Year 3

Spring term

2023

Dear parents,

The Year 3 team has put together this pack which contains information on what we are covering in the Spring term. It provides in depth details on what your child will cover in the following subjects:

- English
- Maths
- Science
- World Studies

We hope that this will provide you with an accurate picture on what your children will be studying in the Spring term of this academic year.

Thank you

The Year 3 team

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English in Year 3

English in Spring term will cover:

Fiction: Science fiction/Fantasy and Poetic language/word play.

Non-fiction: Discussion texts and Explanations texts.

Read Write and Inc. Literacy and Language

Unit 3

Overview of the unit:

A Tale of Two Robots by Roy Apps is humorous story that introduces a science fiction element into a familiar setting. Children will be encouraged to develop empathetic responses to characters and situations and an awareness of different points of view.

The linked Non-Fiction week will develop the children's understanding of discussion texts, fact and opinion. The focus is on understanding the structure and purpose of a text that gives a balanced argument on a topic, i.e. a discussion text. Children will explore discussion texts that about how long break times should be and whether books or computer games are more worthwhile. They will also participate in a class debate about whether dogs or cats make better pets.

Where appropriate, the children will be encouraged to develop an awareness of audience and purpose in relation to the fiction and non-fiction texts they are reading and writing.

Fiction

Students will:

- Connect and explore the central themes and ideas in A Tale of Two Robots of invention and science, by making links with other texts and their own experience.
- Explore how Roy Apps develop plot.
- Devise questions for the main character to ask and answer in role.

Writing:

To write a new episode for the story.

Non-fiction:

Students will:

- Consider what makes a discussion balanced
- Look at the language we use to structure a balanced and discursive argument
- Role-play a debate in order to engage fully with both points of view

Writing:

To write a balanced discussion text about whether break times are too short.

Unit 4

Overview of the unit:

Using a number of short tongue twisters, riddles, nonsense poems and a longer performance poem, this unit encourages children to explore the impact of word play and unusual imagery. It also gives them opportunity to learn poem and enjoy the experience of performing it in a dramatic way.

The non-fiction week is linked to the scientific subject of the water-cycle and will develop the children's understanding of the language features of explanation texts in written and spoken forms.

Where appropriate, the children will be encouraged to develop an awareness of audience and purpose in relation to the fiction and non-fiction texts they are reading and writing.

Fiction

Students will:

- Explore and discuss key features of different types of poems
- Recognise and discuss poetic techniques such as alliteration in 'Water-cycle'
- Explore a poem and perform it.

Writing:

To write a water-cycle poem, and participate in a class poetry performance.

Non-fiction:

Students will:

- Explore the aspects of explanation texts that make them clear for the reader
- Investigate different types of explanation texts.

Writing:

To write two clear and useful explanations, then present them to the class.

Year 3

Spoken language

Statutory requirements

Pupils should be taught to:

- listen and respond appropriately to adults and their peers
- ask relevant questions to extend their understanding and knowledge
- use relevant strategies to build their vocabulary
- articulate and justify answers, arguments and opinions
- give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
- maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
- use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
- speak audibly and fluently with an increasing command of Standard English
- participate in discussions, presentations, performances, role play, improvisations and debates
- gain, maintain and monitor the interest of the listener(s)
- consider and evaluate different viewpoints, attending to and building on the contributions of others
- select and use appropriate registers for effective communication.

Reading – word reading

Statutory requirements

Pupils should be taught to:

- apply their growing knowledge of root words, prefixes and suffixes (etymology and morphology) as listed in English Appendix 1, both to read aloud and to understand the meaning of new words they meet
- Read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word.

