

## **Key Stage 2 Curriculum**

Key Stage 2 consists of Years 3 - 6 – often divided into Lower KS2 (Years 3 and 4) and Upper KS2 (Years 5 and 6). At Newton International School we follow the Programmes of Study as set out in the National Curriculum in England.

### **English**

At Newton International School we follow the English Programmes of Study as set out in the National Curriculum in England (2014).

In KS2 children develop skills in speaking, listening, reading and writing. They learn to express themselves creatively and imaginatively and to communicate with others effectively. Children learn to become enthusiastic and critical readers of stories, poetry and drama as well as non-fiction and media texts. Studying English helps children understand how language works by looking at its patterns and structure enabling them to adapt what they say and write in different situations.

The overarching aim for English in the National Curriculum is to promote high standards of language and literacy by equipping pupils with a strong command of the spoken and written word, and to develop their love of literature through widespread reading for enjoyment. The National Curriculum for English aims to ensure that all pupils:

- read easily, fluently and with good understanding
- develop the habit of reading widely and often, for both pleasure and information
- acquire a wide vocabulary, an understanding of grammar and knowledge of linguistic conventions for reading, writing and spoken language
- appreciate our rich and varied literary heritage
- write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences
- use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas
- are competent in the arts of speaking and listening, making formal presentations, demonstrating to others and participating in debate.

It is essential that children are surrounded in a rich literary environment at both home and school. In KS2 your child will be sent home each week with a book to read, please ensure you take the time to listen to your child and discuss what they have read.

### **Mathematics**

At Newton International School we follow the Mathematics Programme of Study as set out in the National Curriculum in England (2014).

#### **Year 3 and Year 4 (Lower Key Stage 2)**

The principal focus of mathematics teaching in LKS2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and

the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

### **Year 5 and Year 6 (Upper Key Stage 2)**

The principal focus of mathematics teaching in UKS2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell and pronounce mathematical vocabulary correctly

## **Science**

### **Year 3 and Year 4 (Lower Key Stage 2)**

The principal focus of science teaching in LKS2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using

secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

**Year 3** – Plants, Animals, Rocks, Light, Forces and Magnets

**Year 4** – Living Things and their Habitat, Animals including Humans, States of Matter, Sound, Electricity

### **Year 5 and Year 6 (Upper Key Stage 2)**

The principal focus of science teaching in UKS2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At UKS2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

**Year 5** – Living Things and their Habitats, Animals including Humans, Properties of Materials, Earth and Space, Forces

**Year 6** – Living Things and their Habitats, Animals including Humans, Adaptations and Inheritance, Light, Electricity

## **History**

In KS2 pupils should continue to develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. They should note connections, contrasts and trends over time and develop the appropriate use of historical terms. They should regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. They should construct informed responses that involve thoughtful selection and organisation of relevant historical information. They should understand how our knowledge of the past is constructed from a range of sources.

## **Geography**

In KS2 pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America and Middle East. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.

Pupils will be taught:

### **Locational knowledge**

- To 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
- To name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, 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 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**

- To 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 within North or South America

### **Human and physical geography**

To describe and understand key aspects of:

- Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
- Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

### **Geographical skills and fieldwork**

- To use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- 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
- To use fieldwork 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

### **Computing**

Computing is taught through specialist lessons in KS2. Children will take part in a computing lesson once a week. As well as this a number of opportunities for children to be using different technologies in the classroom to support other curriculum areas will occur each week.

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

## **French**

All children from Year 3 to Year 6 will learn French. They will study different topics in French ranging from numbers and the alphabet, to being able to introduce themselves in French and talk about their families. French is taught by a native French speaker.

## **Art and Design**

Art is taught through specialist lessons each week in KS2. Specialist teachers work closely with each year group to ensure the work completed in Art will enhance the subjects/topics being taught in class.

Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught:

- To create sketch books to record their observations and use them to review and revisit ideas
- 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.

## **Music**

In KS2 Music is taught in class in practical hands on lessons.

Pupils should be taught to sing and play musically with increasing confidence and control. They should develop an understanding of musical composition, organising and manipulating ideas within musical structures and reproducing sounds from aural memory.

Pupils should be taught to:

- 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 inter-related 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.

## **Physical Education**

Physical education is taught as a specialist subject, it is essential that children are in the correct PE clothing for their weekly lessons.

Pupils should 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. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.