## Subject: Science States of matter (Y4 PoS)

- compare and group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

# Prior learning:

#### **Y2**:

Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

# Next steps learning:

## <u>KS3</u>

- the properties of the different states of matter (solid, liquid and gas) in terms of the particle model, including gas pressure
- changes of state in terms of the particle model

Theme overview: Children will learn about the differences between solids, liquids and gases, classifying objects and identifying their properties. The children will work scientifically and collaboratively to investigate the weight of a gas. Furthermore, they will have chance to find the ideal temperature to melt chocolate. They will explore in-depth how water changes state, exploring melting, freezing, condensing as well as a particular focus on evaporation. Finally, they will learn about the stages of the water cycle, creating mini water worlds and an interactive water wheel to represent the different stages.

# Small steps:

- 1. To sort and describe materials according to whether they are solid, liquid or gas

  To use material properties to compare and group materials according to whether they are
  solid, liquid or gas
- 2. To investigate if liquids behave the same by making careful observations (and collecting accurate measurements)
- 3. To investigate gases and their uses

  To identify and explore the properties of gases
- 4. To investigate materials as they change state
- 5. To observe that materials change state when they are heated and cooled (and to explore if this is reversible)
- 6. To research the temperature at which materials change state (and to record data accurately)
- 7. To investigate how water evaporates

  To investigate the rate of evaporation

# 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
- plan 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

## Cross curricular links:

Speaking and listening-discussion, justification, hypothesising, evaluate different viewpoints

Maths-data collection and presentation

D&T-cooking and nutrition

# Key vocabulary:

States of matterSolids.Liquids.Gases.EvaporationCondensationMeltingFreezingTemperature

# Key individuals:

# Reading links:

The drop in my drink

A drop in the ocean

Charlie and the Chocolate factory

# Subject: Geography

South America and rainforests

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 understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region in North or South America

physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle

# Prior learning:

**KS1** 

name and locate the world's 7 continents and 5 oceans use basic geographical vocabulary to refer to: key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather

use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage

Links to physical geography study of Africa and North America from Year  ${\sf D}$ 

Links to Science work on habitats in Year D

#### Next steps learning:

**KS3** 

physical geography relating to: geological timescales and plate tectonics; rocks, weathering and soils; weather and climate, including the change in climate from the Ice Age to the present; and glaciation, hydrology and coasts

build on their knowledge of globes, maps and atlases, and apply and develop this knowledge routinely in the classroom and in the field

<u>Theme overview</u>: Children will be concentrating on tropical rainforests with a focus on those in South America. They will look at the layers of the rainforest as well as the habitats they create for living organisms. They will also study the climate of the rainforest and compare it to other places they know. They will compare a rainforest with a known UK Forest. They will also concentrate on how people live and use the forest. This will also include looking at deforestation and conservation.

# Small steps:

- 1. What are rainforests (and where are they found?)
- 2. What is the climate like (and how does this affect the organisms that live there?)
- 3. What are the layers of the rainforest (and how do they differ?)
- 4. How do people live in the rainforest (and what are their settlements like?)
- 5. What is the Amazon rainforest like (and how is it being affected by people?)
- **6.** How can we protect rainforests?

# Cross curricular links:

Science: Living things and their habitats

Maths: Coordinates

Speaking and listening-debate skills, justification

of opinions, listening to others.

British values: Mutual respect and tolerance for

others

# Key vocabulary:

Climate Deforestation

Equator Humid
Native tribes. Species

Weather Layers
Settlement Protection

# Key individuals:

David Attenborough

# Reading links:

The Great Kapok Tree David Attenborough-Little people, big dreams

# Subject: Art

to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]

about great artists, architects and designers in history

# Prior learning:

#### <u>KS1</u>

to use a range of materials creatively to design and make products  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

to use drawing, painting and sculpture to develop and share their ideas, experiences and imagination  ${\sf constant}$ 

to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work

Previous art on Mondrian, previous focus on African art

### Next steps learning:

#### K53

to use a range of techniques and media, including painting to increase their proficiency in the handling of different materials

to analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work

about the history of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day

<u>Theme overview</u>: Children will learn how to make clay monkeys, make picture puzzles using symbols, make dream catchers, draw an important person, create a collage and make traditional drums to create quality artwork that shows progression in skills. The children will also have the opportunity to explore the work of South American artists Frida Khalo, Joaquin Torres Garcia, Leonora Carrington, Diego Rivera, Beatriz Milhazes and Carlos Paez Vilaro.

