Our Curriculum

The Golden Thread

ARNOLD MILL PRIMARY SCHOOL

Achieving together

Our curriculum vision:

Arnold Mill is a school where everyone is encouraged to fulfil their potential, discover new talents, and develop a love for learning.

Our aims are to provide a school where;

- Children are happy, safe, and secure.
- Success and achievement is celebrated.
- Creativity can flourish.
- Everyone and everything is treated with respect.
- Everyone is encouraged to think for themselves, take risks and learn from their mistakes.
- Good behaviour is expected, and everyone learns to take responsibility for their own actions.
- Diversity is celebrated and tolerance promoted.
- Self-belief is nurtured.

The Golden Thread

The rationale behind the learning journey is to ensure the following is in place:

- Develop a Mastery Approach to teaching across the school driven by research (Rosenshine, B Principles of Instruction 2012, Ebbinghaus' Forgetting Curve, EEF 7 step cognitive model of independence).
- A clear vision of how we learn at Arnold Mill.
- Consistency in how we teach across the whole school.
- High quality teaching to ensure all pupils achieve the best possible outcomes.
- Planning sequences of work which builds on children's learning (storing information in the long-term memory and reducing cognitive load).
- A process of teaching which allows sufficient time for children to deepen their learning.

Children who make connections between prior and current learning, meaning they can recall more information that is stored in the long-term memory.

The Golden Thread

At Arnold Mill we pride ourselves on having a curriculum that flows from nursery all the way to Year 6 and we call this the golden thread. The golden thread enables a high-quality curriculum, which is teacher led and develops children's learning throughout their time at Arnold Mill. We believe the golden thread curriculum enables pupils:

FIRST HAND EXPERIENCES - to enhance their learning through educational visits or visitors / workshops in school.

KNOWLEDGE - learning the key information and facts needed to access the whole curriculum, creating building blocks of understanding which they can use as a foundation for being lifelong learners.

SKILLS - to apply the knowledge learned in a range of contexts, as well as learning skills specific to different subject areas or of a practical nature.

PERSONAL ATTITUDES AND ATTRIBUTES - being able to use the knowledge and skills learned when working individually and with other.

English

English
Intent Statement

The ability to communicate is a fundamental part of life. Developing literacy skills (speaking, listening, understanding, reading, and writing) enables children to play a positive and active role in their communities. Equipped with these skills, they can find meaning and participate fully in life's rich opportunities, developing self-confidence, well-being, and the ability to form positive relationships. Our English curriculum is at the centre of all our practice. In the early years, our focus is on oral language development and comprehension. We aim to develop children's understanding of language and their spoken vocabulary through real-life, meaningful experiences. We know that those who develop a strong oral language skill in the early years will learn to read well. We consider reading to be a crucial aspect of our curriculum and we aim to instil a love for reading that will remain with our children throughout their lives. We want to equip children with the skills and knowledge necessary for reading through discussion, a systematic teaching approach and regular exposure to high quality literature. It is our intention that through our English curriculum, our children will have opportunities to develop spiritually, culturally, emotionally, intellectually, and socially. Through our nurturing approach and positive relationships, we hope that children will develop their skills in a safe environment, developing the confidence to become successful language users.

English
Spoken Language

6

- Consider and evaluate different viewpoints, attending to and building on the contributions of others.
- Select and use appropriate registers for effective communication.

5

- Participate in discussions, presentations, performances, role play, improvisions and debates.
- Gain, maintain and monitor the interest of the listener (s)

4

- Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas.
- Speak audibly and fluently with an increasing command of Standard English.

English
Spoken Language

3

- Give well-structured descriptions, explanations and narratives for different purposes, including expressing feelings.
- Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments

2

- Use relevant strategies to build their vocabulary.
- Articulate and justify answers, arguments and opinions.

1

- Listen and respond appropriately to adults and their peers.
- Ask relevant questions to extend their understanding and build vocabulary and knowledge.

English
Spoken Language

F2

- Participates in a small group, class and one to one discussions.
- Offers own ideas
- Uses recently introduced vocabulary
- Offers explanations for why things might happen
- Makes use of recently introduced vocabulary from stories, non-fiction and poems.
- Expresses ideas and feelings about experiences using full sentences.
- Listen and respond appropriately to adults and their peers.

English
Reading: Word Reading

5&6

- Apply their growing knowledge of root words, prefixes and suffixes, both to read aloud and to understand the meaning of new words they meet.

3&4

- Read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word.
- Apply their growing knowledge of root words, prefixes and suffixes, both to read aloud and to understand the meaning of new words they meet.

English
Reading: Word Reading

1&2

- Apply phonics knowledge and skills as the route to decode words
- Respond speedily with the correct sound to graphemes for all 40+ phonemes, including where applicable
- Read accurately by blending sounds in unfamiliar words containing GPCs that have been taught
- Read common exception words, noting unusual correspondences between spelling and sound and where these occur in the word
- Read words containing taught GPCs and –s, –es, –ing, –ed, –er and –est endings
- Read other words of more than one syllable that contain taught GPCs
- Read words with contractions [for example, I'm, I'll, we'll], and understand that the apostrophe represents the omitted letter(s)
- Read aloud accurately books that are consistent with their developing phonic knowledge and that do not require them to use other strategies to work out words
- Re-read these books to build up their fluency and confidence in word reading.
- Continue to apply phonic knowledge and skills as the route to decode words until automatic decoding has become embedded and reading is fluent
- Read accurately by blending the sounds in words that contain the graphemes taught so far, especially recognising alternative sounds for graphemes
- Read accurately words of two or more syllables that contain the same graphemes as above
- Read words containing common suffixes
- Read further common exception words, noting unusual correspondences between spelling and sound and where these occur in the word
- Read most words quickly and accurately, without overt sounding and blending, when they have been frequently encountered
- Read aloud books closely matched to their improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation
- Re-read these books to build up their fluency and confidence in word reading.

English
Reading: Word Reading

F1&F2

- Join in with rhymes and stories
- Identify rhymes
- Join in with the rhythm of well-known rhymes and song
- Recognise own name
- Say a sound for each letter in the alphabet and at least 10 digraphs.
- Read words consistent with their phonics knowledge by sound blending.
- Read aloud simple sentences and books that are consistent with their phonics knowledge, including some common exception words.

English
Reading: Comprehension

5&6

- Maintain positive attitudes to reading and understanding of what they have read by:
- Continuing to read and discuss an increasingly wide range of fiction and non-fiction.
- Reading books that are structured in different ways and reading for a range of purposes.
- Increasing their familiarity with a wide range of books, including myths, legends and traditional stories.
- Recommending books that they have read to their peers, giving reasons for their choices.
- Identifying and discussing themes and conventions in and across a wide range of writing.
- Making comparisons within and across books.
- Learning a wider range of poetry by heart. Preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience.
- Check that the book makes sense to them, discussing their understanding and exploring the meaning of the word in context.
- Drawing inferences such as inferring characters' feelings thoughts and motives from their actions and justifying inferences with evidence.
- Predicting what might happen from details stated and implied.
- Asking questions to improve their understanding.
- Provide reasoned justifications for their views.
- Discuss and evaluate how authors use language including figurative language, considering the impact on the reader.
- Summarising main ideas drawn from more than one paragraph.
- Identifying how language, structure and presentation contribute to meaning.
- Retrieve, record and present information from non-fiction.
- Distinguish between statements of facts or opinion.
- Participate in discussion about both books that are read to them. Build on others ideas and challenge views.
- Explain and discuss their understanding of what they have read.

English
Reading: Comprehension
3&4

- 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 they have read.
- Increasing familiarity with a wide range of books, including fairy stories, myths, legends and retelling of some of these orally.
- Discussing words and phrases that capture the reader's interest and imagination.
- Identifying themes and conventions in a wider range of books.
- Recognising some different forms of poetry (e.g. free verse, narrative poetry).
- Preparing poems and play scripts to read aloud and perform, showing understanding through intonation, tone, volume and action.
- Check the text makes sense to them, discussing understanding and explaining the meaning of words in context.
- Drawing Inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inference with evidence.
- Predicting what might happen from details stated and implied.
- Asking questions to improve their understanding of the text.
- Identifying the main ideas drawn from more than one paragraph and summarise these.
- Retrieve and record information from non-fiction.
- Participate in discussion about both books that are read to them and those that they can read for themselves, taking turns and listening to what others say.

