

## **Science**

- To plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary
- To make a prediction with reasons
- To use test results to make predictions to set up comparative and fair tests
- To present a report of their findings through writing, display and presentation
- To take measurements using a range of scientific equipment with increasing accuracy and precision
- To take repeat readings when appropriate
- To record more complex data and results using scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs
- To report and present findings from enquiries through written explanations and conclusions
- To use a graph to answer scientific questions
- To explore different ways to test an idea, choose the best way and give reasons
- To vary one factor whilst keeping the others the same in an experiment
- To use information to help make a prediction
- To explain, in simple terms, a scientific idea and what evidence supports it
- To decide which units of measurement they need to use
- To explain why a measurement needs to be repeated
- To find a pattern from their data and explain what it shows
- To link what they have found out to other science
- To suggest how to improve their work and say why they think this
- To describe the changes as humans develop to old age
- To create a timeline to indicate stages of growth in certain animals, such as frogs and butterflies
- To describe the changes experienced in puberty
- To draw a timeline to indicate stages in the growth and development of humans, living things and their habitats
- To describe the differences in the life cycles of a mammal, an amphibians, an insects and a bird
- To describe the life cycles of common plants
- To explore the work of well know naturalists and animal behaviourists (David Attenborough and Jane Goodall)
- To observe their local environment and draw conclusions about life-cycles, e.g. plants in the vegetable garden or flower border
- To compare the life cycles of plants and animals in their local environment with the life cycles of those around the world, e.g. rainforests
- To compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
  - To explain how some materials dissolve in liquid to form a solution
  - To describe how to recover a substance from a solution
  - To use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving, evaporating
  - To give reasons, based on evidence for comparative and fair tests for the particular uses of everyday materials, including metals wood and plastic
  - To describe changes using scientific words (evaporation, condensation)
  - To demonstrate that dissolving, mixing and changes of state are reversible changes
  - To explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of

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### Year 5 Learning Objectives

acid on bicarbonate of soda

- To use the terms 'reversible' and 'irreversible'

To describe methods for separating mixtures (filtration, distillation)

- To work out which materials are most effective for keeping us warm or for keeping something cold
- To use their knowledge of materials to suggest ways to classify (solids, liquids, gases)
- To explore changes that are difficult to reverse, e.g. burning, rusting and reactions such as vinegar with bicarbonate of soda
- To explore the work of chemists who created new materials, e.g. Spencer Silver (glue on sticky notes) or Ruth Benerito (wrinkle free cotton)
- To identify and explain the movement of the Earth and other planets relative to the sun in the solar system
- To explain how seasons and the associated weather is created
- To describe and explain the movement of the Moon relative to the Earth
- To describe the sun, earth and moon as approximately spherical bodies
- To use the idea of the earth's rotation to explain day and night and the apparent movement of the sun across the sky
- To compare the time of day at different places on the earth
- To create shadow clocks
- To begin to understand how older civilizations used the sun to create astronomical clocks, e.g. Stonehenge
- To explore the work of some scientists (Ptolemy, Alhazen, Copernicus)
- To explain that unsupported objects fall towards the earth because of the force of gravity acting between the earth and the falling object
- To identify the effects of air resistance, water resistance and friction that act between moving surfaces
- To recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect
- To describe and explain how motion is affected by forces (including gravitational attractions, magnetic attraction and friction)
- To design very effective parachutes
- To work out how water can cause resistance to floating objects
- To explore how scientists, such as Galileo Galilei and Isaac Newton helped to develop the theory of gravitation

## ICT

- To combine sequences of instructions and procedures to turn devices on or off
- To understand input and output
- To use an ICT program to control an external device that is electrical and/or mechanical
- To use ICT to measure sound or light or temperature using sensors
- To explore 'What is' questions by playing adventure or quest games
- To write programs that have sequences and repetitions
- To listen to streaming audio such as online radio
- To download and listen to podcasts
- To produce and upload a podcast
- To manipulate sounds using Audacity
- To select music from open sources and incorporate it into multimedia presentations
- To work on simple film editing
- To use instant messaging to communicate with class members
- To conduct a video chat with someone elsewhere in the school or in another school

