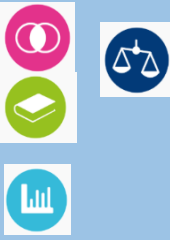
Year Group	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants 	Natural world Explore the world around them making observations and drawings of plants. Natural world Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Communication and language- express their ideas and feelings about their experiences using full sentences.	- Name common plants and describe the basic structure of flowering plants, including deciduous and evergreen. Identify and describe the basic structure of a variety of common flowering plants, including trees.     	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.     	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to 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.     	Recognise that living things can be grouped in a variety of ways. (living things and habitats)	Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird. (Living things and habitats)	Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering.
<u>Key vocabulary</u>	Plant, leaf, stem, flower, grow, rain, sun, water, soil, seed,	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud.	As year 1+ light, shade, sun, warm, cool, water, grow, healthy.	Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal- wind dispersal, animal dispersal, water dispersal, pollen, roots,	Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate.	Lifecycle, mammal, amphibian, germination, seed formation, insect, bird, pollination, life processes, plants, animals, reproduction, environment, dispersal, growth, living, eggs, and seeds.	

		Names of trees in the local area, garden and wild flowering plants.		stem, trunk, leaves, absorb, nutrients, reproduction, germination, stamen, style.	(living things and habitats)	(living things and habitats)	
<u>Key indicators</u>	- Can plant seeds and care for growing plants. - Understand the basic features of a simple plant lifecycle. - Can name basic parts of a plant e.g. leaf, petal.	- Can name trees and other plants they see regularly. - Can describe key features of the trees and plants e.g. shapes of leaves/colour of the flower/blossom. - Can point out trees which lost their leaves and those who keep them all year. Can point to and name parts of a plant. - Can use simple charts to sort. Can use photos to talk about how plants change.	- Can describe how plants that have grown from seeds and bulbs have developed over time. - Can identify plants that grew well in different conditions. - Can spot similarities and differences between bulbs and seeds. - Can nurture seeds and bulbs into mature plants identifying the different requirements of different plants.	- Can explain the function of the parts of a flowering plant. - Can describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal and germination. - Can give different methods of pollination and seed dispersal, including examples. - Can explain observations made during investigations. - Can look at features of seeds to decide on method of dispersal. - Can draw and label a diagram of their created flowering plant to show its parts and their role and method of pollination and seed dispersal.	See living things and habitats.	See living things and habitats.	
Animals including humans. 	The Natural World Explore the natural world around them, making observations and drawing pictures of animals. Begin to make sense of their own life-story and family's history. Begin to understand the key features of the lifecycle of a plant and animal. People, culture and communities Describe their immediate environment using knowledge from observation, discussion, stories and non-fiction texts and maps.	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	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.	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, predators and prey.	Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird. Describe the life processes of reproduction in some plants and animals. (living things and habitats) Describe the characteristics of humans develop from birth to old age.	Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Identify and name the main parts of the human circulatory system and how it works. 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.

	Personal, social and emotional development Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.						gs and g things pitats. nd describe the function of the heart, blood vessels and blood. Describe the ways in which nutrients and water are transported within animals, including humans. 
<u>Key vocabulary</u>	Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, heart,	Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, reptile, amphibian, mammal, omnivore, carnivore, herbivore, all senses.	Offspring, grow, adults, nutrition, reproduce, survival, water, food, air, exercise, hygiene, survival, exercise.	Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, skull, ribs, spine, muscles, joints.	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, incisor, canine, herbivore, omnivore.	Puberty, vocabulary linked to describe a range of sexual characteristics.	Heart, pulse, rate, pumps, blood, blood vessel, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle.
<u>Key indicators</u>	Children can explore the natural world around them. They can describe what they see, feel and hear when outside. They can recognise environments which is different to the one they live in. They can talk about simple similarities and differences between living things. They can make simple	Can name a range of animals which includes animals from each of the vertebrate groups. Can describe the key features of named animals. Can label key features on a picture/diagram. Can write descriptively about an animal. Can write a 'What am I? riddle about an animal.	Can sequence the stages of a baby. Observe these changes. Can describe how animals change as they get older. Develops understanding of how insects change (more than a butterfly) through lifecycle diagrams. Can explain what humans and other animals need to survive- this could be through planning a trip to the moon or desert Island. Can describe how to keep clean and healthy. Has a good	Can name the nutrients found in food. Can state that to be healthy we need to eat the right types of food to give us the correct amount of these nutrients. Name some bones that make up the skeleton giving examples that support, help them move or provide protection. Can describe how muscles and joints help them to move. Classify	Can sequence the main parts of the digestive system. Can draw the main parts of the digestive system onto a human outline. Can describe what happens in each part of the digestive system. Can point to three different types of teeth in their mouth and talk about what each is used for. Demonstrate journey of food through	Can explain the changes that takes place in boys and girls during puberty. Can explain how a baby changes physically as it grows and also what it is able to do.	Can draw a diagram of the circulatory system, label the parts and annotate it to show what the parts do. Can explain the positive and negative effects on diet, exercise, drugs and lifestyle on the body.