English
Reading: Comprehension

1&2

- Listen to and discussing a wide range of poems, stories and non-fiction at a level beyond that at which they can read independently
- Be encouraged to link what they read or hear read to their own experiences
- Become very familiar with key stories, fairy stories and traditional tales, retelling them and considering their particular characteristics
- Recognise and joining in with predictable phrases
- Learn to appreciate rhymes and poems, and to recite some by heart
- Discuss word meanings, linking new meanings to those already known
- Understand both the books they can already read accurately and fluently and those they listen to by:
- Draw on what they already know or on background information and vocabulary provided by the teacher
- Check that the text makes sense to them as they read and correcting inaccurate reading
- Discuss the significance of the title and events
- Make inferences on the basis of what is being said and done
- Predict what might happen on the basis of what has been read so far
- Participate in discussion about what is read to them, taking turns and listening to what others say
- Explain clearly their understanding of what is read to them.
- Listen to, discussing and expressing views about a wide range of contemporary and classic poetry, stories and non-fiction at a level beyond that at which they can read independently
- Discuss the sequence of events in books and how items of information are related
- Become increasingly familiar with and retelling a wider range of stories, fairy stories and traditional tales
- Be introduced to non-fiction books that are structured in different ways
- Recognise simple recurring literary language in stories and poetry
- Discuss and clarifying the meanings of words, linking new meanings to known vocabulary
- Discuss their favourite words and phrases
- Continue to build up a repertoire of poems learnt by heart, appreciating these and reciting some, with appropriate intonation to make the meaning clear
- Draw on what they already know or on background information and vocabulary provided by the teacher
- Check that the text makes sense to them as they read and correcting inaccurate reading
- Make inferences on the basis of what is being said and done
- Answer and asking questions
- Predict what might happen on the basis of what has been read so far
- Participate in discussion about books, poems and other works that are read to them and those that they can read for themselves, taking turns and listening to what others say
- Explain and discuss their understanding of books, poems and other material, both those that they listen to and those that they read for themselves

English
Reading: Comprehension

F1&F2

- Holding a book, turning oages and indication an understanding of pictures and print
- Telling a story to friends
- Talking about events and characters in books
- Making suggestions about what might happen next in a story
- Demonstrate understanding of what has been read to them by retelling stories and narratives, using their own words and recently introduced vocabulary.
- Anticipate, where appropriate key events in stories.
- Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role play.

English
Writing: Composition

5&6

- Write legibly, fluently, with increased speed by:
- Choosing which shape of letter to use when given choices and deciding whether or not to join specific letters.
- Choosing the writing implement that is best suited for the task.
- Identify audience and purpose.
- Develop initial ideas, drawing on reading and research.
- In writing narratives, consider how authors have developed characters and settings.
- Use a wide range of devices to build cohesion within and across paragraphs.
- In narratives, describe settings, characters and atmosphere and integrate dialogue to convey character and advance the action.
- Use further organisational and presentational devices to structure text and guide the reader (e.g. headings, bullet points).
- Assess the effectiveness of their own and others writing.
- Propose changes to grammar, vocab and punctuation to enhance effects and clarify meaning.
- Ensure the consistent and correct use of tense throughout a piece of writing.
- Ensure correct subject and verb agreement when using singular and plural.
- Proof read for spellings and punctuation errors.
- Perform their own compositions, using appropriate intonation, volume and movement so that meaning is clear.

English
Writing: Composition

3&4

- Use the diagonal and horizontal strokes needed to join letters and understand which letters, when adjacent to one another, are best left unjoined.
- Increase the legibility, consistency and quality of handwriting.
- Discuss writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar.
- Discuss and record ideas.
- Build a varied and rich vocabulary and increasing range of sentence structure.
- Organise paragraphs around a theme.
- In narratives, create settings, characters and plot.
- In non-narrative material, use simple organisational devices such as headings and sub-headings.
- Assess the effectiveness of their own and others writing and suggest improvements.
- Propose changes to grammar and vocab to improve consistency, include the accurate use of pronouns in sentences.
- Proof read for spelling and punctuation errors.
- Read aloud their writing to a group or whole class, using appropriate intonation and controlling the tone and volume so meaning is clear.

English
Writing: Composition
1&2

- Sit correctly at a table, holding a pencil comfortably and correctly
- Begin to form lower-case letters in the correct direction, starting and finishing in the right place
- Form capital letters
- Form digits 0-9
- Understand which letters belong to which handwriting 'families' (i.e. letters that are formed in similar ways) and to practise these.
- Form lower-case letters of the correct size relative to one another
- Start using some of the diagonal and horizontal strokes needed to join letters and understand which letters, when adjacent to one another, are best left unjoined
- Write capital letters and digits of the correct size, orientation and relationship to one another and to lower case letters
- Use spacing between words that reflects the size of the letters.
- Say out loud what they are going to write about
- Compose a sentence orally before writing it
- Sequence sentences to form short narratives
- Re-read what they have written to check that it makes sense
- Discuss what they have written with the teacher or other pupils
- Read aloud their writing clearly enough to be heard by their peers and the teacher.
- Write narratives about personal experiences and those of others (real and fictional)
- Write about real events
- Write poetry
- Write for different purposes
- Plan or say out loud what they are going to write about
- Write down ideas and/or key words, including new vocabulary encapsulating what they want to say, sentence by sentence
- Evaluate their writing with the teacher and other pupils
- Re-read to check that their writing makes sense and that verbs to indicate time are used correctly and consistently, including verbs in the continuous form
- Proof-reading to check for errors in spelling, grammar and punctuation (for example, ends of sentences punctuated correctly).
- Read aloud their writing with appropriate intonation to make their meaning clear.

English
Writing: Composition

F1&F2

- Tell an adult what they have drawn or painted
- Recognise a capital letter at the start of their names
- Identify sounds from own name in other words
- Ascribe meaning to other familiar marks in the environment
- Start to write identifiable shapes and letters
- Draw lines and circles in the air, on the floor or on large sheets of paper
- Use tools for mark making with control
- Copy shapes, letter and pictures
- Grip using five fingers or preferably two fingers and thumb for control.
- Writes simple phrases or sentences that can be read by others.
- Uses finger spaces and full stops independently.
- Majority of letters are formed correctly

English
Writing - Punctuation and Grammar

6

- Use of the passive voice to affect the presentation of information in the sentence.
- The difference between structures of formal and informal writing.
- Linking ideas across paragraphs using a wider range of cohesive devices: repetition of word or phrase.
- Layout devices such as headings, sub-headings, columns, bullets, tables, to structure text.
- Use of semi-colon, colon and dash to mark the boundary between independent clauses.
- Use of the colon to introduce a list and use of semi-colon within lists.

5

- Relative clauses beginning with who, which, were, why, whose, that.
- Indicating degrees of possibility using adverbs or modal verbs.
- Devices to build cohesion within a paragraph (e.g. then, after that, this, firstly)
- Linking ideas across paragraphs using adverbials of time, place, number and tense choice.
- Brackets, dashes or commas to indicate parenthesis.
- Use of commas to clarify meaning or avoid ambiguity.

4

- Noun phrases expanded by the addition of modifying adjectives, nouns and preposition phrases.
- Fronted adverbials.
- Use paragraphs to organise ideas around a theme.
- Appropriate choice of pronoun and noun within and across sentences to aid cohesion and avoid repetition.
- Use of inverted commas and other punctuation to indicate direct speech.
- Apostrophes to mark plural possession.
- Use of commas after fronted adverbials.

English
Writing - Punctuation and Grammar

3

- Expressing time, place and cause using conjunctions, adverbs or prepositions.
- Introduction to paragraphs as a way to group related material.
- Headings and subheadings to aid presentations.
- Use of the present perfect form of verbs instead of the simple past.
- Introduction to inverted commas to punctuate direct speech.

2

- Learn how to use both familiar and new punctuation correctly , including full stops, capital letters, exclamation marks, question marks, commas for lists and apostrophes for contracted forms and the possessive (singular)
- Use sentences with different forms: statement, question, exclamation, command
- Use expanded noun phrases to describe and specify [for example, the blue butterfly]
- Use the present and past tenses correctly and consistently including the progressive form
- Use subordination (using when, if, that, or because) and co-ordination (using or, and, or but)
- Use some features of written Standard English.

1

- Leave spaces between words
- Join words and joining clauses using and
- Begin to punctuate sentences using a capital letter and a full stop, question mark or exclamation mark
- Use a capital letter for names of people, places, the days of the week, and the personal pronoun ‘I’

English
Writing - Punctuation and Grammar

F1 &F2

- Write short sentences with words with known sound letter correspondences using a capital letter and full stop
- Attempt to use fingers spaces when writing short sentences

English
Writing: Spelling

5&6

- Continue to distinguish between homophones and other words which are often confused.
- Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary.
- Use a thesaurus.
- Use further prefixes and suffixes and understand the guidance for adding them.
- Spell words with silent letters.
- Use knowledge of morphology and etymology in spelling and understand that the spelling of words needs to be learnt specifically.

3&4

- Spell further homophones.
- Spell words that are often misspelt.
- Use the first two or three letters of a word to check its spelling in a dictionary.
- Use further prefixes and suffixes and understand how to add them.
- Write from memory simple sentences, dictated by the teacher, that include taught words and punctuation taught so far.
- Place the possessive apostrophe accurately in words with regular plurals and in words with irregular plurals.

English
Writing: Spelling

1&2

- Spell words containing each of the 40+ phonemes already taught
- Spell common exception words
- Spell the days of the week
- Name the letters of the alphabet in order
- Use letter names to distinguish between alternative spellings of the same sound
- Use the spelling rule for adding –s or –es as the plural marker for nouns and the third person singular marker for verbs
- Use the prefix un–
- Use –ing, –ed, –er and –est where no change is needed in the spelling of root words [for example, helping, helped, helper, eating, quicker, quickest]
- apply simple spelling rules and guidance.
- Write from memory simple sentences dictated by the teacher that include words using the GPCs and common exception words taught so far.
- Segment spoken words into phonemes and representing these by graphemes, spelling many correctly
- Learn new ways of spelling phonemes for which one or more spellings are already known, and learn some words with each spelling, including a few common homophones
- Learn to spell common exception words
- Learn to spell more words with contracted forms
- Learn the possessive apostrophe (singular) [for example, the girl's book]
- Distinguish between homophones and near-homophones
- Add suffixes to spell longer words, including –ment, –ness, –ful, –less,.
- Write from memory simple sentences dictated by the teacher that include words using the GPCs, common exception words and punctuation taught so far.

