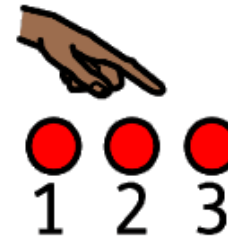


Castle assessment levels for maths and literacy

Rainbows and gemstones





Literacy - rainbow levels



Reading

Writing



Red

Writing starts at Yellow level

- Notices and engages with sounds and images in the environment
- As part of sensory exploration, may touch and handle books and digital reading devices
- Enjoys looking at books and other suitable printed or digital material with familiar people, and being read to

Orange

Writing starts at Yellow level

- Handles books, printed and digital reading material with interest
- Responds to sounds in the environment such as cars, sirens and birds
- Is interested in and explores the sounds made by banging and tapping familiar objects and simple instruments
- Waves and taps arms, bounces or stamps to simple rhythms in songs and rhymes
- Notices pictures and symbols and beginning to recognise what they stand for in their familiar experiences

Yellow

- | | |
|--|---|
| <ul style="list-style-type: none"> • Is interested in and anticipates books and rhymes and may have favourites • Begins to join in with actions and sounds in familiar song and book sharing experiences | <ul style="list-style-type: none"> • Begins to understand the cause and effect of their actions in mark making • Knows that the marks they make are of value • Enjoys the sensory experience of making marks |
|--|---|

Green

- | | |
|--|--|
| <ul style="list-style-type: none"> • Has some favourite stories, rhymes, songs, poems or jingles • Repeats and uses actions, words or phrases from familiar stories • Fills in the missing word or phrase in a known rhyme, story or game, e.g. Humpty Dumpty sat on a wall; Begins to recognise familiar logos from children's popular culture, commercial print or icons for apps • Enjoys rhythmic and musical activity with percussion instruments, actions, rhymes and songs, clapping along with the beat and joining in with words of familiar songs and nursery rhymes | <ul style="list-style-type: none"> • Distinguishes between the different marks they make • Enjoys drawing and writing on paper, on screen and on different textures, such as in sand or playdough and through using touch-screen technology. |
|--|--|



Blue



- Listens to and joins in with stories and poems, when reading one-to-one and in small groups
- Joins in with repeated refrains and anticipates key events and phrases in rhymes and stories
- Begins to be aware of the way stories are structured, and to tell own stories
- Talks about events and principal characters in stories and suggests how the story might end
- Shows interest in illustrations and words in print and digital books and words in the environment
- Recognises familiar words and signs such as own name, advertising logos and screen icons
- Looks at and enjoys print and digital books independently
- Knows that print carries meaning and, in English, is read from left to right and top to bottom
- Knows information can be relayed through signs and symbols in various forms (e.g. printed materials, digital screens and environmental print)
- Handles books and touch screen technology carefully and the correct way up with growing competence
- Begins to navigate apps and websites on digital media using drop down menu to select websites and icons to select apps
- Begins to develop phonological and phonemic awareness
- Shows awareness of rhyme and alliteration
- Recognises rhythm in spoken words, songs, poems and rhymes
- Claps or taps the syllables in words during sound play
- Hears and says the initial sound in words
- Makes up stories, play scenarios, and drawings in response to experiences, such as outings
- Sometimes gives meaning to their drawings and paintings
- Ascribes meanings to signs, symbols and words that they see in different places, including those they make themselves
- Includes mark making and early writing in their play
- Imitates adults' writing by making continuous lines of shapes and symbols (early writing) from left to right
- Attempts to write their own name, or other names and words, using combinations of lines, circles and curves, or letter-type shapes
- Shows interest in letters on a keyboard, identifying the initial letter of their own name and other familiar words
- Begins to make letter-type shapes to represent the initial sound of their name and other familiar words



Indigo



- Enjoys an increasing range of print and digital books, both fiction and non-fiction
- Uses vocabulary and forms of speech that are increasingly influenced by their experiences of reading
- Describes main story settings, events and principal characters in increasing detail
- Re-enacts and reinvents stories they have heard in their play
- Knows that information can be retrieved from books, computers and mobile digital devices
- Is able to recall and discuss stories or information that has been read to them, or they have read themselves
- Begins to recognise some written names of peers, siblings or "Mummy"/"Daddy" for example
- Begins to develop phonological and phonemic awareness
- Continues a rhyming string and identifies alliteration
- Hears and says the initial sound in words
- Begins to segment the sounds in simple words and blend them together and knows which letters represent some of them
- Starts to link sounds to letters, naming and sounding the letters of the alphabet
- Begins to link sounds to some frequently used digraphs, e.g. sh, th, ee
- Begins to read some high frequency words, and to use developing knowledge of letters and sounds to read simple phonically decodable words and simple sentences
- Engages with books and other reading materials at an increasingly deeper level, sometimes drawing on their phonic knowledge to decode words, and their knowledge of language structure, subject knowledge and illustrations to interpret the text
- Includes everyday literacy artefacts in play, such as labels, instructions, signs, envelopes, etc.
- Constructs 3 part sentences using colourful semantics
- Constructs 3 part sentences using colourful semantics
- Enjoys creating texts to communicate meaning for an increasingly wide range of purposes, such as making greetings cards, tickets, lists, invitations and creating their own stories and books with images and sometimes with words, in print and digital formats
- Constructs 3 part sentences using colourful semantics
- Gives meaning to the marks they make as they draw, write, paint and type using a keyboard or touch-screen technology
- Begins to break the flow of speech into words, to hear and say the initial sound in words and may start to segment the sounds in words and blend them together
- Starts to develop phonic knowledge by linking sounds to letters, naming and sounding some of the letters of the alphabet, identifying letters and writing recognisable letters in sequence, such as in their own name
- Uses their developing phonic knowledge to write things such as labels and captions, later progressing to simple sentences



Violet



- Say a sound for each letter in the alphabet and at least 10 digraphs;
- Read words consistent with their phonic knowledge by soundblending;
- Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words.
- Writes recognisable letters, most of which are correctly formed
- Spells words by identifying sounds in them and representing the sounds with a letter or letters
- Writes simple phrases and sentences that can be read by others (using colourful semantics where appropriate).



Literacy – gemstone levels



Reading

Writing

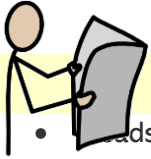


Ruby

- Applies phonic knowledge and skills to decode words
 - Responds with the correct sound to graphemes
 - Reads accurately by blending sounds in unfamiliar words
 - Reads 'tricky' words
 - Listens to and discuss a range of poems, stories and non-fiction text
 - Links what they have read to their own experiences
 - Retells key stories, fairy stories and traditional tales
 - Joins in with predictable phrases
- Forms lower case and capital letters
 - Composes a sentence orally before writing it
 - Uses adjectives
 - Can name the letters of the alphabet
 - Joins words and clauses using and
 - Separates words with spaces
 - Use capital letters for names and the pronoun I
 - Uses capital letters, full stops, question marks and exclamation marks

Sapphire

- Reads words containin -s,-es, -ing, -ed, -er, and -est endings
 - Reads words with contractions e.g. I'm
 - Reads aloud books that are within their developing phonic knowledge
 - Re-reads to build up fluency and confidence
 - Recites rhymes and poems
 - Discusses word meanings
 - Discusses the significance of the title and events
 - Makes inference on the basis of what has been said or done
 - Predicts what might happen on the basis of what has been read so far
 - Participates in discussion about what is read, taking turns and listening to what others say
 - Chooses words that best describe a character
- Sequences sentences to form short narratives
 - Re-reads what they have written to check it makes sense
 - Constructs 4, 5 and 6 part sentences using colourful semantics (where appropriate).
 - Discusses what they have written
 - Spell words containing each of the 40+ phonemes
 - Adds 's' or 'es' as the plural marker for nouns
 - Uses 'ing', 'est', 'er', 'ed' where there is no change needed in the root word
 - Writes from memory simple sentences dictated by an adult that include 'tricky' words



Pearl

- Reads accurately by blending including recognising alternative sounds for graphemes
- Reads words containing common suffixes
- Reads words quickly and accurately, without overt sounding
- Reads aloud books matched to their improving phonic knowledge, sounding out unfamiliar words automatically
- Discusses the sequence of events in books
- Retells a range of stories, fairy stories and traditional tales
- Begins reading non-fiction books that are structured in different ways
- Asks questions related to text
- Forms lower case letters of the correct size relative to one another
- Writes capital letters of the correct size, orientation and relationship to one another and to lower case letters
- Uses spacing between words that reflects the size of the letters
- Writes narratives about personal experience and those of others (real and fictional)
- Writes about real events
- Uses further prefixes and suffixes
- Spells some words with silent letters e.g. knight
- Checks the spelling of words using a dictionary
- Uses commas to list information in a sentences

Silver

- Demonstrates phonic knowledge secure enough that reading is fluent
- Re-reads books to demonstrate fluency and confidence
- Listens to, discusses and expresses views about a range of contemporary and classic poetry, stories and non-fiction text
- Discusses favourite words and phrases
- Answers questions using inference
- Explains and discusses understanding of text, both those that they listen to and those that they read themselves
- Writes poetry
- Writes for different purposes
- Plans what they are going to write about including ideas and key words
- Evaluates and proof reads writing
- Re-reads to check that verbs to indicate time are used correctly
- Understands vocabulary used for informal and formal speech and writing
- Links ideas across paragraphs e.g. use of adverbials and ellipsis
- Uses layout devices such as headings, subheadings, columns, bullets
- Uses colons and semi-colons to mark boundaries between clauses
- Uses colons to introduce a list



Gold



- Reads out loud to a group
- Reads words that I have never seen before
- Reads a range of different types of stories and non-fiction texts
- Finds out the meaning of new words using a dictionary
- Retells stories that they have read before out loud
- Asks questions to help them to understand a text
- Checks that what they are reading makes sense to me and explains what they are reading
- Predicts what might happen from details stated
- Points out the words that best describe a character
- Can explain what a prefix and a suffix are
- Can write lots of words that sound the same but are spelled differently
- Uses similes
- Uses expanded noun phrases
- Plans their writing by discussing it before they start
- Creates settings, characters and a plot for a story
- Reads their work out loud in front of the class
- Presents work clearly and appropriately (with joined up handwriting)
- Punctuates direct speech
- Uses pronouns correctly, e.g. his, hers, its, theirs

Emerald

- Discusses how different stories are structured
- Discusses the theme of some books
- Prepares a poem for performance
- Prepares a play for performance
- Summarises the main ideas in a text of more than one paragraph
- Knows the difference between fact and opinion
- Uses the possessive apostrophe (e.g. John's ball)
- Uses metaphors (e.g. "his fingers were frozen icicles")
- Uses adverbial phrases (e.g. "he looked at me with an evil stare")
- Links ideas using different paragraphs
- Uses headings and sub-headings
- Evaluates and edits their work, checking for spelling and vocabulary errors
- Writes sentences with more than one clause
- Uses lots of conjunctions like when, if, because, although
- Uses the present perfect tense ("I have seen")
- Uses adverbs, conjunctions and prepositions to express time and cause
- Uses fronted adverbials ("Yawning and stretching, he climbed out of bed")



Jet



- Explains the meaning of new words
- Confidently reads unusual and unfamiliar words
- Reads and understands differently structured books (e.g. diaries, collections of letters)
- Reads and discusses books written for different purposes
- Recommends books to others and explains why they like them
- Infers information about the feelings, thoughts and motives of characters from the text
- Imaginatively predicts what might happen from details stated and implied
- Discusses and evaluates how authors use language to impact the reader
- Retrieves, records and presents information from non-fiction
- Explains and discusses what they have read through formal presentation
- Provides a reasoned argument to support their views
- Use quotes directly from the text to support their ideas in writing
- Identifies an audience for their work and writes with them in mind
- Drafts their work, developing initial ideas and researching where necessary
- Considers how authors have developed characters and settings
- Writes a short summary of a longer passage
- Uses subordinating conjunctions (if, when, because)
- Writes persuasively using rhetorical questions and logical connectives (so, therefore)
- Uses organisational and presentational devices to structure text
- Punctuates direct and indirect speech
- Uses modal verbs and adverbs confidently
- Punctuates bullet points

Diamond

- Discusses a wide range of fiction, poetry, plays, non-fiction and reference/text books confidently, contributing their own ideas
- Identifies and discusses themes and conventions in stories
- Recites poetry
- Takes part in and leads extended drama activities
- Re-reads their own work over several paragraphs to sense-check it for meaning
- Explains how the language, structure and presentation add to the meaning of a text
- Understands and explains how texts fit into a historical context
- Assesses the effectiveness of their own and other people's writing
- Suggests changes to the vocabulary, grammar and punctuation they have used to improve the writing
- Independently checks their work for spelling and punctuation and grammatical errors
- Uses passive verbs ("he was hit by the flying object")
- Use the past perfect tense ("I had seen")
- Use expanded noun phrases ("The tall girl standing by the window...")
- Use hyphens, brackets and dashes
- Use relative clauses ("The boy, who had not done his homework...")
- Uses semi-colons, colons and dashes as boundaries between independent clauses



Maths – rainbow levels



Number

Shape, space & measure



Red

- Reacts to changes of amount when those amounts are significant (more than double)

Spatial awareness

- Explores space when they are free to move, roll and stretch
- Developing an awareness of their own bodies, that their body has different parts and where these are in relation to each other

Shape

- Explores differently sized and shaped objects
- Beginning to put objects of similar shapes inside others and take them out again

Pattern

- Shows interest in patterned songs and rhymes, perhaps with repeated actions
- Experiences patterned objects and images
- Begins to predict what happens next in predictable situations

Measures

- Responds to size, reacting to very big or very small items that they see or try to pick up

Orange

Number

- May be aware of number names through their enjoyment of action rhymes and songs that relate to numbers
- Looks for things which have moved out of sight

Spatial awareness

- Explores space around them and engages with position and direction

Shape

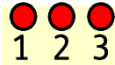
- Stacks objects using flat surfaces
- Responds to changes of shape
- Attempts to match shapes with spaces on inset puzzles

Pattern

- Joins in with repeated actions in songs and stories
- Initiates and continues repeated actions

Measures

- Shows an interest in objects of contrasting sizes in meaningful contexts
- Gets to know and enjoys daily routine
- Shows an interest in emptying containers



Yellow

Comparison

- Responds to words like lots or more

Counting

- Says some counting words
- May engage in counting-like behaviour, making sounds and pointing or saying some numbers in sequence

Cardinality

- Uses number words, like one or two and sometimes responds accurately when asked to give one or two things

Spatial Awareness

- Enjoys filling and emptying containers
- Investigates fitting themselves inside and moving through spaces

Shape

- Pushes objects through different shaped holes, and attempts to fit shapes into spaces on inset boards or puzzles
- Beginning to select a shape for a specific space
- Enjoys using blocks to create their own simple structures and arrangements

Pattern

- Becoming familiar with patterns in daily routines
- Joins in with and predicts what comes next in a story or rhyme
- Beginning to arrange items in their own patterns, e.g. lining up toys

Measures

- Shows an interest in size and weight
- Explores capacity by selecting, filling and emptying containers, e.g. fitting toys in a pram
- Beginning to understand that things might happen now or at another time, in routines



1 2 3



Green

Comparison

- Beginning to compare and recognise changes in numbers of things, using words like more, lots or 'same'

Counting

- Begins to say numbers in order, some of which are in the right order (ordinality)

Cardinality

- In everyday situations, takes or gives two or three objects from a group
- Beginning to notice numerals (number symbols)
- Beginning to count on their fingers.

Spatial Awareness

- Moves their bodies and toys around objects and explores fitting into spaces
- Begins to remember their way around familiar environments
- Responds to some spatial and positional language
- Explores how things look from different viewpoints including things that are near or far away

Shape

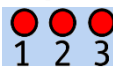
- Chooses puzzle pieces and tries to fit them in
- Recognises that two objects have the same shape
- Makes simple constructions

Pattern

- Joins in and anticipates repeated sound and action patterns
- Is interested in what happens next using the pattern of everyday routines

Measures

- Explores differences in size, length, weight and capacity
- Beginning to understand some talk about immediate past and future
- Beginning to anticipate times of the day such as mealtimes or home time



Blue

Comparison

- Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same!

Counting

- May enjoy counting verbally as far as they can go
- Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5.
- Uses some number names and number language within play, and may show fascination with large numbers
- Begin to recognise numerals 0 to 10

Cardinality

- Subitises one, two and three objects (without counting)
- Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle)
- Links numerals with amounts up to 5 and maybe beyond
- Explores using a range of their own marks and signs to which they ascribe mathematical meanings

Composition

- Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers
- Beginning to use understanding of number to solve practical problems in play and meaningful activities
- Beginning to recognise that each counting number is one more than the one before
- Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same

Spatial Awareness

- Responds to and uses language of position and direction
- Predicts, moves and rotates objects to fit the space or create the shape they would like

Shape

- Chooses items based on their shape which are appropriate for the child's purpose
- Responds to both informal language and common shape names
- Shows awareness of shape similarities and differences between objects
- Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes
- Attempts to create arches and enclosures when building, using trial and improvement to select blocks

Pattern

- Creates their own spatial patterns showing some organisation or regularity
- Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC)
- Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next

Measures

- In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items
- Recalls a sequence of events in everyday life and stories



1 2 3



Indigo

Comparison

- Uses number names and symbols when comparing numbers, showing interest in large numbers
- Estimates of numbers of things, showing understanding of relative size

Counting

- Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0
- Increasingly confident at putting numerals in order 0 to 10 (ordinality)

Cardinality

- Engages in subitising numbers to four and maybe five
- Counts out up to 10 objects from a larger group with some accuracy
- Matches the numeral with a group of items to show how many there are (up to 10)

Composition

- Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects
- Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three
- In practical activities, adds one and subtracts one with numbers to 10
- Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and "+" or "-"

Spatial Awareness

- Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints
- Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning)
- May enjoy making simple maps of familiar and imaginative environments, with landmarks

Shape

- Uses informal language and analogies, (e.g. heartshaped and handshaped leaves), as well as mathematical terms to describe shapes
- Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes
- Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build

Pattern

- Spots patterns in the environment, beginning to identify the pattern "rule"
- Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat

Measures

- Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy
- Becomes familiar with measuring tools in everyday experiences and play
- Is increasingly able to order and sequence events using everyday language related to time
- Beginning to experience measuring time with timers and calendars



1 2 3



Violet

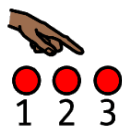
- Subitise (recognise quantities without counting) up to 5;
- Start to recall (with reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts).
- Verbally count beyond 10, recognising the pattern of the counting system;
- Compare quantities up to 10 in different practical contexts.
- Explore and represent patterns within numbers up to 10.

Compare in practical situations:

- Big Small
- Heavy/light
- Full/empty
- Fast, slow

Measure with nonstandard units:

- lengths
- weight
- Understand that money is used in exchange of goods
- Start to recognize coins and notes
- Starting to recognise and use language relating to dates, and their own timetable
- Be able to write the date with some support



Maths – gemstone levels



Number

Measurement, geometry and statistics

Ruby

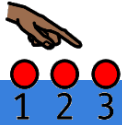
- Count to and across 10, forward and backward from any given number
- Count on in 2's with visual aids.
- Given a number, identify one more and one less to 10 (in a range of situations)
- Use ordinal numbers from 1st — 10th to describe position of objects, people and events
- Estimate a small number (up to 10) and checking by counting
- Recognise 'more' and 'less' when comparing objects in a group.
- Read and write numbers from 1 to 5 in words and to 10 in numerals, including in a calculator.
- Subitise groups of items up to 7
- Read and write with support mathematical statements involving addition (+), subtraction (-) and equals (=) signs.
- Combine 2 sets of objects to ten and count objects
- Use repeated addition to solve practical problems
- In practical situations share out groups of objects.
- Recognise, find and name a half as one of two equal parts of an object or shape

Geometry and statistics

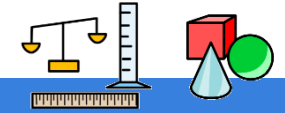
- Recognise and name common 2D (triangle, square, rectangle, circle)
- Recognise and name common 3D shapes (cuboid, cube, cylinder, sphere and cone)
- Respond to positional language in practical situations.
- Show understanding of prepositions such (on, in, under, on top), and talk about it.
- Continue simple patterns using pictorial representations
- Sort and classify objects using one or two simple criteria (boy/girl, thick/thin)
- Collect and sort simple data into tally charts, block diagrams, Venn and Carroll diagram.

Measurements, time and money

- **Compare, describe and solve practical problems for:**
 - lengths and heights (long/short, tall/short, double/half)
 - mass/weight (heavy/light, heavier than, lighter than)
 - capacity and volume (full/empty, more than, less than, half full)
 - time (quicker, slower, earlier, later)
- **Measure and begin to record the following:**
 - lengths and heights;
 - mass/weight;
 - capacity and volume;
- Recognise and know the value of different denominations of coins and notes, recognise and use symbols for pounds (£) and pence (p);
- Solve simple problems in a practical context involving addition and subtraction of whole pounds.
- Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].
- Starting to recognise and use language relating to dates, including days of the week
- Tell the time to the hour and draw the hands on a clock face. To use analogue and digital clocks.



Sapphire



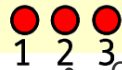
- Join in rote counting to 50 and count to and across 20 forwards and backwards.
- Count in multiples of 2.
- Given a number, identify one more and one less to 20 (in a range of situations)
- Use ordinal numbers in descending position of objects, people and events (1st — 10th)
- Estimate a small number (up to 20) and checking by counting
- Recognise 'most' and 'least' when identifying numerals
- Read and write numbers 1-10 in words and to 20 in numerals, including in the calculator
- Subdivide groups of items up to 10
- Demonstrate an understanding of the mathematical symbols (+) (—) (=).
- Recognise and use the mathematical signs (+) (-) (=) in a calculator
- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations.
- Recall number bonds to and within 5
- Demonstrate understanding of the commutative law ($3+2=5/2+3=5$)
- Solve one-step problems involving multiplication and division, by calculating the answer using concrete and pictorial objects, with the support of the teacher. (grouping and sharing)
- Recognise, find and name a quarter as one of four equal parts of an object or shape

Geometry and statistics

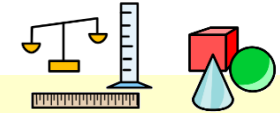
- Name, identify and describe the properties of 2D shapes, including the number of sides (pentagon, hexagon, oval and semicircle)
- Name, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces (prisms and pyramids)
- Identify 2D shapes on the surface of 3D shapes [ie. a circle on a cylinder and a triangle on a pyramid].
- Compare and sort common 2D and 3D shapes and everyday objects
- Order and arrange combinations of mathematical objects in patterns and sequences.
- Describe direction (forward, backward)
- Interpret and construct simple pictograms, Carroll diagram, tally charts, and block diagrams
- 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 comparing categorical data

Measurements, time and money

- **Start to use standard metric units to measure to the nearest appropriate unit and read scales in divisions of 1's and 2's.**
 - length (m/cm)
 - mass (kg/g)
 - capacity (l/ml)
- Combine amounts to make a particular value using 1p, 2p, 5p and 10p
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. (whole pounds up to £10)
- Recognise and use language relating to dates, including days of the week, months and years with support
- Tell the time to half past the hour and draw the hands on a clock face. To use analogue and digital clocks