	observations about animals and explain why some things occur. They can explore basic lifecycles of animals.	Can describe what a range of animals eat. Can compare and classify animals.	understanding of the food plate and understands 'a healthy balanced diet'. Can create a diet for an athlete. Can adopt a menu to substitute food from the eat well plate. Understands the effect of exercise on the body.	food groups (high/low nutrients), answer q's about nutrients in food, use data to look for patterns. Give similarities and differences between skeletons.	body. Make a dental record, Can explain teeth in animals and if they are carnivores, herbivores or omnivores.		
Living Things	People, culture and communities Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and maps. Understanding the world Begin to understand the need to respect and care for the natural environment and all living things. Explore the natural world around them.	Name common plants and describe the basic structure of flowering plants, including trees. (Plants) Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including (Animals including Humans)	Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Identify and name a variety of plants and animals in their habitats, including microhabitats 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.	(Plants)	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 environment. Recognise that environments can change and that this can sometimes pose dangers to living things.	Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird. Describe the life processes of reproduction in some plants and animals.	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
Evolution and Inheritance			 	  	  	 	Evolution and inheritance 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 adaptation may lead to evolution. Recognise that living things have changed over time and that fossils provide information about living things that inhabited the millions of years ago.
Key Vocabulary		See Animals including Humans See Plants	Living, dead, never been alive, suited, suitable, basic need, food, food chain, shelter, move, feed, names		Classification, classification keys, environment, habitat, human impact, positive,	Lifecycle, mammal, amphibian, germination, seed formation, insect, bird, pollination, life processes, plants, animals, reproduction, environment,	Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails,

			of local habitats e.g. pond, woodland, names of micro habitats e.g. under logs, in bushes etc.		negative, migrate, hibernate.	dispersal, growth, living, eggs, and seeds. Can dissect and label parts of flowering plant including male and female structures. Record finding as an annotated illustration of a flowering plant. Research and explain the life cycle and reproduction of a plant using scientific language.	worms, flowering and non-flowering.
Key indicators	Children will be able to explore the natural world and make observations. Children will recognise animal habitats. Children will understand how to look after animals and the environment including habitats. Children will begin to explore where they live and compare to other places in the world e.g. weather, climate.		Find a range of items which are dead, living. Can name plants/animals which live in different habitats and micro habitat. Can talk about the features of the animal/plant and how they are suited to the habitat. Can talk about what the animal eats. Can construct a food chain.		Can name living things in a range of habitats, giving key features that helped identify them. Can give examples of how an environment may change both naturally and due to human impact. Can use classification keys to identify unknown plants and animals.	Can describe the lifecycles of mammals, amphibians and insects using diagrams. Can describe similarities and differences between them.	Evolution Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils.
							Evolution Can explain the process of evolution. Can give examples of how plants and animals are suited to their environment. Can give examples of how an animal or plant has evolved over time e.g. penguin, peppered moth. Give examples of things that lived millions of years ago and the fossil evidence to support this.
<u>Materials</u>	The Natural World Understand some important processes and changes in the natural world around them, including changing states of matter. Speaking Offer explanations for why things happen, making use	Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Describe the simple physical properties of a variety of everyday	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing,	(Forces and magnetism)	STATES OF MATTER Compare and group materials together, according to whether they are solids, liquids or gases (states of matter) Observe that some materials change state when they are heated or cooled, and measure or research the temperature	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	

	of recently introduced vocabulary from stories, non-fiction, rhymes and poems where appropriate. Understanding of the world Use all their senses in hands on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see using a wide vocabulary. Explore how things work. Talk about the difference between materials and changes they notice.	materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. 	bending, twisting and stretching.  		at which this happens in degrees Celsius (States of matter) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (states of matter)  	describe how to recover a substance from a solution. Use knowledge of solids, liquids 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 this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. 	
Rocks and Soils 				Rocks and Soils 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 a rock. Recognise that soils are made from rocks and matter 	 		Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. (Evolution and Inheritance)
Key Vocabulary	Wet, dry, shiny, dull, bendy, stiff, squashy, hard/soft, lumpy, wrinkly. Smooth, rough.	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through.	Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff. Rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting,	Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb, water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil.	Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle	Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/not reversible, change, burning, rusting, new material.	