F1&F2

- Spells words by identifying the sounds and graphemes.

Mathematics

Mathematics Intent Statement

Mathematics is a key part of everyday life. From the moment we wake up, we need to be able to tackle problems, be fluent with numbers and understand spatial awareness. We believe that children who view themselves as mathematicians will be able to function independently in the world. Research shows that children's chances of success are maximized if they develop deep and lasting understanding of mathematical procedures and concepts.

Mathematics is woven through our school day as a natural part of our timetable and continuous provision (FS & KS1). We aim to 'hardwire' number facts by teaching our children small steps. Application of these facts in different contexts allows the working memory to think creatively to solve problems (mastery curriculum). Through praise, we create a culture in which every child develops the self-belief to master mathematics and the resilience to solve problems.

Careful planning based on children's individual needs allows them to master small steps, creating a deep understanding of mathematics. We encourage the children to use their own mathematical graphics to represent their enquiries and ideas, particularly when problem solving. We teach our children to build endurance, develop language skills and foster a curiosity and passion for mathematics ready to tackle problems and utilise the key skills manifested throughout their schooling.

Maths
Number and Place Value

5&6

- Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.
- Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.
- Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
- Solve number and practical problems that involve all of the above.
- Use negative numbers in context & calculate intervals across zero.
- Read, write, order and compare numbers up to 10 000 000 & determine the value of each digit.
- Round any whole number to a required degree of accuracy.
- Solve number & practical problems that involved all of the above.

3&4

- Count from 0 in multiples of 4,8,50 and 100.
- Find 10 or 1—more or less than a given number.
- Identify, represent and estimate numbers using different representations.
- Read and write numbers to at least 1000 in numerals and in words.
- Compare and order numbers upto 1000
- Recognise the place value of each digit in a 3 digit number.
- Solve number problems and practical problems involving these ideas.
- Count backwards through zero to include negative numbers.
- Count in multiples of 6,7,9,25 and 1000
- Find 1000 more or less than a given number
- Identify, represent and estimate numbers using different representations.
- Compare and order numbers beyond 1000.
- Recognise the place value of each digit in a 4 digit number.
- Round any number to the nearest 10,100 and 1000.
- Read roman numerals to 100 (I to C) and understand that over time, the numeral system changed to include the concept of zero and palce value.
- Solve number and practical problems that involve all of the above and with increasingly large positive numbers.

Maths
Number and Place Value

1&2

- Count to and across 100, forward and backwards, beginning with 0 or 1, or from any given number.
- Count in multiples including 2s, 5s and 10s.
- Given a number, identify 1 more and 1 less.
- Identify and represent numbers using concrete 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 100 in numerals.
- Read and write numbers from 1 – 20 in numerals and words
- Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.
- Identify, represent and estimate numbers using different representations, incl the number line.
- Read and write numbers to at least 100 in numerals and in words.
- Compare and order numbers from 0 to 100; use <, > & = signs.
- Recognise the place value of each digit in a 2 digit number.
- Use place value and number facts to solve problems.

Maths
Number and Place Value

F1&F2

- Use number names to 10 and sometimes counting accurately
- Represent numbers using marks, fingers or digits
- Saying when two small groups have the same number of objects
- Identify numerals in the environment
- Have a deep understanding of number to 10, including the composition of each number
- Subitise up to 5; automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
- Verbally count beyond 20, recognising the pattern of the counting system
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and
- odds, double facts and how quantities can be distributed equally

Maths
Addition and Subtraction

5&6

- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Add and subtract numbers mentally with increasingly large numbers.
- Add and subtract whole numbers with more than 4 digits including using formal written methods (columnar addition and subtraction).
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
- Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why.
- Perform mental calculations, incl with mixed operations & large numbers.
- Use knowledge of the order of operations to carry out calculations involving four operations.
- Use estimation to check answers to calculations & determine, in the context of a problem, levels of accuracy.
- Solve problems involving addition, subtraction, multiplication & division.

3&4

- Add and subtract numbers mentally, including:
- 3 digit no and ones
- 3 digit no and tens
- 3 digit no and hundreds
- Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.
- Estimate the answer to a calculation and use the inverse operations to check answers.
- Solve problems, including missing number problems, number facts, place value, and more complex addition and subtraction.
- Solve addition and subtraction two step problems in contexts deciding which operations and methods to use and why.
- Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
- Estimate and use inverse operations to check answers to a calculation.

Maths
Addition and Subtraction

1&2

- Read, write and interpret mathematical statements, involving + - = signs.
- Represent and use the number bonds and related subtraction facts within 20.
- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.
- Add and subtract 1-digit and 2-digit numbers to 20, including zero.
- Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.
- Solve problems with addition and subtraction:
- using concrete objects and pictorial representations, incl. Those involving numbers, quantities and measures.
- Applying their increasing knowledge of mental and written methods.
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, inlcuding:
- 2-digit no and ones
- 2 digit no and tens
- Two 2-digit numbers
- Adding three 1-digit numbers.
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Maths
Multiplication and Division

5&6

- Identify all the multiples & factors including finding all factor pairs of a number, & common factors of two numbers.
- Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
- Establish where a number up to 100is prime and recall prime numbers up to 19.
- Multiply and divide numbers mentally drawing upon known facts.
- Multiply numbers up to 4-digits by a 1-digit or 2-digit number using the formal written method, including long multiplication for 2-digit numbers.
- Divide numbers up to 4-digits by a 1-digit number using the formal written method of short division & interpret remainders appropriately for the context.
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
- Recognise and use square number and cube numbers, & the notation for squared and cubed.
- Solve problems involving addition, subtraction, multiplication & division & a combination of these incl understanding the meaning of the equals sign.
- Solve problems using multiplication and division including scaling by simple fractions & problems involving simple rates.
- Solve problems involving multiplication & division including using their knowledge of factors & multiples, squares and cubes.
- Identify common factors, common multiples & prime numbers.
- Perform mental calculations incl mixed operations & large numbers.
- Multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method of long multiplication.
- Divide numbers up to 4-digits by a 2-digit whole number using the formal written method of long division, & interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.
- Divide numbers up to 4-digits by a 2-digit number using the formal written methods of short division where appropriate interpreting remainders according to the context.
- Use knowledge of the order of operations to carry out calculations involving four operations.
- Solve problems involving addition, subtraction, multiplication and division.

Maths
Multiplication and Division

3&4

- Recall and use the multiplcation and division facts for the 3,4,8 tables.
- Write and calculate mathematical statement for multiplication and division using the multiplication tables that they know, indl 2 digit x 1 digit, using mental and progressing to formal written methods.
- Solve problems, including missing number problems involving multiplication and dividion, including integer scaling problems and correspondence problems in which n objects are connected to m objects.
- Recall multiplication and division facts for tables up to 12x12
- Recognise and use factor pairs and commutativity in mental calculations.
- Multiply 2 digit x 3 digit numbers by a 1 digit number using formal written layout.
- Use place value, known and derived facts to multiply and divide mentallu, including multiplying by 0 and 1: dividing by 1: multiplying three numbers together.
- Solve problems involving multiplying and adding, including the distributive law to multiply 2 digit numbers by 1 digit, integer scaling problems and harder multiplication problems such as n objects are connected to m objects.

1&2

- Your Solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
- Recall and use multiplication and division facts for the 2, 5, 10 tables, incl recognising odd and even nos.
- Calculate the mathematical statements for multiplication and division within the multiplication tables and write the using x ÷ = signs.
- Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.
- Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, incl problems in context.

Maths
Fractions

5&6

- Identity, name and write equivalent fractions of a given fraction, represented visually, incl tenths and hundredths.
- Read and write decimal numbers as fractions (e.g. 0.71 = 71/100).
- Recognise and use thousandths and relate then to tenths, hundredths and decimal equivalents.
- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements.
- Compare and order fractions whose denominations are all multiples of the same number.
- Add and subtract fractions with the same denominator and multiples of the same number.
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- Round decimals with two decimal places to the nearest whole number and to one decimal place.
- Read, write, order and compare numbers with up to three decimal places.
- Recognise the per cent symbol(%) and understand that per cent relates to 'number or parts per hundred', and write percentages as a fraction with denominator hundred, and as a decimal fraction.
- Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.
- Solve problems involving number up to three decimal places.
- Associate a fraction with division & calculation decimal fraction equivalent (e.g. 0.375) for a simple fraction (e.g. 3/8).
- Identify the value of each digit to three decimal places and multiply & divide numbers by 10, 100, 1000 where the answers are up to three decimal places.
- Compare and order fractions including > 1. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
- Add and subtract fractions with different denominators & mixed numbers using the concept of equivalent fractions.
- Multiply simple pairs of fractions writing the answer in its simplest form.
- Multiply 1-digit numbers with up to two decimal places by whole numbers.
- Divide proper fractions by whole numbers. Use written division methods in cases where the answer has up to two decimal places.
- Recall and use equivalences between simple fractions, decimals & percentages including in different contexts.
- Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.
- Solve problems which require answers to be rounded to specific degrees of accuracy.

Maths
Fractions

3&4

- Count up and down in tenths: recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1 digit numbers or quantities by 10.
- Compare and order unit fractions and fractions with the same denominators.
- Recognise, find and write fractions or 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.
- Solve problems that involve all of the above.
- Recognise and show, using diagrams, families of common equivalent fractions.
- Recognise and write decimal equivalents on any number of tenths or hundredths.
- Recognise and write decimal equivalents to 1/4 ½ ¾
- Find the effect of dividing a 1 digit or 2 digit number by 10 and 100. Identifying the value of the digits in the aswer as unit, tenths and hundredths.
- Count up and down in hundredths recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.
- Add and subtract fractions with the same denominator.
- 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 problems involving increasingly harder fractions to calculate quantities and fractions to divide quantities including non unit fractions where the answer is a whole number.
- Solve simple measure and money problems involving fractions and decimals to two decimal places.

Maths
Fractions

1&2

- Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.
- Recognise, find, name and write fractions 1/3 ¼ 2/4 and ¾ or a length, shape, set of objects or quantity.
- Write simple fractions, e.g ½ of 6 = 3 and recognise the equivalence of 2/4 and ½

Maths
Measurement

5&6

- IConvert between different units of metric measure.
- Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.
- Use all four operations to solve problems involving measure using decimal notation, including scaling.
- Estimate volume and capacity.
- Peimeter
- Measure and calculate the perimeter of composite rectilinear shapes in cm and m.
- Area
- Calculate and compare the area of rectangles and square metres and estimate the area of irregular shapes.
- Time
- Solve problems involving converting between units of time.
- Solve problems involving calculation & conversion of units of measure, using decimal notation to three decimal places where appropriate.
- Use, read, write and convert between standard units, converting measurements of length, mass, volume & time from a smaller unit of measure to a larger unit and vice versa, using decimal notation to three places.
- Calculate estimate & compare volume of cubes & cuboids using standard units, incl cm3 and m3 and extending to other units such as mm3 and km3.
- Convert between miles and KM.
- Recognise when it is possible to use the formulae for area & volumes of shapes.
- Perimeter
- Recognise that shapes with the same areas can have different perimeters & vice versa.
- Area
- Calculate the area of parallelograms and triangles.
- Recognise when it is possible to use the formulae for area and volumes of shapes.

Maths
Measurement

3&4

- Measure, compare, add and subtract:
- Lengths (m/cm/mm)
- Mass (kg/g)
- Volume and capactity (l/ml)
- Measure the perimeter of simple 2d 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 incresing accuracy to the nearest minute: record and compare times in terms of secs,mins, hrs; use vocabulary such as o click am/pm, morning, afternoon, noon and midnight.
- Know the numbers of seconds in a minute and the number of days each month, year and leap year.
- Compare durations of events for example to calculate time taken bu particular events or tasks.
- Convert between different units of measure)eg hm to m; hr to min)
- Estimate compare and calculate different measures.
- Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m.
- Find the area of rectilinear shapes by counting squares.
- Estimate compare and calculate different measures, including money in pounds and pence.
- Read, write and 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.

Maths
Measurement

1&2

- Compare, describe and solve practical problems for:
- -Lengths and heights
- -Mass /weight
- Capacity and volume
- -Time
- Measure and begin to record the following:
- -Lengths and heights
- -Mass /weight
- Capacity and volume
- -Time (hrs, mins, secs)
- Recognise and know the value of different denominations or coins and notes.
- Sequence events in chronological order using language (e.g before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening).
- Recognise and use language relating to dates, incl days of the week, weeks, months, years.
- Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
- Choose and use appropriate standard units to estimate and measure:
- -Length/height in any direction (m/cm)
- -Mass (kg/g)
- - Temperature (°C)
- -Capacity (l/ml)
- To the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.
- Compare and order lengths, mass, volume/capacity and record the results using >, < and =.
- Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
- Find different combinations of coins that equal the same amounts of money.
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, incl giving change.
- Compare and sequence intervals of time.
- Tell and write the time to five minutes incl quarter past/to the hour and draw the hands on a clock face to show these times..

Maths
Measurement

F1&F2

- Asks questions about the routine and what is happening next.
- Uses small world play to experiment with size, shape, difference & similarities.
- Begins to describe a sequence of events.
- Makes comparisons between objects relating to size, length, weight and capacity.
- Uses comparative language like ‘taller’, ‘shorter’, ‘same’.
- Talks about the routine of the day using language like ‘before’ and ‘after’
- Uses tall, thin, narrow, wide to describe containers
- Compares how many smaller containers it takes to fill larger containers.
- Begins to use skills and knowledge to solve problems involving measure – both adult led and self- initiated.

Maths
Geometry

5&6

- Identify 3D shapes, including cubes and cuboids from 2D representations.
- Use the properties of rectangles to deduce related facts and find missing length and angles.
- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
- Know angles are measures in degrees; estimate and compare acute, obtuse and reflex angles.
- Identify:
- -Angles at a point on a straight line and ½ a turn
- -Angles at a point and one whole turn
- Other multiples of 90°
- Draw given angles and measure them in degrees.
- Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language and know that the shape has not changed.
- Draw 2D shapes using given dimensions and angles.
- Recognise describe & build simple 3D shapes incl making nets.
- Compare & classify geometric shapes based on their properties & sizes & find unknown angles in any triangles quadrilaterals & regular polygons.
- Recognise angles where they meet at a point, are on a straight line or are vertically opposite, & find missing angles.
- Illustrate & name parts of circles, including radius, diameter & circumference & know that the diameter is twice the radius.
- Describe the positions on the full coordinate grid (all four quadrants).
- Draw & translate simple shapes on the coordinate plane & reflect them in the axes.

Maths
Geometry

3&4

- Draw 2d shapes and make 3d shapes using modelling materials; recognise 3d shapes in different orientations and describe them.
- Recognise angles are 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 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 parallell lines.
- Compare and classify geometric shapes including quadrilaterals and triangles based on their properties and sizes
- Identify lines of symmetry in 2d sghapes presented in different orientations.
- Complete a simple symmetric figure with respect to a specific line of symmetry.
- Identify acute and obtuse angles and compare and order angles upto two right angles by size.
- Describe positions on a 2d grid as coordinates in the first quadrant.
- Describe movements between positions as a translations of a given unit to the left/right and up/down.
- Plot specific points and draw sides to complete a given polygon.

Maths
Geometry

1&2

- Recognise and name common 2d and 3d shapes, including:
- -2D e.g rectangles (including squares), circles, triangles
- -3D e.g cuboids (including cubes), pyramids, spheres.
- Describe position, directions and movement, including half, quarter and three-quarter turns.
- Identify and describe the properties of 2D shapes, incl the number of sides and symmetry in a vertical line.
- Identify and describe the properties of 3D shapes incl the number of edges, vertices and faces.
- Identify 2D shapes on the surface of 3D shapes.
- Compare and sort common 2D and 3D shapes and everyday objects.
- Order and arrange combinations of mathematical objects in patterns and sequences.
- Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

Maths
Geometry

F1&F2

- **T**alks about and explores 2D and 3D shapes. Sees some shapes in pictures and can start to make pictures using shapes. Combines shapes to make new ones.
- Selects shapes appropriately.
- Begins to identify shapes in the environment. Begins to find appropriate shapes for certain tasks. Asks questions about my observations of differences and similarities.
- Talks about routes and locations using words like ‘in front of’ and ‘behind’
- Describes a familiar route
- Begins to make more meaningful pictures
- Understands that a shape can be built in different ways using smaller shapes.
- Is able to rotate shapes.
- Selects and rotates shapes to make them fit in a puzzle, picture or tangram.
- Uses positional language to describes shapes and objects in relation to one another.
- Can look at position from different perspectives and notice how it changes.
- Represents models, maps and plans in mark making.

Maths
Statistics

5&6

- Complete, read and interpret information in tables, incl timetables
- Solve comparison, sum and difference problems using information presented in a line graph.
- Interpret & construct: pie charts, line graphs and use to solve problems.
- Calculate and interpret the mean as an average.

3&4

- Interpret and present data using:
- Bar charts
- Pictograms
- Tables
- Solve one step and two step questions such as how many more? And how many fewer? Using informations presented in scaled bar charts and pictograms and tables.
- Interpret and present discrete data using appropriate graphical methods, including
- Bar charts
- Time graphs.
- Solve comparison, sum and difference problems using informations presented in bar charts, pictograms, tables and other graphs.

Y2

- Interpret and construct simple:
- -Pictograms
- -Tally charts
- -Block diagrams –Simple tables
- Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.
- Ask and answer questions about totalling and compare categorical data.

Maths
Ratio, Proportion and Algebra

5&6

- Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.
- Solve problems involving the calculation of percentages of whole number or measures such as 15% of 360 and the use of percentages for comparison.
- Solve problems involving similar shapes where the scale factor is known or can be found.
- Solve problem involving unequal sharing and grouping using knowledge of fractions & multiples.
- Express missing number problems algebraically.
- Use simple formulae
- Generate and describe linear number sequences.
- Find pairs of numbers that satisfy an equation with two unknows.
- Enumerate all possibilities of combinations of two variables.

Science

Science Intent Statement

Science learning takes place every day, within every opportunity and action presented to us. At Arnold Mill, we understand that within the earliest moments in life, children's actions and exploration open up a world of scientific possibilities. We will provide children with high-quality science education that gives children the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. We want our children to develop the skills, confidence and enquiring minds that allow them to explore the universe and world in which they live in. We strive to develop a sense of curiosity, excitement and deeper thinking through providing children with hands on practical scientific opportunities.

Our science teaching encourages children to develop a love for science and exploring big questions they have. We encourage them to investigate and explore all aspects of science whilst developing skills they will build on and use, not only during their time in education, but throughout their lives. Within our current world climate, it is essential for children to understand how through science and sustainability they can make a real different to the future of the planet. Science is at the core of many aspects of life and its value within children's education should never be underestimated.

Science

Working Scientifically

Y5&6

- Planning different types of scientific enquires to answer questions, including recognising and controlling variables where necessary.
- Identifying scientific evidence that has been used to support or refute ideas or arguments.
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where necessary.
- Using test results to make predictions to set up further comparative and fair tests.
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs.
- Reporting and presenting findings from enquires, including conclusions, casual relationships and explanations of an degrees of trust in results, in oral and written forms such as displays and other presentations.
- Pupils should read, spell and pronounce scientific vocabulary correctly**.**

Y3&4

- Asking relevant questions and using different types of scientific enquiries to answer them.
- Using straightforward scientific evidence to answer questions or to support their findings.
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- Setting up simple practical enquiries, comparative and fair tests.
- Identifying differences, similarities or changes related to simple scientific ideas and processes.
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

Science

Working Scientifically

Y1&2

- Asking simple questions and recognising that they can be answered in different ways.
- Oberserving closely, using simple equipment.
- Performing simple tests.
- Identifying and classifying.
- Using their observations and ideas to suggest answers to questions.
- Gathering and recording data to help in answering questions.

FS1&FS2

- Ask questions about aspects of their familiar world such as the place where they live or the natural world
- Talking about some of the things they have observed such as plants, animals, natural and found objects
- Talking about why things happen and how things work
- Starting to develop an understanding of growth, decay and changes over time
- Showing care and concern for living things and the environment
- Begins to understand the key features of the life cycle and an animal
- Explore the natural world around them, making observations and drawing pictures of animals and plants;
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class;
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Science

Biology

Y5&6

Living things and habitats

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
- Describe the life process of reproduction in some plants and animals.
- Animals, including humans.
- Describe the ways in which nutrients and water are transported within animals, including humans.
- Identify and name of the main parts of human circulatory system, and describe the functions of the heart, blood vessels and blood.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.

- **Living things and habitats**
- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.
- Give reasons for classifying plants and animals based on specific characteristics
- Evolution and inheritance
- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Science

Biology

Y3&4

- **P**lants
- Identify and describe the functions of different parts of the flowering plants, roots, stem/trunk, leaves and flowers.
- Explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant.
- Investigate the ways in which water is transported within plants.
- Explore the part that flowers play in the life cycle of a flowering plant, including pollination, seed formation and seed dispersal.
- **Animals including humans**
- Identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food; they get nutrition from what they eat.
- Identify that humans and some animals have skeletons and muscles for support, protection and movement.
- **Rocks**
- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
- Describe in simple terms how fossils are formed when things that have lived are trapped within rock.
- Recognise that soils are made from rocks and organic matter.
- **Animals, including humans**
- Construct and interpret a variety of food chains, identifying producers, predators and prey.
- Describe the simple functions of the basic parts of the digestive system in humans.
- Identify the different types of teeth in humans and their simple functions.
- **Living things and 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 danger to living things.

Science

Biology

Y1&2

Plants

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common flowering plants, including trees.
- Animals, including humans
- Identify and name a variety of common animals, including fish, amphibians, reptiles, birds, & mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds & mammals, including pets).
- Identify, name, draw and label the basic parts of the human body and say which is associated with each sense.

Plants

- Observe and describe how seeds and bulbs grow into mature plants.
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
- Animals, including humans.
- Notice that animals, including humans, have offspring which grow into adults.
- Find out about and describe the basic needs of animals, including humans, for survival (water food and air).
- Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.

Living things and habitats.

- Explore and compare the differences between things that are living, dead and things that have never been alive.
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats, including micro-habitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Science

Chemistry

Y5&6

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.
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
- Properties and changes of materials.
- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
- Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
- Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
- Give reasons, based on evidence from comparative and fair tests, for the particular use of everyday materials, including metals, wood and plastic.
- Demonstrate that dissolving, mixing and changes of state are reversible changes.
- Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Science

Physics

Y5&6

- SForces and magnets
- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Identify the effects of air resistance, water resistance and friction that act between moving surfaces.
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have greater effect.
- Earth and Space
- Describe the movement of the Earth, and other planets, relative to the sun in the solar system.
- Describe the movement of the moon relative to the earth.
- Describe the sun, earth and moon as approximately spherical bodies.
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.
- Light
- Recognise that light appears to travel in straight lines.
- Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.
- 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.
- Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that cast them.
- Electricity
- Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
- Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.
- Use recognised symbols when representing a simple circuit in a diagram.

Science

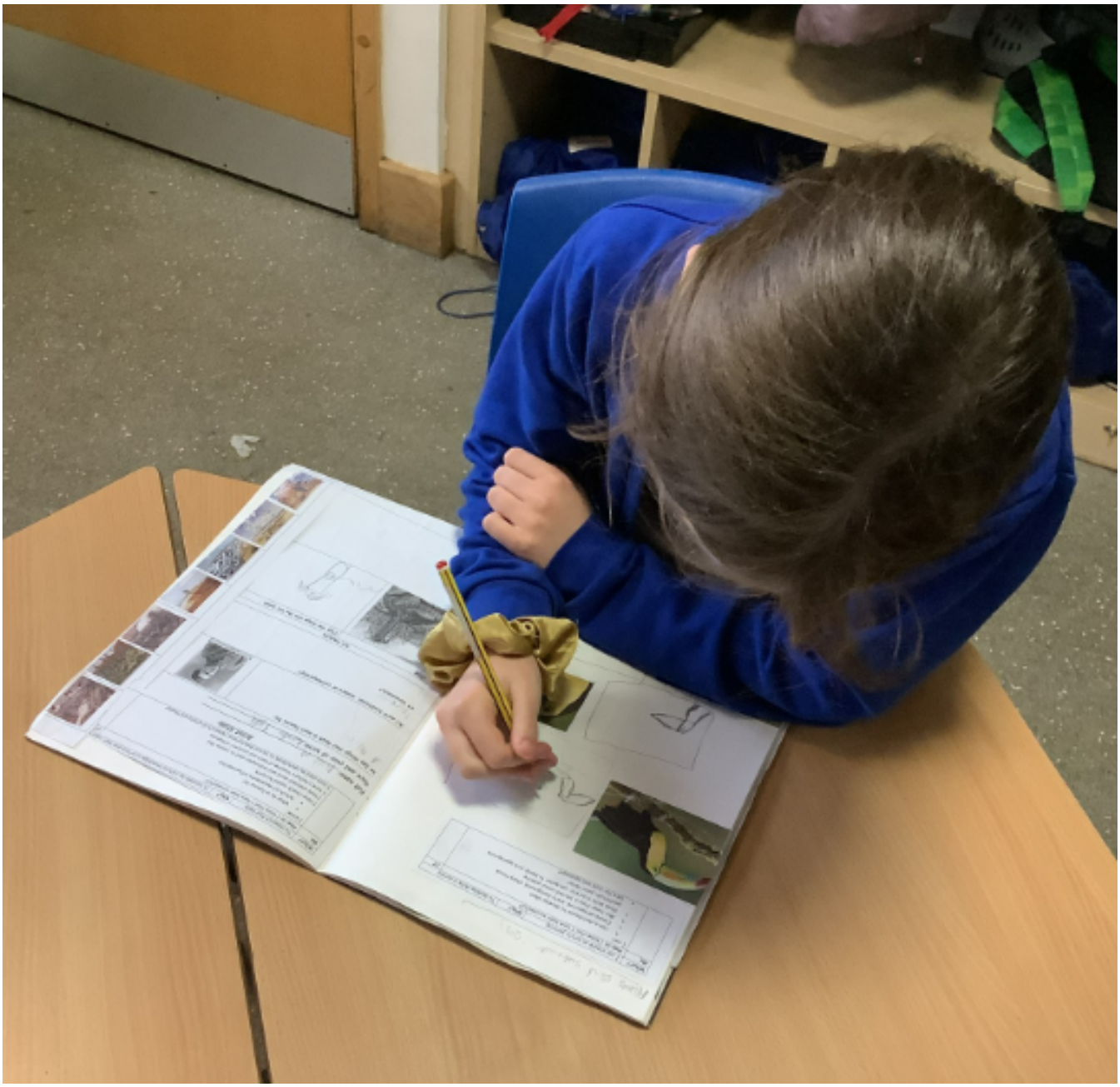
Physics

Y3&4

- Light
- 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 a solid object.
- Find patterns in the way that the size of shadows change.
- 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.
- Observe how magnets attract or repel each other and attract some materials and not others.
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
- Describe magnets as having two poles.
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.
- Sound
- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound increases.
- 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.

Art and Design



Art and Design Intent Statement

At Arnold Mill Primary, it is evident within the school the high value that we place on art and design activities. This is seen by our strong, ambitious aims and beliefs for the subject.

Our Aims:

- Provide a broad and balanced education for all pupils
- Enable pupils to develop knowledge, understand concepts and acquire skills, and be able to choose and apply these in relevant situations
- Support pupils' spiritual, moral, social and cultural development
- Close cultural gaps/ experiences for all children in our care, (eg knowledge of London)
- Promote a positive attitude towards learning
- To give children from disadvantaged backgrounds and children with SEN the cultural capital that they need to succeed in life.
- Ensure equal access to learning, with high expectations for every pupil and appropriate levels of challenge and support
- Develop pupils' independent learning skills and resilience, to equip them for future life opportunities, experiences and responsibilities
- Promote mental health
- To have a clear progression of skills from FS to year 6.

Our Beliefs:

·Art and design activity enriches children's learning and enables them to communicate their thoughts, ideas and observations in a practical and expressive way.

·In talking about art and evaluating their own and others' work, children are encouraged to develop their visual language, ideas and feelings.

·Through experience of a variety of materials, tools and techniques, children have the opportunity to record creatively the world around them - developing skills which are often transferable to other subjects (eg maths: ratio/ proportion).

·If art is not nurtured through primary school, children enter the next stage of learning with many subjects already 'closed' to them.

·Just as in every other subject, art skills, techniques and knowledge can be taught.

·By teaching children about great artists, craft makers and designers, they develop their historical and cultural capital – helping them to be 'educated citizens, introducing them to the best that has been thought and said and helping to engender an appreciation of human creativity and achievement.' (National Curriculum).

·Art has been proven to aid mental health and well-being:

'Participating in the arts can enable people to deal with a wide range of mental ill health conditions and psychological distress. The best part is that it helps people to improve their mental health through creativity. Making art is helping many people express themselves, without having to use words.'

Art and Design

Year 3-6

- 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.
- 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.
- About great artists, architects and designers in history.

Year 1 & 2

- To use a range of materials creatively to design and make products.
- To use drawing, painting and sculpture to develop and share their ideas, experience and imagination.
- To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space.
- About the work of a range of artists, craft makers, and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.

F1 & F2

- Draws a variety of objects with increased detail and shapes
- Draws people with all features and details.
- Selects own resources and painting technique to create a representation.
- Learns how to use a watercolour set.
- Learns about the work of an artist.
- Knows which primary colours are mixed to make secondary colours.

Music

Music Intent Statement

Music is a huge part of human culture and people all over the world use it for entertainment and self-expression. At Arnold Mill we are keen to inspire a lifelong love of music and provide children with the foundational knowledge they need to appreciate music and become musicians themselves.

When children start in nursery and foundation they are surrounded by music, learning rhymes and songs, which enhance their acquisition of language. In key stage 1 and experiment with a variety of instruments as well as their voices. Pupils clap out rhythms, listen to music and encounter different forms of notation. In key stage 2 pupils learn to play the glockenspiel solo and as an ensemble. The aim is to develop pupil's ability to play a tuned instrument and read music. Pupils are listen to and analyse music from various historical periods and of different musical genres. We expect pupils to talk about music's different dimensions such as pitch, duration, dynamics, tempo, timbre, texture, structure.

As children progress through school, we aim to build on their self-confidence and creativity as performers. Performance can give pupils a wonderful sense of achievement. In each year pupils should progress to the next level of excellence. We aspire for all pupils to appreciate and enjoy music, whether that be through listening or performing.

Music

Year 3-6

- Your 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. paragraph text

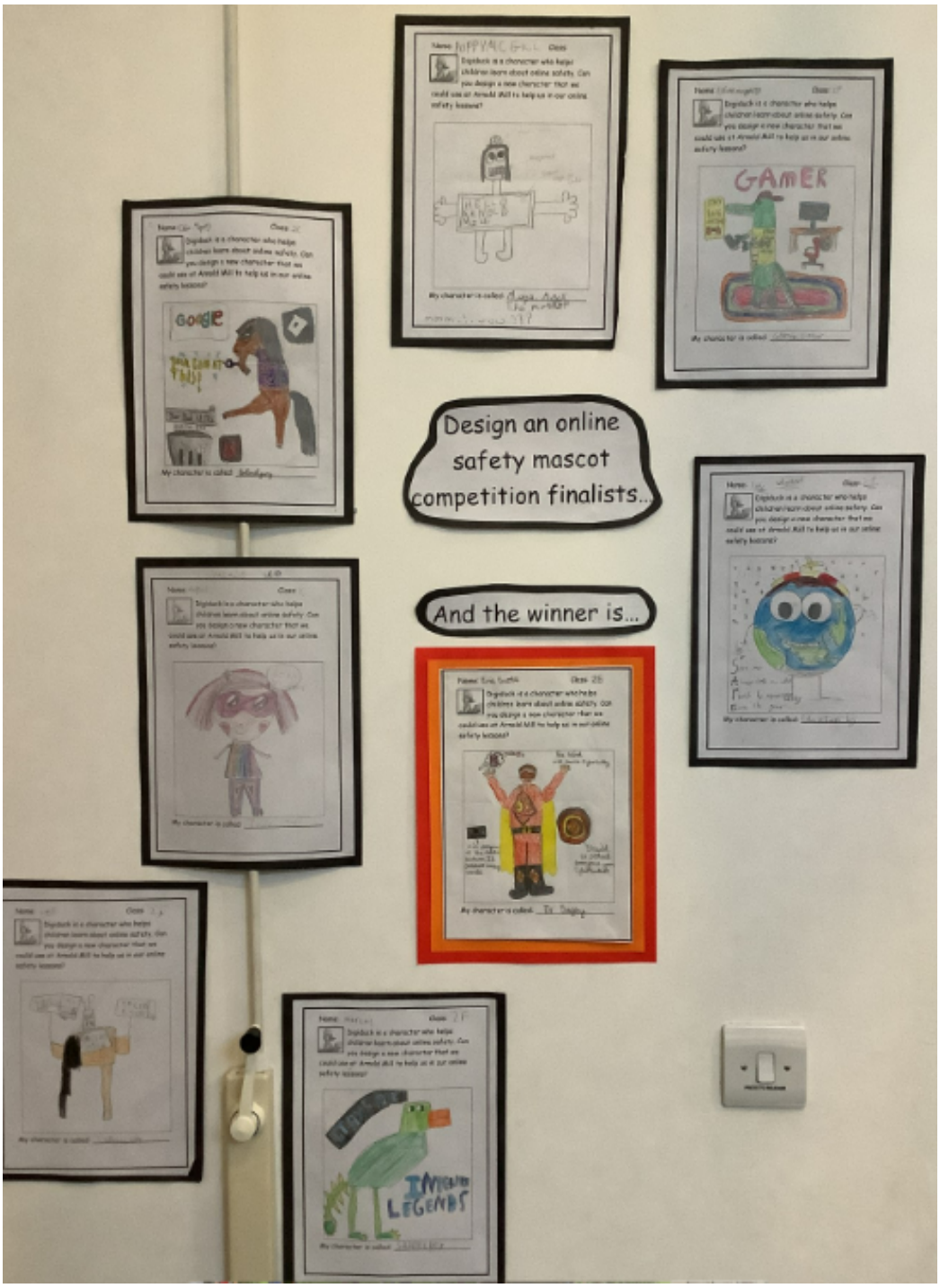
Year 1 & 2

- Use their voices expressively and creatively by singing songs and speaking chants and rhymes.
- Play tuned and untuned instruments musically.
- Listen with concentration and understanding to a range of high-quality live and recorded music.
- Experiment with, create, select and combine sounds using the inter-related dimensions of music**.**

F1 & F2

- Sing a range of well-known rhymes and songs.
- Perform songs, rhymes, stories with others.
- Try to move in time with music (where appropriate)

Computing


Design an online safety mascot competition finalists...
And the winner is...
GAMER
Google

Computing Intent Statement

At Arnold Mill Primary School, we aspire for the children to be confident users of technology where they have the opportunities to collaborate and problem solve through computational thinking. We are committed to providing a range of engaging experiences that encourage pupils to think creatively whilst using technology as a purposeful tool. By challenging pupils to consider both the advantages and disadvantages to working online, we aim to prepare them for entering the 21st Century workforce by ensuring that they can connect with the wider world in a safe and responsible manner. “The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.” (National Curriculum: Computing, 2014)"

Computing

Year 3-6

- Pupils should be taught to:
- Design write and debug programs that accomplish specific goals, including controlling physical systems; solving problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs; work with variable 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.
- Understanding computer networks including the internet; how they can provide multiple services, such as the whole 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.

Year 1 & 2

- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs
- Use logical reasoning to predict the behaviours of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of information, technology beyond school.
- Use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Design and Technology

Design and Technology Intent Statement

At Arnold Mill we believe Design and Technology prepares children to take part in the development of today's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become independent and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of Design and Technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past Design and Technology, its uses and its impacts. Design and Technology helps all children to become discriminating and informed consumers and potential innovators.

The aims of Design and Technology are:

· to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;

· to enable children to talk about how things work, and to draw and model their ideas;

· to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;

· to explore attitudes towards the made world and how we live and work within it;

· to develop an understanding of technological processes, products, and their manufacture, and their contribution to our society;

· to foster enjoyment, satisfaction and purpose in designing and making.

Design and Technology

Year 3-6

- Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [e.g. the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should 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, annotated sketches, cross-sectional and exploded diagrams, prototypes, patterns pieces and computer-aided design.

Make

- Select from and use a wider range of tools and equipment to perform practical tasks (e.g. 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 individuals in design and technology have helped shape the world

Technical Knowledge

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understand and use mechanical systems in their products (e.g. gears, pulleys, cams, levers and linkages).
- Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors).
- Apply their understanding of computing to program, monitor and control their products.

Cooking and Nutrition

- Understand and apply the principals 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.

Design and Technology

Year 1&2

- Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

F1 & F2

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creation, explaining the process they have used.
- Make use of props and materials when role playing character in narratives and stories.

Geography

Geography Intent Statement

Geography provokes and answers questions about the natural and human worlds. It is a focus within the curriculum for developing cultural awareness, understanding and resolving issues about the environment and recognising the importance of sustainable development. It can inspire children to think about their own place in the world, their values, and their rights and responsibilities to other people and the environment.

At Arnold Mill we aim to:

- Develop a broad geographical and cultural awareness in children of globally significant places.
- Provide opportunities for children to undertake geographical enquiry and skills by investigating and expressing their own views about people, places and environments, both in and outside the classroom.
- Enable children to communicate their view points in a variety of ways using appropriate vocabulary.
- Encourage children to collect and analyse evidence and draw conclusions.
- Explore a range of sources of information.
- Foster enjoyment, satisfaction and curiosity for finding out about places, patterns and processes.

Geography

Year 3-6

Locational knowledge

- 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 topgraphical 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).

Place knowledge

- 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

- 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.

Skills and Fieldwork

- 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 and record the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.

Geography

Year 1&2

Locational knowledge

- Name and locate the world's seven continents and five oceans.
- Name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas.

Place knowledge

- Understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country.

Human and Physical Geography

- Identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.
- Use basic geographical vocabulary to refer to:
- Key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather
- Key human features including: city, town, village, factory, farm, house, office, port, harbour and shop.

Skills and Fieldwork

- Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage.
- Use simple compass directions (North, South, East and West) and locational and directional language (e.g near and far; left and right) to describe the location of features and routes on a map.
- Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features: devise a simple map; and use and construct basic symbols in a key.
- Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.

Geography

F1 & F2

Locational and Place Knowledge

- Knows there are different countries in the world and can talk about the differences they have experienced or seen in photos.
- Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps.
- Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and when appropriate – maps.

History

History Intent Statement

History fires children's curiosity about the past in Britain and the wider world and helps them to understand the diversity of human experience. It provides them with the ability to empathise with others, argue a point of view and reach their own conclusions - essential skills that are prized in adult life.

At Arnold Mill we aim to:

- Develop a broad historical and cultural awareness in children.
- Provide opportunities for children to develop a chronological framework by investigating the past and how it influences the present.
- Encourage children to interrogate evidence and form their own opinions.
- Enable children to communicate their view points in a variety of ways using appropriate vocabulary.
- Explore a range of sources of information.
- Foster enjoyment, empathy and curiosity for finding out about the past.

We offer the children a broad and balanced curriculum which builds on their knowledge, skills and understanding of history each year. Through the use of visitors & visits, drama and historical evidence, children will leave Arnold Mill with an understanding of how beliefs and cultures affect people's actions. Children will also have a chronological framework for their knowledge of significant events and people.

History

Year 3-6

- Pupils should continue to develop a chronologically secure knowledge and understanding of British, local and world study, 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 than 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.
- Changes in Britain from the stone age to the iron age. This could include:
- Late neolithic hunter gatherers and early farmers, eg Skara brae.
- Bronze age religion, technology and travel, eg Stonehenge.
- Iron age hill forts; tribal kingdoms, farming, art and culture.
- The Viking and Anglo Saxon struggle for the kingdom of England to the time of Edward the confessor.
- Viking raids and invasion
- Resistance by Alfred the great and Athelstan, first king of England.
- Further Viking invasions and danegeld
- Anglo Saxon laws and justice.
- Edward the confessor and his death in 1066.
- The achievements of the earliest civilisations - an overview of where and when the first civilisations appeared and a depth study of one of the following: ancient Sumer; the Indus valley; ancient Egypt; the Shang dynasty of ancient China.
- The roman empire and its impact on Britain.
- Julius Caeser's attempted invasion in 55-54 BC
- The roman empire by AD 42 and the power of its army.
- Successful invasion by Claudius and conquest, including Hadrian's wall.
- British resistance, e.g. Boudica
- Romanisation of Britain: sites such as Caerwent and the impact of technology, culture and beliefs, including early Christianity.
- A local history study.
- A depth study linked to one of the British areas of study listed above
- A study over time tracing how several aspects national history are reflected in the locality (this can go beyond 1066)
- A study of an aspect of history or a site dating from a period beyond 1066 that is significant in the locality.
-

History

- Ancient Greece
- A study of Greek life and achievements and their influence on the eastern world.
- Britain's settlement by Anglo Saxons and Scots.
- Roman withdrawal from Britain in ad 410 and the fall of the western roman empire
- Scots invasions from Ireland to north Britain now Scotland
- Anglo Saxon invasions, settlements and kingdoms: place names and village life
- Anglo Saxon art culture
- Christian conversion – canterbury, Iona and Lindisfarne.
- A study of an aspect or theme in British history that extends pupils chronological knowledge beyond 1066.
- The changing power of monarchs using case studies such as john, Anne and Victoria
- Changes in an aspect of social history, such as crime and punishment from Anglo Saxons to the present of leisure and entertainment in the 20th century.
- The legacy of Greek and roman culture (art, architecture or literature) on later periods in British history, including the present day.
- A significant turning point in British history, e.g. The first railways or the battle of Britain.
-
- A non European society
- That provides contrasts with British history – one study chosen from: early Islamic civilization, including a study of Baghdad AD900; Mayan civilisation AD 900; Benin (West Africa) AD 900-1300

History

Year 1 & 2

- Pupils should develop an awareness of the past, using common words and phrases relating to the passing of time.
- They should know where the people and events they study fit within a chronological framework and identify similarities and differences between ways of life in different periods.
- They should use a wide vocabulary of everyday historical terms.
- They should ask and answer questions, choosing and using parts of stories and other sources to show that they know and understand key features of events.
- They should understand some of the ways in which we find out about the past and identify different ways in which it is represented.
- changes within living memory. Where appropriate, these should be used to reveal aspects of change in national life
- events beyond living memory that are significant nationally or globally [for example, the Great Fire of London, the first aeroplane flight or events commemorated through festivals or anniversaries]
- the lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods [for example, Elizabeth I and Queen Victoria, Christopher Columbus and Neil Armstrong, William Caxton and Tim Berners-Lee, Pieter Bruegel the Elder and LS Lowry, Rosa Parks and Emily Davison, Mary Seacole and/or Florence Nightingale and Edith Cavell]
- significant historical events, people and places in their own locality

History

F1 & F2

- Begin to have an understanding for terms like, yesterday, last week and last year
- Appreciate that they may have siblings that are older than them and that they may be older than a younger sibling
- Appreciate that certain artefacts and resources are old and have been used before
- Talk about the lives of the people around them and their roles in society;
- Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.
- Understand the past through settings, characters and events encountered in
- books read in class and storytelling.

Modern Foreign Languages

Modern Foreign Languages Intent Statement

At Arnold Mill Primary it is evident within school that we place importance on pupils having positive experiences of MFL teaching, specifically in our chosen language which is French.

Our aims at Arnold Mill are to provide:

- A broad and balanced education for all pupils
- Enable pupils to develop knowledge, understand concepts and acquire skills, and be able to choose and apply these in relevant situations.
- Support pupils' spiritual, moral, social and cultural development
- Promote a positive attitude towards learning.
- Ensure equal access to learning, with high expectations for every pupil and appropriate levels of challenge and support.
- To have a clear progression of skills throughout MFL teaching from Years 3-6

These aims support our core beliefs at Arnold Mill which are to ensure:

- Children can find enjoyment in learning to speak another language.
- Children can acquire foreign language skills at an early age.
- The early acquisition of a foreign language facilitates the learning of other foreign languages later in life.
- Pupils can develop an interest in, and appreciation of, other cultures as they learn to understand and express themselves in French.
- By teaching children about French customs and traditions, artists and composers we can close cultural gaps.
- Pupils can be prepared for the transition into language learning at KS3.

