

Year 6 Spring Term Skills and Knowledge

At Moorside Primary School our approach to our teaching and learning is through a skill based curriculum. Below are the subjects and skills being taught in the spring term:

Science – Animals including humans

Essential skills and knowledge

- To identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
- To recognize the impact of diet, exercise, drugs and lifestyle on the way the body functions
- To describe the ways in which nutrients and water are transported within animals, including humans

Communication skills

- To explain how to keep the body healthy and how the body might be damaged by some drugs and other substances that can be harmful to the human body

Working together – collaborative skills

- To explore and answer questions that help to understand how the circulatory system enables the body to function

Application of number

- To take measurements using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- To record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

Information Technology

- To use ICT to explain hypothesis, methods and results
- To record results using a digital camera or iPad independently
- To explore the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health

Science – Light

Essential skills and knowledge

- To recognise that light appears to travel in straight lines
- To use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into our eyes
- To explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
- To use the idea that light travels straight lines to explain why shadows have the same shape as the objects that cast them

Working together – collaborative skills

- To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- To identify scientific evidence that has been used to support or refute ideas or arguments

Problem solving

- To use test results to make predictions to set up further comparative and fair tests
- To describe and make a periscope and using the idea that light appears to travel in straight lines to explain how it works
- To use shadow puppets to investigate the relationship between light sources, objects and shadows

Information Technology

- To use secondary sources and recognise when they will be most useful to research ideas and begin to separate opinion from fact

Computing – Programming

Programming and making things work with understanding

- To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems
- To design and write programs to answer own questions

- To test, evaluate and refine
- To use programs to simulate real world experiences
- To understand when a variable is needed in a program
- To use one or more input and predict then test outcomes
- To set my own challenges
- To use formula in a spreadsheet to present and analyse information
- To present the results appropriately
- To critically evaluate data
- To identify the purpose of a task and select the most appropriate tool/s for effectiveness
- To store information online where it can be shared with others
- To use ICT to measure sound, light, temperature Create databases with fields, rows, columns
- To know that devices can have more than one pre-determined action or result
- To make devices have more than one pre-determined action
- To explore what-if scenarios
- To use video chat in school

Physical Education

Gymnastics - Developing skills

- To perform fluently and with control, even when performing difficult combinations
- To work well with a partner or a small group to practise and refine my work

Gymnastics - Making and applying

- To make up longer sequences and perform them with fluency and clarity of movement
- To vary direction, levels and pathways, to improve the look of a sequence
- To use planned variations and contrasts in actions and speed in my sequences

Gymnastics - Physical and mental

- To understand what it is important to include in a warm up for gymnastic activity
- To recognise that a cool down is important
- To understand how gymnastic activity helps my overall health

Gymnastics - Evaluate and improve

- To watch performances and use criteria to make judgements and suggest improvements
- To explain how a sequence is formed, using appropriate terminology to describe technique and composition

Invasion Games – Basketball and hockey

Invasion Games - Developing skills

- To combine and perform skills with control, adapting them to meet the needs of the situation
- To perform skills with greater speed

Invasion Games - Making and applying

- To choose when to pass or dribble, so that I keep possession and make progress towards the goal
- To use attacking and defending skills appropriately in games
- To choose and use different formations to suit the needs of the game

Invasion Games - Physical and mental

- To know the importance of being fit, and what types of fitness are most important for games
- To begin to anticipate what they will feel like after playing games
- To understand how playing games can contribute to a healthy lifestyle

Invasion Games - Evaluate and improve

- To recognise and describe the best points in an individual's and a team's performance
- To identify aspects of my own and others' performances that need improvement, and suggest how to improve them

History – Vikings and the Anglo Saxons – Struggle for the kingdom of England to the time of Edward the Confessor

Historical knowledge (constructing the past and sequencing the past)

- To place events, objects, themes and people from my history topic on a timeline
- To place a number of events, objects, themes and people from topics I have studied on a timeline
- To place historical periods I have studied as well as information about my topic on a timeline
- To speculate and hypothesise about the past, formulating my own theories and reasons for change

History concepts (change and development, cause and effect, significance and interpretations)

- To describe some similarities and differences between people (e.g. rich and poor), events and beliefs in the period of history I am studying
- To describe similarities and differences between some people, events and beliefs in the period of history I am studying
- To describe similarities and differences in society, culture and religion in Britain at local and national levels
- To describe and suggest some reasons for similarities and differences in society, culture and religion in Britain and the wider world
- To suggest which people and causes and consequences of change are more important
- I can explain which causes and consequences are the most significant

Historical enquiry (planning and carrying out historical enquiry/using sources of evidence)

- To devise historically valid questions about change, cause, similarity and difference

Geography – The Arctic and Antarctic

Location and place knowledge

- To name and locate key topographical features including hills and mountains
- To name the largest desert in the world
- To name and locate key topographical features including coasts and rivers, and land-use patterns
- To name and locate geographical regions and their identifying key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time
- To identify and name the Tropics of Cancer and Capricorn as well as the Arctic and Antarctic circles
- To locate the world's countries, using maps to focus on Europe, N and S America concentrating on their environmental regions, key characteristics, countries and major cities
- To identify the position and significance of latitude, longitude, Equator, Northern Hemisphere and Southern Hemisphere
- To identify the position and significance of the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)
- To explain how the time zones work
- To demonstrate an understanding of geographical similarities and differences through study of human and physical geography of a region of the UK and a region within North or South America

Physical and human geography

- To discuss, describe and understand key aspects of human geography, including: types of settlement and land use, economic activity
- To describe and understand human geography, including economic activity, including trade links and the distribution of natural resources including energy, food, minerals and water
- To give extended descriptions of the physical features of different places around the world
- To describe how some places are similar and others are different in relation to their human features
- To use key geographical vocabulary with a good understanding
- To make a plausible case for environmental change