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- To use a search engine using keyword searches
- To compare the results of different searches
- To decide which sections are appropriate to copy and paste from at least two web pages
- To save stored information following simple lines of enquiry
- To download a document and save it to the computer
- To create a formula in a spreadsheet and then check for accuracy and plausibility
- To search databases for information using symbols such as = > or <
- To create databases planning the fields, rows and columns
- To create graphs and tables to be copied and pasted into other documents
- To use a range of presentation applications
- To consider audience when editing a simple film
- To know how to prepare and then present a simple film
- To use ICT to record sounds and capture both still and video images?
- To make a home page for a website that contains links to other pages
- To capture sounds, images and video
- To they use the word count tool to check the length of a document
- To use bullets and numbering tools

## **RE**

### **Passover**

- To investigate Passover and generate questions for the topic
- To investigate exodus and consider why Passover is important to Jewish people.
- To generate questions about Passover for Jewish visitor
- To explore how food plays an important part in different festivals. Focus on Seder Plate
- To investigate the features of a Torah
- To recreate their own Passover meal and find out about the importance of the different foods

### **Why is Muhammad important to Muslims?**

- To focus on story 'Night of Power' and how it changed Muhammad's life
- To investigate the importance of Muhammad to Muslims
- To explore the story of the revelation and consider the effect that this has on Muslims
- To compare their own experience of quietness for reflection with those of Muhammad and other religious people
- To make comparisons between Muhammad's life and Muslims today
- To investigate the Qur'an and its significance for Muslims
- To consider the influences in their own life

### **Hindu beliefs and values**

- To use a selection of Murti to recap the beliefs of Hindus about different Gods
- To learn about Hindus beliefs on reincarnation and karma and consider their own beliefs. They explore the values of Hindus
- To look at different festivals – Sacred Thread ceremony, Raksha Bandhan
- To learn about the rituals at a Hindu funeral
- To find out about Hindu weddings and make comparisons between other religions and non-religious wedding ceremonies

### **Where did the Bible come from?**

- To explore how the bible started and its origins. They learn about the timings of the bible
- Children learn about the popularity of the Bible, ask and reflect on questions still to be answered

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- To explore the different genres that are in the bible
- To learn that people have different views about the truths of the Bible

#### **Creation Stories**

- To look at the definition of creation. They ask questions and explore their opinions of creation
- To investigate and explore Hindu, Christian and Islamic creation stories. They investigate the Big Bang Theory
- To consider their own beliefs and theories about creation

#### **Christian Beliefs**

- To make decisions. Children think about moral dilemmas that they have had to face? How do they know what to do?
- To look at materials from Christian agencies such as Christian Aid
- To reflect on the importance of forgiving and consider times when they have asked to be forgiven and forgiven somebody else. They listen to Christian stories about forgiving and reflect on these
- To summarise all that they have learnt during the unit to reflect on who influences them and whether they should try to change anything

### **History**

- To test out a hypothesis in order to answer a question
- To appreciate how historical artefacts have helped us understand more about British lives in the present and past
- To research the life of one person who has had an influence on the way Great Britain is divided into four separate countries
- To describe historical events from the different period/s they are studying/have studied
- To make comparisons between historical periods; explaining things that have changed and things which have stayed the same
- To explain the role that Britain has had in spreading Christian values across the world
- To appreciate that significant events in history have helped shape the country we have today
- To have a good understanding as to how crime and punishment has changes over the years
- To appreciate how plagues and other major events have created huge differences to the way medicines and health care was looked at
- To use dates and historical language in their work
- To draw a timeline with different time periods outlined which show a range of information, such as, periods of history, when famous people lived, etc.
- To use their mathematical skills to work exact time scales and differences as need be
- To create timelines which outline the development of specific features, such as medicine; weaponry; transport, etc.

### **Geography**

- To name and locate many of the world's major rivers on maps
- To name and locate many of the world's most famous mountain regions on maps
- To locate the USA and Canada on a world map and atlas
- To locate and name the main countries in South America on a world map and atlas
- To begin to recognise the climate of a given country according to its location on the map
- To explain why people are attracted to live by rivers
- To explain how a location fits into its wider geographical location; with reference to human and economical features
- To explain what a place might be like in the future, taking account of issues impacting on human features
- To report on ways in which humans have both improved and damaged the environment
- To explain why many cities of the world are situated by rivers

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**Year 5 Learning Objectives**

- To explain how a location fits into its wider geographical location; with reference to physical features
- To explain how the water cycle works
- To explain why water is such a valuable commodity
- To explain what a place (open to environmental and physical change) might be like in the future taking account of physical features
- To collect information about a place and use it in a report
- To map land use
- To find possible answers to their own geographical questions
- To make detailed sketches and plans; improving their accuracy later
- To plan a journey to a place in another part of the world, taking account of distance and time
- To work out an accurate itinerary detailing a journey to another part of the world

**PE**

- To link skills, techniques and ideas and apply them accurately and appropriately
- To show good control in their movements
- To compare and comment on skills, techniques and ideas that they and others have used
- To use their observations to improve their work
- To explain some important safety principles when preparing for exercise
- To explain what effect exercise has on their body
- To explain why exercise is important
- To compose their own dances in a creative and imaginative way
- To perform to an accompaniment, expressively and sensitively
- To control their movements
- To show clarity, fluency, accuracy and consistency

**Dance**

- To gain possession by working as a team
- To pass in different ways
- To use forehand and backhand with a racquet
- To field
- To choose the best tactics for attacking and defending
- To use a number of techniques to pass, dribble and shoot

**Games**

- To make complex or extended sequences
- To combine action, balance and shape
- To perform consistently to different audiences
- To make movements accurate, clear and consistent

**Gymnastics**

- To be controlled when taking off and landing in a jump
- To throw with accuracy
- To combine running and jumping
- To follow specific rules

**Athletics**

- To follow a map in an unknown location
- To use clues and compass directions to navigate a route
- To change their route if there is a problem
- To change their plan if they get new information

## **Spanish**

- To understand longer passages made up of familiar language in simple sentences
- To identify the main points and some details
- To hold a simple conversation with at least 3-4 exchanges
- To use their knowledge of grammar to adapt and substitute single words and phrases
- To understand a short story or factual text and note some of the main points
- To use context to work out unfamiliar words
- To write a paragraph of about 3-4 simple sentences
- To adapt and substitute individual words and set phrases
- To use a dictionary or glossary to check words they have learnt

## **PSHCE**

### **Developing confidence and responsibility and making the most of their abilities**

Pupils should be taught:

- a. to talk and write about their opinions, and explain their views, on issues that affect themselves and society
- b. to recognise their worth as individuals by identifying positive things about themselves and their achievements, seeing their mistakes, making amends and setting personal goals
- c. to face new challenges positively by collecting information, looking for help, making responsible choices, and taking action to look after their money and realise that future wants and needs may be met through saving.

### **Developing good relationships and respecting the differences between people**

Pupils should be taught:

- a. that their actions affect themselves and others, to care about other people's feelings and to try to see things from their points of view

### **Developing confidence and responsibility and making the most of their abilities**

Pupils should be taught:

- a. to recognise their worth as individuals by identifying positive things about themselves and their achievements, seeing their mistakes, making amends and setting personal goals
- b. to recognise, as they approach puberty, how people's emotions change at that time and how to deal with their feelings towards themselves, their family and others in a positive way
- c. to reflect on spiritual, moral, social, and cultural issues, using imagination to understand other people's experiences

### **Developing confidence and responsibility and making the most of their abilities**

Pupils should be taught:

- a. To face new challenges positively by collecting information, looking for help, making responsible choices, and taking action
- b. To look after their money and realise that future wants and needs may be met through saving.  
Preparing to play an active role as citizens
- c. To appreciate the range of national, regional, religious and ethnic identities in the United Kingdom

d.To explore how the media present information

## **Art**

- To explore ideas and collect visual and other information to help me develop my work
- To create colours by mixing to represent images I have observed in the natural or man-made world
- To experiment with different colours to create a mood
- To make comments on the ideas, methods and approaches in my own and others' work, relating these to the context in which their work was made
- To adapt and refine my work to reflect the purpose and meaning of the work sketch lightly before painting so as to combine lines with colour to produce images that convey a purpose
- To base paintings on observations and can convey realism or an impression of what I observe
- To experiment with techniques that use contrasting textures, colours or patterns. (rough/smooth, light dark, plain/pattered)
- To reflect a purpose that I write about in my sketchbook
- To make comments on the ideas, methods and approaches in my own and others' work, relating these to the context in which their work was made
- To adapt and refine my work to reflect the purpose and meaning of the work. My collage reflects a real purpose and I write about this in my sketch book
- To write about the visual and tactile qualities of my collages in my sketchbook
- To can make nets of shapes to create recognisable forms
- To use a variety of tools and techniques for sculpting in clay, papier mache and other mouldable materials
- To adapt and refine my work to reflect the purpose and meaning of the work. My 3D work has a well thought out purpose
- To add paper curlings or other objects to embellish and add detail to my work
- To print using a number of colours built up in a sequence
- To make precise repeating patterns by creating accurate printing blocks
- To make comments on the ideas, methods and approaches in my own and others' work, relating these to the context in which their work was made
- To adapt and refine my work to reflect the purpose and meaning of the work
- To explore ideas and collect visual and other information to help me develop my work. I keep these in my art sketch book
- To write about my ideas and add sketches to my art sketchbook
- To keep notes in my sketch book about how I might develop my work further
- To use the internet for research
- To take digital photographs and enhance them using computer software. My work communicates a meaning, idea, thought feeling or emotion and this is explained in a short piece of writing to accompany each piece of artwork
- To make comments on the ideas, methods and approaches in my own and others' work, relating these to the context in which their work was made

- To adapt and refine my work to reflect the purpose and meaning of the work.

## **Design technology**

- To be motivated enough to refine and further improve their product using mouldable materials
- To think what the user would want when choosing textiles
- To consider how they made their product attractive and strong
- To make up a prototype first
- To use a range of joining techniques
- To incorporate a switch into their product
- To refine their product after testing it
- To incorporate hydraulics and pneumatics
- To make measurements accurate enough to ensure that everything is precise
- To ensure that their product is strong and fit for purpose
- To come up with a range of ideas after they have collected information
- To take a user's view into account when designing
- To produce a detailed step-by-step plan
- To suggest some alternative plans and say what the good points and drawbacks are about each
- To explain why their finished product is going to be of good quality
- To explain how their product will appeal to the audience
- To use a range of tools and equipment expertly
- To persevere through different stages of the making process
- To keep checking that their design is the best it can be
- To check whether anything could be improved
- To evaluate appearance and function against the original criteria

## **Music**

- To describe, compare and evaluate music using musical vocabulary
- To explain why they think their music is successful or unsuccessful
- To suggest improvements to their own or others' work
- To choose the most appropriate tempo for a piece of music
- To contrast the work of famous composers and show preferences
- To explain how tempo changes the character of music
- To identify where a gradual change in dynamics has helped to shape a phrase of music
- Composing
  - To change sounds or organise them differently to change the effect
  - To compose music which meets specific criteria
  - To use their notations to record groups of pitches (chords)
  - To use a music diary to record aspects of the composition process
  - To choose the most appropriate tempo for a piece of music
  - To understand the relation between pulse and syncopated patterns
  - To identify (and use) how patterns of repetitions, contrasts and variations can be organised to give structure to a melody, rhythm, dynamic and timbre
- Performing
  - To breathe in the correct place when singing
  - To sing and use their understanding of meaning to add expression
  - To maintain their part whilst others are performing their part
  - To perform 'by ear' and from simple notations
  - To improvise within a group using melodic and rhythmic phrases
  - To recognise and use basic structural forms e.g. rounds, variations, rondo form



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**Year 5 Learning Objectives**

- To use pitches simultaneously to produce harmony by building up simple chords
- To devise and play a repeated sequence of pitches on a tuned instrument to accompany a song