#### Small steps:

- 1. To recognise the importance of Frida Kahlo and sculpt with clay (with improved skill)
- 2. To recognise the importance of Joaquin Torres Garcia and using paint to create pattern
- 3. To recognise the importance of Leonora Carrington and use craft techniques
- 4. To recognise the importance of Diego Rivera and use colour for effect (with accurate drawing)
- 5. To recognise the importance of Beatriz Milhazes and use collage

# Cross curricular links:

British values: Mutual respect and tolerance for others

Maths: shape, space and measures

Speaking and listening: justify opinions, give wellstructured descriptions

# Key vocabulary:

Textiles Weave
Colour Pattern
Texture. Line
Shape. Form
Space. Sculpture

# Key individuals:

Beatriz Milhazes

Frida Kahlo
Leonora Carrington
Joaquin Torres Garcia
Diego Rivera

# Reading links:

Little people, big dreams-Frida Kahlo

# Subject: Computing

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

# Prior learning:

#### **KS1**

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs

# Next steps learning:

## **KS3**

- understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem
- use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions

<u>Theme overview:</u> Learners will develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. They will also compare digital and non-digital devices. Next, learners will be introduced to computer networks, including devices that make up a network's infrastructure, such as wireless access points and switches. Finally, learners will discover the benefits of connecting devices in a network.

#### Small steps:

- 1. To explain that digital devices accept inputs and produce outputs (and follow a process)
- 2. To classify input and output devices (and describe a simple process)
- 3. To explain how digital devices can be used (and recognise similarities and differences between digital devices and non-digital)
- 4. To recognise different connections (and explain how messages are passed through multiple connections)
- 5. To recognise the make-up of a computer network (and explain the roles of different components)
- 6. To identify how devices are connected (and the benefits of these networks)

## Cross curricular links:

Maths-algebra (Y6), operations (Y3-6)

Geography-map skills

Speaking and listening: articulate instructions, build vocabulary

Key vocabulary:		Key individuals:	Reading links:
Input	Output		
Digital	Device		
Process	Function		
Program	Connection		
Network.	Server		
Wireless	Switch		

<ul> <li>Subject: French</li> <li>listen attentively to spoken language and show understanding by joining in and responding</li> <li>engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help</li> <li>speak in sentences, using familiar vocabulary, phrases and basic language structures</li> <li>read carefully and show understanding of words, phrases and simple writing</li> <li>Theme overview: Children will learn key vocabulary at objects; will combine learning to express preferences</li> </ul>	Prior learning:  General links for EYFS/KS1 new language learning  Prior French work on colours, numbers  and phrases around the theme of school. The class will lead to the school subjects	Next steps learning:  • develop and use a wide-ranging and deepening vocabulary that goes beyond their immediate needs and interests, allowing them to give and justify opinions and take part in discussion about wider issues  • use accurate grammar, spelling and punctuation  • initiate and develop conversations, coping with unfamiliar language and unexpected responses, making use of important social conventions such as formal modes of address  earn vocabulary for school places and classroom
<ol> <li>Small steps:         <ol> <li>To ask for an item in the classroom                 To ask and explain where things are in the class.</li> <li>To listen and follow classroom instructions                 To listen, follow and deliver classroom instructions.                 To name the things in a pencil case.                 To name and describe the things in a pencil case.                  To express an opinion about school subjects (ask and answer questions about places in school to be a simple sentences to say what I like about to use correct grammar in sentences to say were say what I like about to use correct grammar in sentences to say were say wer</li></ol></li></ol>	Cross curricular links: English-grammar, vocabulary, dictionary use Maths-statistics Speaking and listening-building vocabulary, justifying	
Key vocabulary: (see attached vocabulary list)	Key individuals:	Reading links:

# <u>Subject: Music</u> How does music bring us closer together?

- play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
- improvise and compose music for a range of purposes using the interrelated dimensions of music
- listen with attention to detail and recall sounds with increasing aural memory
- use and understand staff and other musical notations
- appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
- develop an understanding of the history of music

# Prior learning:

#### **KS1**

- use their voices expressively and creatively by singing songs and speaking chants and rhymes
- play tuned and untuned instruments musically
- listen with concentration and understanding to a range of highquality live and recorded music
- experiment with, create, select and combine sounds using the interrelated dimensions of music

Previous Charanga units

# Next steps learning:

## **KS3**

- play and perform confidently in a range of solo and ensemble contexts using their voice, playing instruments musically, fluently and with accuracy and expression
- improvise and compose; and extend and develop musical ideas by drawing on a range of musical structures, styles, genres and traditions
- use staff and other relevant notations appropriately and accurately in a range of musical styles, genres and traditions
- listen with increasing discrimination to a wide range of music from great composers and musicians

<u>Theme overview:</u> During this unit, children will build on their prior learning linked with musical notation and composition. They will extend their singing practise by focusing on use of high and low notes. They will develop their playing skills by using more glockenspiels notes to build on their melody playing. This unit will also focus on their use of pulse as well as listening to different genres of music and discussing their opinions.

# Small steps:

- 1. To listen and respond to a piece of music using correct vocabulary; to begin to learn to sing the song
- 2. To improvise using the song with instruments and using correct notation
- 3. To follow music and play instrumental parts to a known song using increased accuracy
- 4. To create a graphic score using correct notation
- 5. To perform using instruments and vocals

# Cross curricular links:

Maths-counting, time
Speaking and listening-justify opinions, building vocabulary consider other viewpoints
Art-pattern

# Key vocabulary:

Tempo Time signature
Andante Crotchet
Minims. Quavers
Beats. Bar

Improvise. Compose Country Baroque Orchestra. Ballad Pop

# Key individuals:

Dolly Parton Handel The Beatles Kylie Minogue

# Reading links:

Subject: PSHE

Health and wellbeing

Healthy lifestyles (physical wellbeing) H13.