Geographical enquiry

- To locate on a world map the main countries in Africa, Asia, Australasia and Oceania
- To use maps, atlases, globes and digital/computer mapping (Google Earth) to locate countries and describe features studied
- To make careful measurements and use the data
- To use maps, aerial photos, plans and web resources to describe what a locality might be like
- To expand map skills to include non-UK countries

Art and design – Louise Goodman (Craft maker)

Developing, planning and communicating ideas

- To plan and use shading for mood and feelings
- To annotate my work in my sketch books
- To give examples of the above using pencil, charcoal, paint, clay and other forms
- To have developed my own techniques, including my control and use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design

Working with tools, equipment, materials and components to make quality products

- To select and use a variety of materials to create mood and feelings in my work
- To use a sketch book to sort, discuss and compare ideas

Evaluating processes and products

- To talk about my work and what was successful

Drawing and painting

- To begin to use perspective in both abstract and real life art
- To work with care and precision towards an end point, whilst making adaptations following my own reflections and the comments of others

Printing and sketch books

- To annotate my sketch book

Knowledge

- To know about great artists, architects and designers in history
- To research what critics say about great artists, craft makers and designers
- To research what critics say about some art examples and reach own conclusions
- To give a report on various art galleries around the world and compare them to galleries in the UK
- To have an understanding of the historical and cultural development of art forms

Design and Technology - Mechanical cams

Developing, planning and communicating ideas

- To use a range of information to inform my design
- To follow and refine my plan if necessary
- To justify my plan to someone else
- To design including hydraulics and pneumatics when appropriate
- To draw scaled diagrams with increasing use of ratio

Evaluating processes and products

- To make sure the product is fit for purpose
- To know whether more or different information is needed to make the product even better
- To make a product to meet all design criteria
- To consider the use of the product when selecting materials

Mechanisms and Structures

- To justify the selection of certain material
- To ensure work is precise and accurate
- To hide joints so as to improve the looks of the product
- To justify why the chosen material was the best for the task
- To justify design in relation to the audience
- To use tools and materials precisely
- To change the way I am working if needed
- To measure and cut out in precise detail, and make sure that finished products are carefully finished
- To make separate elements of a model before combining into the finished article
- To understand how an article might be mass produced
- To produce a simple instruction manual or handbook for my product

Music - Vivaldi

Elements of music (listening and understanding)

- **Pitch:** recognise and identify different scale patterns: major, minor, pentatonic and raga
- **Dynamics:** understand how the full range of dynamics can be manipulated for expressive effect
- **Tempo:** understand how the full range of tempi can be manipulated for expressive effect
- **Texture:** distinguish between textures, and how they can be used for expressive effect; understand simple chord structures
- **Timbre:** identify families of instruments, and different ensemble combinations, e.g.: jazz band, orchestra and choir

Applying and understanding

- To identify how a combination of elements are used in a variety of musical styles and to communicate musical effects
- To describe what I hear using a wide range of musical vocabulary
- To identify instruments within different families of instruments, and electronic sounds
- To identify composers' intent in music heard and performed

Creating

- To develop ideas within musical structures
- To use simple chord sequences to structure pieces

Responding and reviewing

- To compare and contrast music heard and performed with an awareness of the music's context and purpose
- To use variety of art forms to respond to changes with increased emphasis on changes in metre, textures and structures
- To use a variety of art forms to respond to changes with increased emphasis on changes in metre, textures and structures
- To express and justify ideas and opinions about music heard and performed using an appropriate and extended musical vocabulary
- To recognise differences between music of different times and culture

Spring 1 RE – The importance of worship

Spring 2 RE - Muhammad

Modern Foreign Languages – French

Oracy

- To understand the main points in a simple story or song

Literacy

- To identify different text types and read a short text for enjoyment or for information
- To write sentences on a topic using a model

PSHE – Health and wellbeing

- To know about change, including transitions (between key stages and schools), loss, separation, divorce and bereavement
- To know that bacteria and viruses can affect health and that following simple routines can reduce their spread
- To recognise when they need help and to develop the skills to ask for help; to use basic techniques for resisting pressure to do something dangerous, unhealthy, that makes them uncomfortable or anxious or that they think is wrong
- To know school rules about health and safety, basic emergency aid procedures, where and how to get help
- To know what is meant by the term 'habit' and why habits can be hard to change
- To know which, why and how, commonly available substances and drugs (including alcohol, tobacco and 'energy drinks') can damage their immediate and future health and safety; that some are restricted, and some are illegal to own, use and give to others
- To know how their body will, and their emotions may, change as they approach and move through puberty
- To know about human reproduction
- To know about taking care of their body, understanding that they have the right to protect their body from inappropriate and unwanted contact; understanding that actions such as female genital mutilation (FGM) constitute abuse and are a crime, and develop the skills and strategies required to get support if they have fears for themselves or their peers
- To know strategies for keeping physically and emotionally safe including road safety (including cycle safety- the Bikeability programme), and safety in the environment (including rail, water and fire safety)
- To know strategies for keeping safe online; the importance of protecting personal information, including passwords, addresses and the distribution of images of themselves and others
- To know about people who are responsible for helping them stay healthy and safe; how they can help these people to keep them healthy and safe
- To know the responsible use of mobile phones: safe keeping (looking after it) and safe user habits (time limits, use of passcode, turning it off at night etc.)
- To know how to manage requests for images of themselves or others; what is and is not appropriate to ask for or share; who to talk to if they feel uncomfortable or are concerned by such a request