Modern Foreign Languages

Year 3:

- Listen and respond to familiar spoken words and phrases (Listening)
- Communicate with others using simple words, phrases and short sentences (Speaking)
- Explore the patterns and sounds of language to help develop accurate pronunciation and intonation (Speaking)
- Recognise and understand some familiar words and phrases (Reading)
- Show awareness of sound spelling links (Reading)
- Write some familiar simple words using a model and some from memory (Writing)
- Understand some basic grammar appropriate to the language being studied (Grammar)
- a) gender: masculine/feminine nouns - singular
- b) have some understanding of the word order of adjectives

Year 4:

- Listen for specific phonemes, words and phrases (Listening)
- Communicate by asking and answering a wider range of questions (Speaking)
- Explore further the patterns and sounds of language to help develop accurate pronunciation and intonation (Speaking)
- Recognise and understand familiar written words, phrases and short texts made of simple sentences (Reading)
- Read a wider range of words, phrases and sentences aloud (Reading)
- Follow text while listening and reading at the same time (Reading)
- Apply phonics knowledge to support reading and read words with increasingly accurate pronunciation (Reading)
- Write phrases and a simple sentence using a model (Writing)
- Apply phonics knowledge to support writing (Writing)
- Understand more grammar appropriate to the language being studied (Grammar)
- a) gender: masculine/feminine nouns – singular and plural
- b) understand the word order of adjectives
- c) be introduced to the negative form

Modern Foreign Languages

Year 5:

- Listen attentively and understand more complex phrases and sentences (Listening)
- Take part in short conversations using familiar structures and vocabulary (Speaking)
- Use simple conjunctions to build more complex sentences and present information to others (Speaking)
- Understand and express more complex opinions (Speaking)
- Continue to explore the patterns and sounds of language to improve accurate pronunciation and intonation (Speaking)
- Read a variety of short simple texts in different formats and in different contexts (Reading)
- Focus on correct pronunciation and intonation, using tone of voice and gesture to convey meaning when reading aloud (Reading)
- Write simple sentences, sometimes using a model (Writing)
- Use a bilingual dictionary to check the spelling of words (Writing)
- Understand a wider range of grammar appropriate to the language being studied (Grammar)
- a) gender: confidence with sorting masculine/feminine nouns, both singular and plural
- b) using adjectives
- c) forming the negative
-

Year 6:

- Understand the main points and simple opinions in spoken sources e.g. story, song (Listening)
- Understand longer and more complex phrases or sentences e.g. descriptions, information, instructions (Listening)
- Use spoken language to convey meaning in different contexts and for different purposes (Speaking)
- Present to an audience e.g. role-play, presentation (Speaking)
- Read aloud from a text with good expression (Reading)
- Read and understand the main points and some detail from a short written passage (Reading)
- Construct and write a short text from a model (Writing)
- Write a couple of sentences from memory, using knowledge of words, texts and structure (Writing)
- Have secure understanding of noun gender: masculine and feminine, singular and plural (Grammar)
- Be confident with the word order of adjectives (Grammar)
- Be introduced to the conjugation of some present tense verbs (Grammar)

Physical Education

Physical Education Intent Statement

The early years of a child's life are central to their growth and development. This applies to their physical development as much as any other area. One of the greatest benefits of physical education (PE) is that it improves children's physical and mental health at the same time.

Children who are involved in regular PE are much more likely to have better physical health when compared to those who don't. We aim to offer a PE curriculum that ensures our children grow strong muscles and bones, with lots of opportunities for outdoor learning and physical activity such as: pushing, climbing, running, and jumping. We encourage them to have at least an hour of vigorous physical activity every day through specific lessons, access to outdoor provision and active breaktimes to improve cardiovascular health and wellbeing.

We also know that PE also has the potential to greatly boost children's memories, improve their concentration and support the development of positive mental health. Our PE curriculum encourages children to challenge themselves, improve their own performance and to work as a team in competitive sports; signposting them to outside agencies to nurture their development even further.

We want our children to discover a love for sports and talents at an early age and receive the support they need to develop them. If these talents are well taken care of many children will remain active, giving them a love of sporting activity into adulthood.

Physical Education

Year 3-6

- 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. They should develop an understanding of how to improve in difference physical activities and sports and learn how to evaluate and recognise their own success.
- Pupils should be taught to:
- Use running, jumping, throwing and catching in isolation and in combination
- Play competitive games, modified where appropriate, e.g. badminton , basketball, cricket, football, hockey, netball, rounders and tennis and apply basic principles suitable for attacking and defending
- Develop flexibility, strength, technique, control and balance, e.g. through athletics and gymnastics
- Perform dances using a range of movement patterns
- Take part in outdoor and adventurous activity challenges both individually and within a team
- Compare their performances with previous ones and demonstrate improvement to achieve their personal best

Swim

- Swim competently, confidently and proficiently over a distance of at least 25 metres.
- Use a range of strokes effectively such as front crawl, backstroke and breaststroke.
- Perform safe self-rescue in different water-based situations.

Year 1 & 2

- Pupils should develop fundamental movement skills, become increasingly competent and confident and access a broad range of opportunities to extend their agility, balance and coordination, individually and with others. They should be able to engage in competitive (both against self and against others) and co-operative physical activities, in a range of increasingly challenging situations. Pupils should be taught to:
- master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities
- participate in team games, developing simple tactics for attacking and defending
- perform dances using simple movement patterns

Physical Education

F1 & F2

Gross Motor

- Moves freely with pleasure in lots of ways.
- Changes speed and direction to avoid obstacles.
- Experiments with skipping, hopping and jumping movements.
- Can catch a large ball.
- Can kick a large ball.
- Stands momentarily on one foot.
- Climbs onto the climbing frame and uses the rope ladder to climb down independently.
- Confidently balances on crates, planks and benches both in PE and in play.
- Safely jumps off apparatus
- Negotiates space and obstacles safely, with consideration of themselves and others.
- Demonstrate strength, balance and coordination when playing.
- Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.

Fine Motor

- Holds a pencil near the point between first two fingers and thumb and uses it with good control.
- Knows how to hold scissors correctly
- Can use scissors to snip
- Experiments with cutting other materials (string, card, ribbon)
- Hold their pencil with a tripod or near tripod grip.
- Use a comfortable grip on scissors to snip.
- Hold a pencil effectively in preparation for fluent writing (the tripod grip in almost all cases)
- Use a range of small tools, scissors, paintbrushes and cutlery.
- Begin to show accuracy and care when drawing

PSHE

PSHE Intent Statement

Your At Arnold Mill Primary School, we firmly believe the implementation of Personal, Social and Health Education (PSHE) and Citizenship as well as Relationships Education within the curriculum, enables children to become healthy, independent and responsible members of society who encompass British Values. Lessons offer learning opportunities across and beyond the curriculum, including class-based activities, assemblies, circle time, nurture groups, sensory time, special school projects and extra-curricular opportunities aimed to enrich pupils' experiences. Our objective is to work alongside parents and carers to support and help our young people through their physical, emotional and moral development and aims to help them understand how they are developing personally and socially; tackling many of the moral, social and cultural issues that are part of growing up. As well as encouraging our pupils to play a positive role in contributing to the life of Arnold Mill Primary, this is also extended to the wider community. In doing so, we help develop their sense of self-worth and they learn to appreciate what it means to be a positive member of a diverse multicultural society.

PSHE

F2, Key Stage 1 and Key Stage 2 PSHE is taught via the SCARF PSHE programme which delivers comprehensive coverage of the subject across six strands of learning, which include;

Me and My Relationships,
Valuing Difference,
Keeping Safe,
Rights and Respect,
Being my Best
Growing and Changing.

Our F1 children are taught PSHE via the Early Years Foundation Stage (EYFS) framework.

For more understanding about our SCARF PSHE programme please see the link below:
www.coramlifeeducation.org.uk

coram Life Education SCARF

Religious Education

Religious Education Intent Statement

Religious Education enables children to investigate and reflect on some of the most fundamental questions asked by people. At Arnold Mill Primary School, we deliver a plural, fun and spiritually engaging curriculum which allows children to develop and deepen their knowledge and understanding of the major world faiths. We provide opportunities for children to ask and reflect on challenging questions about the meaning and purpose of life, beliefs, the self, issues of right and wrong and what it means to be human. We enable children to develop a sound knowledge not only of Christianity but also of other world religions in relation to values. Children reflect on what it means to have a faith and develop their own spiritual knowledge and understanding. We help the children to learn from religions as well as about religions.

Through the teaching of Religious Education we aim to:

- Develop moral and social understanding through exploring the concepts of religion and belief and their roles in the spiritual, moral and cultural lives of the people in our society
- Develop an awareness of spiritual and moral issues in life experiences
- Develop an understanding of religious traditions and to appreciate and respect the cultural differences in Britain today
- Prepare pupils for life in modern, diverse Britain
- Develop knowledge and understanding of Christianity and other major world religions and value systems found in Britain
- Have an understanding of what it means to be committed to a religious tradition
- Provide opportunities to promote an ethos of respect for others, challenge stereotypes, celebrate diversity and build an understanding of other cultures and beliefs
- Be able to reflect on own experiences and to develop a personal response to the fundamental questions of life

Religious Education

- Our teaching of Religious Education follows the guidance given in the latest Agreed Syllabus for Nottingham City and Nottinghamshire:- Religious Education for All
- The Agreed Syllabus for RE in Nottingham City and Nottinghamshire 2021-2026
- Using this Agreed Syllabus for Religious Education, we will enable our pupils to discover more about religion as well as other world views as we assist them to apply their learning to a range of topics. Our pupils are encouraged to express ideas and insights into key questions which face all human beings as we travel through life. They will take part in lessons, and also receive visitors to school sharing a range of religious viewpoints and undertake their own visits to varied places of worship.
- Through these experiences they will gain insights and knowledge to help equip them as responsible citizens, ready to contribute positively to our society and the wider world.
- The three-fold aims of RE in Nottingham City and the County will ensure that our pupils:
- Know and understand a range of religions and world views which will allow them to recognise the diversity which exists in our city and wider society.
- Can express ideas and insights about the nature, significance and the impact of religions and world views as they develop their own personal views on a range of issues
- Develop and use skills which will assist them to engage seriously with religions and world views

- By following the Agreed Syllabus, RE will also contribute to a whole range of school priorities. Study of religious and world views will also promote spiritual, cultural, social and moral development, and will support pupils' understanding of British Values such as acceptance and respect for others who hold different world views.