			squash/squashing, bend/bending, stretch/stretching.				
Key indicators	They can talk about simple similarities and differences between two materials and how materials change in terms of shape, size and texture. They can describe materials using basic scientific words. They can explore how things work. They can group and classify materials using their properties.	Can label a picture/diagram of an object made from different materials. Can describe the properties of materials. Can sort materials using their properties. Can test evidence to answer a question.	Can name an object, say what material it is made from, identify properties and make a link between property and use. Whilst changing a shape of an object can describe the actions used. Can use suitable vocabulary. Simple tests relevant to properties. Describe similarities and differences.	Can name some types of rock and give physical features of each. Can explain how a fossil is formed. Can explain that soils are made from rocks and also contain living/dead matter. Classify rocks in a range of ways using scientific vocabulary. Test properties of rocks. Show understanding of how fossils were formed, can identify plant/animal matter in soil, test water retention of soils.	Can create a concept map, including arrows linking the key vocabulary. Can name properties of solids, liquids and gases. Can give everyday examples of melting and freezing. Can give everyday examples of evaporation and condensation. Can describe the water cycle. Can give reasons to justify why something is a solid liquid or gas. Can give examples of things that melt/freeze and how their melting points vary From their observations, can give the melting points of some materials. Using their data, can explain what affects how quickly a solid melts. Can measure temperatures using a thermometer. Can explain why there is condensation on the inside the hot water cup but on the outside of the icy water cup From their data, can explain how to speed up or slow down evaporation. Can present their learning about the water cycle in a range of ways e.g. diagrams, explanation text, story of a water droplet.	Can explain everyday use of material e.g. how brick wood, glass are used in buildings. Can explain what dissolving is, giving examples. Can name equipment used for filtering and sieving. Can use knowledge of liquids, gases and solids to suggest how materials can be recovered from solutions or mixtures by evaporation, filtering or sieving. Can describe simple reversible and non-reversible changes to materials, giving examples. Can create chart/table grouping materials using properties. Suggest appropriate material for purpose. Can explain results from investigations involving dissolving and non-reversible change.	
Seasonal Changes 	The Natural World Understand some important processes and changes in the natural world around them, including seasons.	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. 				Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. (Forces)	Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that casts them. (Light)
Earth and Space 				Recognise that light from the sun can be dangerous and that there are ways to protect our eyes. Recognise that shadows are formed when the light source is blocked by a solid object. Find patterns in the way the size of the shadows change (Light)		Earth and Space 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 Earth rotation to explain day and night due to the apparent movement of the Sun. 	
Key vocabulary	Snow, wind, rain, sun, day, night, stormy, cloudy, hot, cold, foggy.	Weather (sunny, rainy, windy, snowy etc) Seasons (winter, summer, spring, autumn) sun, sunrise, sunset, Day length		(Light)		Earth, sun, moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune, Pluto (dwarf planet), spherical, solar system, rotates, star, orbit, planets, axis, night, day, season, galaxy. Meteorite.	Year 3 vocabulary- Plus Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.]
Key indicators	Can describe the weather outside and suggest what they might wear and what they might see. Can comment on the environment e.g. the leaves have fallen off the tree, there is a puddle. Children can understand the effect of changing seasons on the natural world around them.	Can name four seasons and identify when in the year they occur. Can observe and describe weather in different seasons. Can describe days being longer in summer and shorter in winter. Present data in tables charts and compare seasons.		See Light		Can show using diagrams the movement of the Earth and moon. Can explain the rotation of the Earth and how this causes night and day. Can explain evidence gathered about the position of shadows in terms of movement of the Earth. Can explain how a sundial works. Can explain why we have time zones.	See Light
Light and sound	Understanding of the world Explore materials with different properties. Talk about what they see, using a wide vocabulary. Expressive arts and design	Describe the simple physical properties of a variety of everyday materials.] Compare and group together a variety of everyday materials on the basis of their simple physical properties.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.		Recognise that environments can change and that this can sometimes pose dangers to living things. (living things and habitats)	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.	cognise that light travels in straight lines. e the idea that light travels in straight lines explain that objects e seen because they