Keeping safe H37, H42.

Relationships

Friendships R15.

Managing hurtful behaviour and bullying R19, R20, R21,

R23, R24, R28,

Living in the wider world

Media literacy and digital resilience L11, L12, L13, L14, L15, L16.

Prior learning:

**KS1** 

Health and wellbeing Healthy lifestyles H 9

Keeping safe H34

Relationships

Managing hurtful behaviour and bullying R10, R12, R14,

Living in the wider world

Media literacy and digital resilience L7, L8, L9

Next steps learning:

**KS3** 

Health and wellbeing

Healthy lifestyles H 13

Managing risk and personal safety H30

Relationships

Forming and maintain respectful relationships R13, R14,

R17, R21,

Consent R29

Bullying, abuse and discrimination R 37

Social influences R42

Living in the wider world

Media literacy and digital resilience L20, L21, L22, L23, L24, L25, L26, L27

Theme overview: Children will focus on how it is important to understand and have digital wellbeing. Children will consider what we use the Internet for and the benefits and risks of online activities. Children will learn about screentime and getting a healthy balance between online and offline activities. They will learn about online relationships, including cyberbullying and online stranger danger. Privacy issues will be explored in terms of passwords, personal information and the sharing or forwarding of images and videos. Children will also learn about pressures and challenges that are often associated with social media.

# Small steps:

- 1. To identify the positive and negative of being online (and to know how to look after digital wellbeing)
- 2. To know how to be safe on the internet
- 3. To know how to communicate safely online (and recognise signs of inappropriate online behaviour)
- 4. To know how to share information responsibly online
- 5. To identify things that shouldn't be shared online
- 6. To know what online bullying is and how to deal with it
- 7. To recognise that not all information online is true
- 8. To know how technology can affect wellbeing in different ways

# Cross curricular links:

Computing: use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Speaking and listening: ask questions, build vocabulary, articulate answers and opinions, participate in discussions, role play, evaluate different viewpoints

Reading links:

Emotional Menagerie

The boy, the mole, the fox and the horse

The book of Hopes

# Key vocabulary:

Benefits Risks. Internet Digital wellbeing. Inappropriate. Harmful Online Social media Digital Technology. Bullying

# Key individuals:

# Subject: RE

- identify and begin to describe the similarities and differences within and between religions.
- investigate the significance of religion in the local, national and global communities.
- Reflect on ideas of right and wrong and their own and others' responses to them

# Prior learning:

- Identify the importance, for some people, of belonging to a religion and recognise the difference this makes to their lives
- Reflect on and consider religious and spiritual feelings, experiences and concepts such as worship, wonder, praise, thanks, concern, joy and sadness

# Next steps learning:

- Investigate and explain the differing impacts of religious beliefs and teachings on individuals. communities and societies
- Analyse and explain how religious beliefs and ideas are transmitted by people, texts and traditions

Theme overview: This unit will look at each religion's view of peace and take children on a journey through different acts of achieving and creating peace. The children will compare and contrast the concept of peace across religions. Look at symbolic people of peace and well-known symbols of peace before creating their

# Small steps:

- 1. To understand (and explain) the meaning of the word peace
- 2. To recognise (and explain) how different religions view peace
- To describe (and explain) the similarities and differences between religions views on peace
- To explain how some religions use inner peace to find peace (and reflect on the technique)
- 5. To explain how religions focus on community cohesion to bring about peace (and recognise this in the world)
- 6. To recognise key peace symbols (and explain their importance)

## Cross curricular links:

Reading links:

British values: mutual respect and tolerance for others

PSHE: Relationships, living in the wider world Speaking and listening: listen and respond, justify opinions, take part in discussions, evaluate different viewpoints

# Key vocabulary:

Acts of peace Peace Non-violence Conflict **Pacifist** Inner peace Symbols of peace Mindfulness

Community cohesion. Fairtrade

# Key individuals:

Gandhi Buddha Jesus Guru Nanak

# The book of Hopes

Mahatma Gandhi Little people, big dreams

Subject: PE	Prior learning:	Next steps learning:
<ul> <li>use running, jumping, throwing and catching in isolation and in combination</li> <li>play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending</li> <li>compare their performances with previous ones and demonstrate improvement to achieve their personal best</li> </ul>	master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and coordination, and begin to apply these in a range of activities     participate in team games, developing simple tactics for attacking and defending	<ul> <li>use a range of tactics and strategies to overcome opponents in direct competition through team and individual games [for example, badminton, basketball, cricket, football, hockey, netball, rounders, rugby and tennis]</li> <li>analyse their performances compared to previous ones and demonstrate improvement to achieve their personal best</li> <li>take part in competitive sports and activities outside school through community links or sports clubs</li> </ul>
Small steps:	Cross curricular links:	
1. To hold a lacrosse stick correctly (and begin t		
2. To begin to understand the technique of throu		
Key vocabulary: Lacrosse. Stick. Ball. Throw. Catch.	Key individuals:	Reading links: