

Year 4 Curriculum

In Year 4, our topics are:

| <u>Autumn Term</u> | <u>Spring Term</u> | <u>Summer Term</u> |
|----------------------|--------------------|--------------------|
| Raiders and Invaders | SuidAfrika | We are Ecologists |

In Year 4 we cover the following objectives:

Maths

Pupils will be taught to...

Number and place value

- count in multiples of 6, 7, 9, 25 and 1000.
- find 1000 more or less than a given number.
- count backwards through zero to include negative numbers.
- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- order and compare numbers beyond 1000 .
- identify, represent and estimate numbers using different representations
- round any number to the nearest 10, 100 or 1000.
- solve number and practical problems that involve all of the above and with increasingly large positive numbers.
- read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

Addition and subtraction

- add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate.
- subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate.
- estimate to check answers to a calculation.
- use inverse operations to check answers to a calculation.
- solve addition two-step problems in contexts, deciding which operations and methods to use and why.
- solve subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Multiplication and division

- recall multiplication and division facts for multiplication tables up to 12×12 .
- use place value, known and derived facts to multiply mentally, including: multiplying by 0 and 1; multiplying together three numbers.
- use place value, known and derived facts to divide mentally, including: dividing by 1.
- recognise and use factor pairs and commutativity in mental calculations.
- know which calculations can be written differently but mean the same in mental calculations (e.g $3+1=4$ $1+3=4$) (commutativity law).
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
- solve problems involving multiplying and adding.
- solve problem using the distributive law to multiply two digit numbers by one digit, (e.g by split a calculation up to make it easier).
- solve problems involving multiplying and adding, including integer scaling.
- solve problems involving multiplying and adding, including harder problems such as n objects are connected to objects.

Fractions (including decimals)

- recognise and show, using diagrams families of common equivalent fractions.
- count up and down in hundredths.
- know that hundredths arise when dividing an object by a hundred and dividing tenths by ten.
- solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.
- add and subtract fractions with the same denominator.
- recognise and write decimal equivalents of any number of tenths.
- recognise and write decimal equivalents of any number of hundredths
- recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$
- find the effect of dividing a one- or two-digit number by 10 and 100.
- identifying the value of the digits in the answer as ones, tenths and hundredths.
- round decimals with one decimal place to the nearest whole number .
- compare numbers with the same number of decimal places up to two decimal places .
- solve simple measure problems involving fractions and decimals to two decimal places.
- solve simple money problems involving fractions and decimals to two decimal places.

Measurement

- convert between different units of measure [for example, kilometre to metre; hour to minute]
- measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.
- find the area of rectilinear shapes by counting squares.
- estimate different measures, including money in pounds and pence.
- compare different measures, including money in pounds and pence.
- read and write time in analogue and digital 12 and 24-hour clocks
- convert time between analogue and digital 12 and 24-hour clocks.
- solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

Geometry: properties of shapes

- compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.
- identify acute and obtuse angles .
- compare and order angles up to two right angles by size.
- identify lines of symmetry in 2-D shapes presented in different orientations .
- complete a simple symmetric figure with respect to a specific line of symmetry.

Geometry: position and direction

- describe positions using coordinates in the first quadrant .
- describe movements between positions as translations of a given unit to the left/right and up/down .
- plot specified points and draw sides to complete a given polygon.

Statistics

- present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- interpret discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

English

In writing, pupils will be taught to...

- talk about writing that is similar to the writing I am going to do. (structure, vocabulary and grammar)
- create a mood by using powerful words and phrases.
- include descriptive detail about a setting by using: specific nouns, powerful adjectives, noun phrases, powerful simile and powerful metaphors.
- include character descriptions to create sympathy or dislike using powerful verbs and powerful adverbs
- write in a similar way to an author
- sequence events clearly and shows how one event leads to another using: conjunctions (when, if, because, although) and adverbials
- organise and sort information based on notes from several sources
- use techniques to get the reader on side: addresses the reader directly (e.g. *'This is just what you've been waiting for'*); adopts a friendly and informal tone; uses memorable or alliterative slogans (e.g. *'Happy Holidays at Hazel House'*); uses simple persuasive language to impact the reader (e.g. *'Everyone knows that ...'*, *'Nine out of ten people agree that ...'*, *'Choosing this will make you happy and contented'*, *'You'd be foolish not to sign up'*).
- know what the words determiner, pronoun, possessive, pronoun and adverbial mean and can use them.
- self and peers assess writing and suggests improvements.
- plan their writing by discussing and recording their ideas.
- say a sentence out loud before they write them
- read their writing out loud, changing the tone and volume of voice.

Sentence structure and punctuation

- use Standard English form s of verbs (e.g. *'we were'* instead of *'we was'*, or *'I did'* instead of *'I done'*).
- use noun phrases expanded by: modifying adjectives, verbs and prepositions.
- use fronted adverbials e.g. *Later that day, I heard the bad news*
- use commas after fronted adverbials
- use pronoun or other noun to avoid repetition and help their writing make sense
- use speech punctuation e.g. *The conductor shouted, "Sit down!"*
- inverted commas to show direct speech
- a comma after the reporting clause
- ending punctuation inside the inverted commas
- uses apostrophes correctly to mark plural possession e.g. *the girl's name, the girls' names*
- edit my work focus on errors with punctuation, sense and spelling

Text organisation

- organise paragraphs around a theme including: *using paragraphs to organise a story, show a change in setting, character and time, organise and sort information based on notes from several sources.*
- write more than one sentence about an idea, giving more specific detail and examples.
- In non-fiction use organisation techniques to organise writing.
- write riddles.

Handwriting

- use the Birch Copse cursive handwriting style to form letters correctly, including: 'lead-ins' and 'lead-outs', ascenders, descenders, joins and using lower and upper case in the correct places

Spellings

spell words with endings sounding like -sure (e.g. treasure); -ture (e.g. picture); -sion (e.g. diversion)

- spells endings which sound like, -tion (action); -sion (extension); -sion (permission); -cian (electrician)
- spells words with the /k/ sound spelt ch (e.g. chorus, chemist (Greek in origin))
- spells words ending with the /g/ sound spelt -que (e.g. antique) (French)
- spells words ending with the /g/ sound spelt -gue (e.g. tongue) (French)
- spells words with the /s/ sound spelt sc (e.g. science, scene) (Latin in origin)

- spells words with the /ei/ sound spelt ei, (e.g. vein)
- spells words with the /ei/ sound spelt eigh (e.g. weigh)
- spells words with the /ei/ sound spelt ey (e.g. they)
- use prefixes and understand how to add them including: un-, dis-, mis-, in-
- use suffixes and understand how to add them including: -ing, -ed, -en, -er, -ly, -ation
- spells homophones.
- spells words that are often misspelt.
- find words in the dictionary by using the first two or three letters of the word to find it.
- write from memory simple sentences, dictated by the teacher, including words and the punctuation that is being taught

In reading, pupils will be taught to...

- check that the text makes sense to them.
- discuss my understanding
- explain the meaning of words in context.
- recognise the introduction, build-up, climax or conflict and resolution in a story
- identify how specific words and phrases link sections, paragraphs and chapters
- identify events that are presented in more detail and those that are skimmed over
- summarise the way that the setting affects characters' appearance, actions and relationships e.g. *'The children in The Lion, The Witch and The Wardrobe are family and speak and act differently to the class mates in The Angel of Nitshill Road'*
- understand how a setting is created using small details and longer descriptions
- retrieve information from text where there is lots of information
- summarise the main ideas of a non-fiction text drawn from more than 1 paragraph
- analyse how the structure of non-fiction relates to its purpose e.g. how the points in a persuasive speech lead you to the author's viewpoint'.
- tell the difference between fact and opinion
- say how poetry is structured and its effect on the reader
- explain the decisions that the author has made in setting up problems for the characters and choosing how to resolve them
- explain and justify an opinion on the resolution of an issue/whole narrative
- explore alternative outcomes to an issue
- listens to the opinions of others and adjust my own thinking/understanding where appropriate
- identify generalisations and specific information
- identifies a wide range of poetic forms, e.g. *cinquain, haiku, calligram, kenning*
- expresses personal preferences regarding the work of significant authors/poets
- participate in discussions both about books that are read to me and those I can read for myself taking turns and listening to what other say.
- identify techniques used by the author/writer to persuade the reader to feel sympathy or dislike

Inference

- justify opinions of particular characters
- comment on the differences between what characters say and what they do
- explain similarities and differences with my own experiences
- predict (thinking about mood or atmosphere) how a character will behave in a particular setting
- comment on the way key characters respond to a problem
- make deductions about the motives and feelings that might lay behind characters' words
- make deductions about characters' motives and feelings
- explain whether their behaviour was predictable or unexpected

Language foreffect

- notice key words and phrases used to show passing of time to introduce paragraphs or chapters
- say examples of descriptive language and explains the mood or atmosphere they create
- identify figurative and expressive language that builds a fuller picture of a character
- identify the way descriptive language and small details are used to build an impression of an unfamiliar place

- analyse dialogue, making judgments about the extent to which characters reveal their true feelings or motives
- identify key words and phrases as evidence when making a point
- identify how an author uses a variety of sentence constructions e.g. *relative clauses to add detail*
- identify how authors use precise vocabulary to meet the intended purpose/effect e.g. *They slipped into the room unnoticed.*
- evaluates texts for their appeal for the intended audience

Themes and conventions

- identify the structure and features of a range of non-fiction texts.
- identify the structure and features of a range of narrative texts.
- identify the structure and features of a range of poetry texts.
- identify underlying themes in a range of narrative texts e.g. courage over adversity, loss etc.
- analyse how structural and presentational features contribute to meaning in a range of texts.
- prepares poems to read aloud and perform, showing understanding through intonation, tone, volume and action.

Word Reading

- apply what I know about root words, prefixes and suffixes when reading aloud and to understand the meaning of new words I meet.
- read further 'exception words', saying what is unusual between their spelling and sound and where these occur in the word.

Science

Pupils will be taught to...

Living things and their habitats

- recognise that living things can be grouped in a variety of ways
- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- recognise that environments can change and that this can sometimes pose dangers to living things

Animals, including humans

- identify that animals 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.

States of matter

- 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)

Forces and magnets

- compare how things move on different surfaces
- notice that some forces need contact between two objects, but magnetic forces can act at a distance.

Electricity

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery

- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors.
- group materials based upon their ability to conduct electricity

Art and design

Pupils will be taught to...

- use a sketch book to record observations and use them to review and revisit ideas.
- improve their art and design techniques, including:
 - Drawing from imagination and observation using pencil, charcoal and pastels focusing on mark making, detail and texture.
 - Painting on 2D and 3D surfaces, focusing on colour blending techniques, colour choice and use of painting tools.
 - Printing focusing on block printing.
 - Sculpture focusing on techniques using clay, papiermache and reused materials.
- know about the great surrealist artist from history Joan Miró, fashion designer Vivienne Westwood and contemporary South African artists.

PHSE & Citizenship

The National Curriculum PSHE & Citizenship guidelines are divided into five sections:

- Developing confidence and responsibility and making the most of their abilities.
- Preparing to play an active role as a citizen.
- Developing a healthy, safer lifestyle.
- Developing good relationships and respecting the differences between people.
- Breadth of opportunities.

PSHE and Citizenship at Birch Copse will also be taught through the use of the Social and Emotional Aspects of Learning (SEAL) materials. These materials provide important opportunities to enhance our school's PSHE and Citizenship provision as they were issued after the introduction of the National Curriculum. The objectives of these SEAL materials will be met through a whole school 'SEAL Day' at the start of each half term (see list below) and some of the PSHE and Citizenship objectives taken from the National Curriculum will also be covered during these days (see Key Stage tables). Specific PSHE and Citizenship objectives may also be covered through annual whole school 'Themed Days' e.g. 'Healthy Living Day'. At BirchCopeSchool our day to day classroom and whole school ethos also supports the coverage of PSHE and Citizenship objectives.

SEAL Days

SEAL Day 1- New Beginnings

SEAL Day 2- Getting on and falling out/ Say no to bullying

SEAL day 3- Going for goals!

SEAL Day 4- Good to be me

SEAL Day 5-Relationships

SEAL Day 6- Changes

Breadth of opportunities

1. During the key stage, pupils should be taught the Knowledge, skills and understanding through opportunities to:

- a. take and share responsibility [for example, for their own behaviour; by helping to make classroom rules and following them; by looking after pets well (SEAL Day 1)]
 - b. feel positive about themselves [for example by having their achievements recognised and by being given positive feedback about themselves (SEAL Day 3 & 4)]
 - c. take part in discussions [for example, talking about topics of school, local, national, European, Commonwealth and global concern, such as 'where our food and raw materials for industry come from']
 - d. make real choices [for example, between healthy options in school meals, what to watch on television, what games to play, how to spend and save money sensibly]
 - e. meet and talk with people [for example, with outside visitors such as religious leaders, police officers, the school nurse]
 - f. develop relationships through work and play [for example, by sharing equipment with other pupils or their friends in a group task]
 - g. consider social and moral dilemmas that they come across in everyday life [for example, aggressive behaviour, questions of fairness, right and wrong, simple political issues, use of money, simple environmental issues (SEAL Day 2)]
 - h. ask for help [for example, from family and friends, midday supervisors, older pupils, the police].
- about the range of jobs carried out by people they know, and to understand how they can develop skills to make their contribution in the future

Preparing to play an active role as citizens

- to realise the consequences of anti-social and aggressive behaviours, such as bullying and racism, on individuals and communities (SEAL Day 2)
- that there are different kinds of responsibilities, rights and duties at home, at school and in the community, and that these can sometimes conflict with each other

Developing a healthy, safer lifestyle

- school rules about health and safety, basic emergency aid procedures and where to get help

Developing good relationships and respecting the differences between people

- to think about the lives of people living in other places and times, and people with different values and customs

Computing

Pupils will be taught to...

- select, use and combine a variety of software (including Word, PowerPoint, Excel and Publisher) on a range of digital devices (including cameras to take photos and film) 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.
- develop an educational computer game using selection and repetition.
- understand and use variables.
- start to debug computer programmes.
- recognise the importance of user interface design, including consideration of input and output.
- design and make an on-screen prototype of a computer controlled toy.
- understand different forms of input and output (such as, sensors, switches, motors, lights and speakers).
- design, write and debug the control and monitoring programme for their toy.
- use one or more programmes to edit music.

- create and develop musical composition, refining their ideas through reflection and discussion.
- develop collaboration skills.
- develop an awareness of how their composition can enhance work in other media.
- understand some technical aspects of how the internet makes the web possible.
- use HTML tags for elementary mark up.
- use hyperlinks to connect ideas and sources.
- code up a simple webpage with useful content.
- understand some of the risks in using the web.
- understand the conventions for collaborative online work, particularly in wiki's.
- be aware of their responsibilities when editing other people's work.
- become familiar with Wikipedia including potential problems associated with its uses.
- practise research skills, including using search technologies effectively, appreciating how results are selected and ranked.
- write for a target audience using a wiki tool.
- develop proof-reading skills.
- understand different measurement techniques for weather, both analogue and digital.
- use computer based data logging to automate the recoding of some weather data.
- use spread sheets to create charts.
- analyse data, explore inconsistencies in data and make predictions.
- practise using presentation software and optionally video.

Design and Technology

Pupils will be taught to...

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion and cross-sectional diagrams and pattern pieces.

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and fashion designer, Vivienne Westwood, have helped shape the world.

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]

Cooking and nutrition

- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Languages

Pupils will be taught to:

- listen attentively to spoken language and show understanding by joining in and responding
- explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words
- engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help*
- speak in sentences, using familiar vocabulary, phrases and basic language structures
- develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases*
- present ideas and information orally to a range of audiences*
- read carefully and show understanding of words, phrases and simple writing
- appreciate stories, songs, poems and rhymes in the language
- broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
- write phrases from memory, and adapt these to create new sentences, to express ideas clearly
- describe people, places, things and actions orally* and in writing
- understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English

Geography

Pupils will be taught to:

Locational knowledge

- Locate countries in Scandinavia, using maps, 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

Place knowledge

- Understand geographical similarities and differences through the study of human and physical geography of countries in Scandinavia and South Africa.

Human and physical geography

Describe and understand key aspects of:

- Physical geography, including: climate zones, biomes and vegetation belts, mountains and the water cycle of countries in Scandinavia.
- Human geography, including: life style of people, types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water of countries in Scandinavia and South Africa

Geographical skills and fieldwork

- Use maps, atlases, globes and digital/computer mapping to locate South Africa 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 local areas in the United Kingdom.
- 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.

History

Pupils will be taught about:

- Anglo-Saxon invasions, settlements and kingdoms: place names and village life
- Christian conversion and Lindisfarne
- Viking raids and invasion
- Further Viking invasions and Danegeld
- Nelson Mandela his fight for freedom and the Apartheid.

Music

Pupils will 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
- Play the Steel Pans
- Compose music for a range of purposes including South African drumming and whole team production performances.
- Listen with attention to detail and recall sounds with increasing aural memory.
- Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians including Trevor Morris and production related artists.
- Develop an understanding of the history of music by studying Trevor Morris.

Physical Education

Pupils will be taught to:

- use running, jumping, throwing and catching in isolation and in combination as part of Athletics and Sports Day.
- play competitive games, modified where appropriate including Basketball, Cricket, Netball, Rounders, Tennis and apply basic principles suitable for attacking and defending
- develop flexibility, strength, technique, control and balance through gymnastics, athletics and fitness sessions.
- perform South African and production related dances using a range of movement patterns.
- compare their performances with previous ones and demonstrate improvement to achieve their personal best.

Religious Education

Pupils will be encouraged to question...

Beliefs and practices - Judaism

- How special is the relationship Jews have with God?

Christmas - Christianity

- What is the most significant part of the nativity story for Christians today?

Passover - Judaism

- How important is it for Jewish people to do what God asks them to do?

Easter - Christianity

- Is forgiveness always possible?

Rites of passage and good works – Judaism

- What is the best way for a Jew to show commitment to God?

Prayer and Worship – Christianity

- Do people need to go to church to show they are Christians?