Statutory requirements

Reading – comprehension

Statutory requirements

Pupils should be taught to:

- develop positive attitudes to reading and understanding of what they read by:
- listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
- reading books that are structured in different ways and reading for a range of purposes
- using dictionaries to check the meaning of words that they have read
- increasing their familiarity with a wide range of books, including fairy stories, myths and legends, and retelling some of these orally
- identifying themes and conventions in a wide range of books

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- preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action
- discussing words and phrases that capture the reader's interest and imagination
- recognising some different forms of poetry [for example, free verse, narrative poetry]
- understand what they read, in books they can read independently, by:
    1. checking that the text makes sense to them, discussing their understanding and explaining the meaning of words in context
    2. asking questions to improve their understanding of a text
    3. drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
    4. predicting what might happen from details stated and implied
    5. identifying main ideas drawn from more than one paragraph and summarising these
    6. identifying how language, structure, and presentation contribute to meaning
    7. retrieve and record information from non-fiction
- Participate in discussion about both books that are read to them and those they can read for themselves, taking turns and listening to what others say.

Writing – transcription

Statutory requirements

Spelling (see English Appendix 1)

Pupils should be taught to:

- use further prefixes and suffixes and understand how to add them (English Appendix 1)
- spell further homophones
- spell words that are often misspelt (English Appendix 1)
- place the possessive apostrophe accurately in words with regular plurals [for example, girls', boys'] and in words with irregular plurals [for example, children's]
- use the first two or three letters of a word to check its spelling in a dictionary
- Write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far.

Writing – handwriting and presentation

Statutory requirements

Handwriting

Pupils should be taught to:

- use the diagonal and horizontal strokes that are needed to join letters and understand which letters, when adjacent to one another, are best left un joined
- increase the legibility, consistency and quality of their handwriting [for example, by ensuring that the down strokes of letters are parallel and equidistant; that lines of writing are spaced sufficiently so that the ascenders and descenders of letters do not touch].

Statutory requirements

Handwriting and presentation

Pupils should be taught to:

- write legibly, fluently and with increasing speed by:
  - Choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters
  - Choosing the writing implement that is best suited for a task.

Writing – composition

Statutory requirements

Pupils should be taught to:

- plan their writing by:
    1. discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar
    2. discussing and recording ideas
- draft and write by:
    1. composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich vocabulary and an increasing range of sentence structures (English Appendix 2)
    2. organising paragraphs around a theme
    3. in narratives, creating settings, characters and plot
    4. in non-narrative material, using simple organisational devices [for example, headings and sub-headings]
- evaluate and edit by:
    1. assessing the effectiveness of their own and others' writing and suggesting improvements
    2. proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences.
- proof-read for spelling and punctuation errors
- Read aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear.

Writing – vocabulary, grammar and punctuation

Statutory requirements

Pupils should be taught to:

- develop their understanding of the concepts set out in English Appendix 2 by:
    1. extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although
    2. using the present perfect form of verbs in contrast to the past tense
    3. choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition
    4. using conjunctions, adverbs and prepositions to express time and cause

Statutory requirements
5. using fronted adverbials 6. learning the grammar for Year 3 and 4 in English Appendix 2 • indicate grammatical and other features by: 1. using commas after fronted adverbials 2. indicating possession by using the possessive apostrophe with plural nouns using and punctuating direct speech • Use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading.

Year 3: Detail of content to be introduced (statutory requirement)	
Word	Formation of **nouns** using a range of **prefixes** [for example *super–*, *anti–*, *auto–*] Use of the **forms** *a* or *an* according to whether the next **word** begins with a **consonant** or a **vowel** [for example, *a rock*, *an open box*] **Word families** based on common **words**, showing how words are related in form and meaning [for example, *solve, solution, solver, dissolve, insoluble*]
Sentence	Expressing time, place and cause using **conjunctions** [for example, *when*, *before*, *after*, *while*, *so*, *because*], **adverbs** [for example, *then*, *next*, *soon*, *therefore*], or **prepositions** [for example, *before*, *after*, *during*, *in*, *because of*]
Text	Introduction to paragraphs as a way to group related material Headings and sub-headings to aid presentation Use of the **present perfect** form of **verbs** instead of the simple past [for example, *He has gone out to play* contrasted with *He went out to play*]
Punctuation	Introduction to inverted commas to **punctuate** direct speech
Terminology for pupils	preposition, conjunction word family, prefix clause, subordinate clause direct speech consonant, consonant letter vowel, vowel letter inverted commas (or 'speech marks')