	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function. Explore colour and colour-mixing. Play instruments with increasing control to express their feelings and ideas.	(Materials)	(materials)	(Plants)		(materials)	give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or
		Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. (Seasonal changes)	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Plants)	Recognise that they need light in order to see things and that dark 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. Recognise that shadows are formed when the light source is blocked by a solid object. Find patterns in the way the size of the shadows change 	SOUND To 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 pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sound gets fainter as the distance from the sound source increases. 	Use Earth rotation to explain day and night due to the apparent movement of the sun across the sky. (Earth and Space)	from light sources to objects and then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that casts them. 
Key vocabulary	Smell, sound, sight, see, look,	See Seasonal Changes See Animals Including Humans		Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.	Sound, source, vibrate, vibration, travel, pitch, volume, faint, loud, insulation.	Earth, sun, moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune, Pluto (dwarf planet), spherical, solar system, rotates, star, orbit, planets, axis, night, day, season, galaxy, Meteorite. (Earth and Space)	ar 3 vocabulary- Plus light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.
Key indicators	Children will be able to identify and name different colours. They can mix colours and explain the changes. They can experiment with sound and making different noises with musical instruments and express using different terms such as loud, quiet, beat, vibrate.	See Seasonal Changes See Animals Including Humans		Can describe how we see objects in lights and can describe dark as the absence of light. Know it is dangerous to look at the sun. Define transparent, translucent and opaque. Can describe how shadows are formed. Predict what materials will be more/less visible. .	Can describe different types of objects producing different sounds and that the sound is produced by vibration in the object. Can describe sounds travelling through different mediums such as air, water, metal. Can find patterns between pitch and volume and the features of the object producing it. Can recognise that sounds get fainter as the distance from the sound source increases. Can explain what happens when you strike a drum or pluck a string- use diagrams to show. Demonstrates how to	(See Earth and Space)	Can describe with diagrams how light travels in straight lines, either from sources or reflected from other objects into our eyes. Can describe with diagrams how light travels in straight lines past translucent or opaque objects to form a shadow of the same shape.

					increase/decrease pitch and volume.		
Forces 	Understanding the World. Explore and talk about different forces they can feel. Can talk about the differences between materials and changes they notice.  	Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Materials)	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Materials) Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff. Rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching.	Compare how things move on different surfaces Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other,     		Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to      To describe the movements of the Earth, and other planets, relative to the Sun in the solar system (Earth and Space)	
Key Vocabulary	Push, pull, twist, stretch, turn, open, lift, squeeze, pinch, flick, tap.	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through. (Materials)	(Materials)	Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel. Magnetic material, metal, iron, steel, poles, north pole, south pole.		Force, Gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears.	

Key indicators	Children will be able to play with a range of toys of varying sizes made of different materials and fit them together in different ways such as twisting, pushing, slotting or magnetism. Can manipulate playdough in different ways.	(See Materials)	(See Materials)	Give examples of forces in everyday life. Give examples of objects moving differently on different surfaces. Name a range of magnets and show how the poles attract and repel. Can draw diagrams using arrows to show the attraction and repulsion between the poles of magnets. Can use results to describe how objects move on different surfaces. Can use results to make predictions. Can use some classification to know some metals are not magnetic. Use test data to rank magnets.		Can demonstrate the effect of gravity acting on an unsupported object. Can give examples of friction, water resistance and air resistance. Can give examples of when it is beneficial to have high or low friction, water resistance, and air resistance. Can demonstrate how pulleys, levers and gears work.	
Electricity	Shows skills in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement or new images. 	Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties.  (Materials)	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Materials)		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 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. 	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. (Materials)	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. 

		Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through. (Materials)	Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff. Rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching. (Materials)		Can name the components in a circuit. Can make an electric circuit. Can control a circuit using a switch. Can name some metals that are conductors. Can name materials that are insulators. Can communicate structures of circuits using drawings. Can incorporate a switch. Can add a circuit with a switch to a DT project and demonstrate how it works. Can describe how a switch works.		Explain how a circuit operates to achieve particular operations, such as control the light for a torch with different brightnesses or make a motor go faster or slower Make circuits to solve particular problems such as a quiet and a loud burglar alarm Carry out fair tests exploring changes in circuits Make circuits that can be controlled as part of a D&T project
					Electrical, appliance, mains, plug, circuit, component, cell, battery, positive, negative, connect/connectors, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol.		Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage NB Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The words cells and batteries are now used interchangeably