Maths in the Spring Term

Maths in the Spring term children will expand their knowledge by teaching them various ways to calculate and solve problems. This Spring term, the following topics will be taught:

- numbers and place value
- Mental addition and subtraction.
- Problem solving, reasoning and algebra.
- Mental multiplication and division
- Statistics
- Fractions, ratio and proportion
- Geometry: properties of shapes Understanding fractions
- Geometry: position and directions
- Measurement
- Written multiplication and division

These are all new topics that the children will be learning and they will have to use their prior knowledge of topics covered this term as a basis to their learning. The following is a copy of the mid-term plan that includes a detailed breakdown of the subjects covered in Spring term. The plan provides topics week by week so that you are aware of what is being covered on a weekly basis.

Maths Spring Term Plan 2022

Spring 1 term

Wk	Weekly Summary	Strands	Objectives
1	Rehearse place value in 3-digit numbers, order them on a number line and find a number in between; compare number sentences; solve additions and subtractions using place value; multiply and divide by 10 (whole number answers); count in steps of 10, 50 and 100.	Number and place value (NPV)	**NPV.33** Understand place value in 3-digit numbers by creating 3-digit numbers, placing them on a number line and solving place value additions and subtractions **NPV.34** Order and compare 3-digit numbers and say a number between **NPV.38** Multiply 2-digit numbers by 10 **NPV.39** Divide 3-digit multiples of 10 by 10 **NPV.54** Divide large multiples of 10 and 100 by 10 and 100 to give whole number answers **NPV.40** Count in 10s and 100s up to 1000 **NPV.41** Count on and back in 50s
		Mental addition and subtraction (MAS)	**MAS.41** Add multiples of 10 and 100 to 3-digit numbers **MAS.42** Subtract multiples of 10 and 100 from 3-digit numbers
		Problem solving, reasoning and algebra (PRA)	**PRA.44** Spot patterns and relationships and make predictions
2	Add pairs of 2-digit numbers using partitioning (crossing 10s, 100 or both) and then extend to add two 3-digit numbers (not crossing 1000); recognise and sort multiples of 2, 3, 4, 5, and 10; double the 4 times-table to find the 8 times-table; derive division facts for the 8 times-table; multiply and divide by 4 by doubling or halving twice	Mental addition and subtraction (MAS)	**MAS.30** Add pairs of 2-digit numbers using partitioning (totals < 100) **MAS.31** Add pairs of 2-digit numbers with a total ≤ 198 **MAS.46** Mentally add two friendly 3-digit numbers
		Mental multiplication and division (MMD)	**MMD.39** Understand what a multiple is and identify multiples **MMD.40** Count in 8s and recall multiplication and division facts for the ×8 table **MMD.41** Use doubling and halving to multiply and divide by 4 and 8 and solve correspondence problems **MMD.36** Double and halve numbers to 100, including partitioning 2-digit numbers
		Statistics (STA)	**STA.11** Sort objects on to a Venn diagram (two overlapping sets)
		Problem solving, reasoning and algebra (PRA)	**PRA.44** Spot patterns and relationships and make predictions
3	Identify 1/2s, 1/3s, 1/4,s 1/6s, and 1/8s; realise how many of each make a whole; find equivalent fractions; place fractions on a 0 to 1 line; find fractions of amounts	Fractions, ratio and proportion (FRP)	**FRP.24** Understand the concept of a non-unit fraction (non-unit halves, non-unit thirds, non-unit quarters, non-unit eighths) **FRP.32** Add fractions with the same denominator to make one whole **FRP.41** Understand unit and non-unit fractions with denominators ≤ 12 **FRP.43** Know fraction complements to 1 (fractions with denominators ≤12) **FRP.34** Begin to understand equivalence by placing fractions on a number line **FRP.46** Develop an understanding of equivalence in fractions; 1/2s, 1/3s, 1/4s, 1/5s, 1/6s, 1/8s, 1/10s **FRP.33** Place fractions with denominators ≤ 8 on a number line

			FRP.25 Use fraction strips to find fractions of amounts **FRP.30** Find familiar fractions of small amounts
		Problem solving, reasoning and algebra (PRA)	**PRA.46** Solve problems involving fractions (unit and non-unit fractions with small denominators)
4	Recognise right angles and know they are 90°; understand angles are measured in degrees; recognise ° as the symbol for the measurement of degrees; name and list simple properties of 2D shapes; begin to understand and use the term perimeter to mean the length/distance around the edge (border) of a 2D shape; begin to calculate using a ruler; know a right angle is a quarter turn; know 360° is a full turn; begin to understand angles and identify size of angles in relation to 90°	Geometry: properties of shapes (GPS)	**GPS.48** Identify whether angles are greater than or less than a right angle **GPS.50** Begin to understand that angles are measured in degrees **GPS.54** Estimate and measure angles, recognising that they are measured in degrees **GPS.24** Understand that 2D shapes with straight sides are polygons and so identify polygons **GPS.25** Name and identify 2D shapes including circles, ovals and simple polygons **GPS.30** Identify right angles in 2D shapes **GPS.45** Compare and classify squares, rectangles and triangles based on their properties and sizes **GPS.53** Identify and describe angles as more than 90°, less than 90° or right angles in 2D shapes
		Geometry: position and direction (GPD)	**GPD.29** Associate angle with a measure of turn **GPD.30** Identify right angles (90°) as quarter turns **GPD.41** Identify right angles, recognising one right angle as a quarter turn and two right angles as half a turn **GPD.44** Identify right angles, recognising three right angles as a three-quarter turn and four right angles as a whole turn **GPD.46** Associate angles smaller and larger than 90° with turn
		Measurement (MEA)	**MEA.53** Measure the perimeter of simple shapes
5	Place 3-digit numbers on empty 100 number lines; begin to place 3-digit numbers on 0-1000 landmarked and empty number lines; round 3-digit numbers to the nearest ten and to the nearest hundred; use counting up as a strategy to perform mental subtraction (Frog); subtract pounds and pence from five pounds; use counting up (Frog) as a strategy to perform mental subtraction of amounts of money; subtract pounds and pence from ten pounds	Number and place value (NPV)	**NPV.33** Understand place value in 3-digit numbers by creating 3-digit numbers, placing them on a number line and solving place value additions and subtractions **NPV.36** Round 3-digit numbers up or down to the nearest 100 and 10
		Mental addition and subtraction (MAS)	**MAS.33** Subtract 2-digit from 2-digit numbers by counting up **MAS.37** Subtract by counting up from a 2-digit to a 3-digit number < 200 **MAS.40** Find change from £5, £10 and £20 by counting up

Week 6 will be revision on all that was covered during Spring term 1.

Spring 2 terms

Wk	Weekly Summary	Strands	Objectives
6	Understand place-value in 3-digit numbers; separate 3-digit numbers into hundreds, tens, and ones; add two 3-digit numbers using vertical written addition (expanded); add 2- and 3- digit numbers using vertical written addition (expanded)	Number and place value (NPV)	**NPV.33** Understand place value in 3-digit numbers by creating 3-digit numbers, placing them on a number line and solving place value additions and subtractions **NPV.48** Read and write numbers to at least 1000 in numerals and in words
		Problem solving, reasoning and algebra (PRA)	**PRA.42** Work systematically, using logical reasoning and deduction **PRA.45** Begin to make generalisations
		Written addition and subtraction (WAS)	**WAS.41** Use expanded column addition to add pairs of 3-digit numbers **WAS.45** Use column addition to add several 2-digit numbers
7	Add two 2-digit numbers mentally; add 2-digit to 3-digit numbers mentally using place value and rounding; add two 3-digit numbers using expanded written method (answers under 1000); begin to move tens and hundreds moving towards formal written addition; add two 3-digit numbers using expanded column addition; investigate patterns in numbers when adding them; choose to solve addition using a mental method or expanded column addition (written method)	Mental addition and subtraction (MAS)	**MAS.30** Add pairs of 2-digit numbers using partitioning (totals < 100) **MAS.45** Add mentally 2-digit to 3-digit numbers by partitioning or counting on **MAS.46** Mentally add two friendly 3-digit numbers
		Written addition and subtraction (WAS)	**WAS.41** Use expanded column addition to add pairs of 3-digit numbers
		Problem solving, reasoning and algebra (PRA)	**PRA.42** Work systematically, using logical reasoning and deduction **PRA.44** Spot patterns and relationships and make predictions
8	Tell the time to the nearest minute on analogue and digital clocks (minutes past and minutes to); time events in minutes and seconds; find a time after a given interval (not crossing the hour); calculate time intervals; solve	Measurement (MEA)	**MEA.51** Recognise Roman numerals on analogue clocks **MEA.54** Write and tell the time to the nearest minute using analogue and digital clocks **MEA.48** Estimate, solve problems and read time with increasing accuracy; record and compare time using seconds, minutes, hours **MEA.49** Know the number of seconds in a minute, minutes in an hour, hours in a day and days in a week **MEA.52** Compare durations of events to calculate the time taken by particular events or tasks

	word problems involving time		
9	Order 3-digit numbers and find numbers between; solve subtractions of 3-digit - 3-digit numbers using counting up (Frog); use counting up and counting back as strategies to perform mental subtractions; choose to solve a given subtraction by counting up or counting back	Number and place value (NPV)	**NPV.34** Order and compare 3-digit numbers and say a number between
		Mental addition and subtraction (MAS)	**MAS.43** Add to the next multiple of 100 by counting up from any 2-digit or 3-digit number **MAS.44** Subtract a 3-digit from a 3-digit number (with a difference < 50) by counting up **MAS.49** Count up to subtract any 3-digit from 3-digit number **MAS.33** Subtract 2-digit from 2-digit numbers by counting up **MAS.37** Subtract by counting up from a 2-digit to a 3-digit number < 200 **MAS.42** Subtract multiples of 10 and 100 from 3-digit numbers
		Problem solving, reasoning and algebra (PRA)	**PRA.44** Spot patterns and relationships and make predictions
10	Double and halve numbers up to 100 by partitioning; solve word problems involving doubling and halving; multiply numbers between 10 and 25 by 1-digit numbers using the grid method; divide multiples of 10 by 1-digit numbers using known tables facts; see the relation between multiplication and division	Mental multiplication and division (MMD)	**MMD.36** Double and halve numbers to 100, including partitioning 2-digit numbers **MMD.43** Multiply mentally 2-digit by 1-digit numbers using partitioning **MMD.37** Understand division as the inverse of multiplication
		Written multiplication and division (WMD)	**WMD.43** Use known tables and place value to multiply 2-digit by 1-digit numbers with the grid method **WMD.55** Solve problems involving multiplying and adding using the distributive law to multiply 2-digit numbers by 1-digit numbers (partitioning)
		Problem solving, reasoning and algebra (PRA)	**PRA.48** Solve problems involving multiplication and division, including missing number problems

Week 12 will be revision on all what was covered during Spring term 2

Lower Key Stage 2 – Year 3 and 4

The principal focus of mathematics teaching in Lower Key Stage 2 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 3 programme of study

Number – number and place value

Statutory requirements

Pupils should be taught to:

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- Read and write numbers from 1 to 20 in numerals and words.

Number – addition and subtraction

Statutory requirements

Pupils should be taught to:

- Add and subtract numbers mentally, including:

  a three-digit number and ones

  a three-digit number and tens

  a three-digit number and hundreds

- Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- Estimate the answer to a calculation and use inverse operations to check answers
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Number – multiplication and division

Statutory requirements

Pupils should be taught to:

- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which objects are connected to m objects.

Statutory requirements

Number – fractions

Statutory requirements

Pupils should be taught to:

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- Recognise and show, using diagrams, equivalent fractions with small denominators
- Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]
- Compare and order unit fractions, and fractions with the same denominators
- Solve problems that involve all of the above.

Measurement

Statutory requirements

Pupils should be taught to:

- measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- measure the perimeter of simple 2-D shapes
- add and subtract amounts of money to give change, using both £ and p in practical contexts
- tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
- estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight
- know the number of seconds in a minute and the number of days in each month, year and leap year
- Compare durations of events [for example to calculate the time taken by particular events or tasks].

Geometry – properties of shapes

Statutory requirements

Pupils should be taught to:

- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- recognise angles as a property of shape or a description of a turn
- identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

Statistics

Statutory requirements

Pupils should be taught to:

- interpret and present data using bar charts, pictograms and tables
- Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

Science in Spring term 1 and 2

Aims

The national curriculum for science aims to ensure that all pupils:

- Develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- Develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- Are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

By the end of the Spring term, children will have covered two science topics from the national curriculum. Children will work scientifically on a variety of quick challenges and longer tasks to learn about:

- **Light a**nd shadows

The objectives of this topic are to:

- 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 shadows are formed when the light from a light source is blocked by a solid object
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Find patterns in the way that the size of shadows change.
- Set up simple practical enquiries, comparative and fair tests
- Gather, record, classify and present data in a variety of ways to help in answering questions
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
  Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

- **Movement and feeding** :

The objectives of this topic are to:

- 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.
- Gather, record, classify and present data in a variety of ways to help in answering questions
- Ask relevant questions and using different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Use straightforward scientific evidence to answer questions or to support their findings.

Lower Key Stage 2 programme of study

Light and shadows

Statutory requirements

Pupils should be taught to:

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 their eyes

recognise that shadows are formed when the light from a light source is blocked by an opaque object

Find patterns in the way that the size of shadows changes.

Movement and feeding

Statutory requirements

Pupils should be taught to:

- 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.

World Studies in Spring term

History: The Metal Age

The objectives of this topic are to:

- Talk about how people lived in the Bronze Age and the Iron Age.
- Describe how people first began making things from metal.
- Discuss similarities and differences between life in the past and life in the present day.
- Explain how we use evidence to find out about people from prehistoric times.
- Examine the impact of bronze on farming.
- Understand how our knowledge of the past is constructed from a range of sources.
- Examine the impact of the discovery and use of iron.
- Explore how Iron Age people lived together in groups.
- Recogise that fighting and trading were both parts of life in the Iron Age.

Geography: Weather around the world and what's in the news

The objectives of this topic are to:

- Compare some of the different countries that people visit on holidays and the reasons they choose to go those particular places.
- Discuss why different parts of the world have different climates.
- Introduce Egypt as a country in Africa which has Cairo as its capital city.
- Collect important geographical data about Egypt.
- Explain how changes in the weather, including extreme forms of weather, affect us.
- Explain that floods are where water spills onto the land.
- Explain how weather data are collected and how weather forecasts are made.
- Explain that traffic hazards, traffic delays and accidents can all be news items.

History
▪ late Neolithic hunter-gatherers and early farmers, for example, Skara Brae ▪ Bronze Age religion, technology and travel, for example, Stonehenge ▪ Iron Age hill forts: tribal kingdoms, farming, art and culture.

Geography

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

Key:

- The statements that are highlighted belong to the topics already covered in the autumn term.
- The statements that are not highlighted are the ones that are yet to be covered during the Spring and summer term.