Pearl



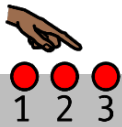
- Count to and across to 100, forwards and backwards, beginning with 0, 1 or any given number.
- Count in multiples of 2, 5 and 10
- Given a number (0-100) identify one more and one less.
- Use ordinal numbers (1st — 20th) in descending position of objects, people and events
- Compare and order numbers from 0 up to 50; use $<$, $>$ and $=$ signs.
- Estimate a small number (up to 50) and checking by counting
- Use the language form most to least, and equal to, more than, less than.
- Partitioning 2 digit numbers into 10's and 1's using structured resources (e.g. Base ten and abacus)
- Use a calculator to add and subtract small numbers to 100.
- Represent and use number bonds and related subtraction facts to 10
- Add and subtract 10 and 0 to a number
- Demonstrate an understanding of inverse relationship involving addition and subtraction
- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.
- Solve one-step problems involving multiplication, by calculating the answer using arrays and a calculator.
- Solve one-step problems involving division, by calculating the answer using arrays with the support of the teacher and a calculator.
- Recognise, find and name a half and a quarter as one of two/four equal parts of an object, shape or quantity.

Geometry and statistics

- Name, identify and describe the properties of 2D shapes, including the number of sides, (heptagon, octagon and nonagon)
- Name, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces (prisms and pyramids)
- Recognize lines of symmetry in simple 2D shapes
- Order and arrange combinations of mathematical objects in patterns and sequences.
- Give directions (left, right, forward, backward) and describe movement (whole turn and half turn)
- Interpret and present data using bar charts, pictograms and tables.
- Solve onestep and twostep questions [e.i., 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

Measurements, time and money

- Read scales in divisions of 5's and 10's and use standard metric units to measure to the nearest appropriate unit, using rulers, scales, thermometer and measuring vessels:**
 - lengths (m/cm/mm);
 - mass (kg/g);
 - volume/capacity (l/ml).
 - temperature ($^{\circ}\text{C}$) – only positive numbers
- Record the results for lengths, mass, temperature and capacity.
- Combine amounts to make a particular value using 1p, 2p, 5p, 10p and 20p
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.
- Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times. To use analogue and digital clocks.
- Know the number of minutes in an hour, number of hours in a day and months
- Read and extract information from a timetable.
- Read dates written in different formats (i.e. food packages)



Silver

- Count in steps of 3 and 100 from any number, forward and backward.
- Find 10 more or less than given number.
- Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).
- Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs.
- Read and write numbers to at least 100 in numerals and in words.
- Estimate up to 100 and checking by counting
- **Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:**
 - a two-digit number and ones;
 - a two-digit number and tens;
- Recall and use addition and subtraction facts to 20 fluently
- Solve problems with addition and subtraction:
- Using concrete objects and pictorial representations, including those involving numbers, quantities and measures;
- Applying their increasing knowledge of mental and written methods and use a calculator
- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables,
- Recognise odd and even numbers.
- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs.
- Recognize the mathematical signs (\times) (\div) ($=$) in a calculator
- Recognise, find, name and write fractions $1/3$, $1/4$, $2/4$, and $3/4$ of a length, shape, set of objects or quantity.

Geometry and statistics

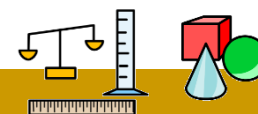
- Name, identify and describe the properties of 2D shapes, including symmetry in a vertical line and right angles.
- Name, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces
- Recognize the nets of common 3D shapes.
- Order and arrange combinations of mathematical objects in patterns and sequences.
- Record the results for lengths, mass, temperature and capacity.
- Complete a simple symmetric figure with respect to a specific line of symmetry.
- 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 threequarter turns (clockwise and anticlockwise).
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, simple pie charts, tables and other graphs.
- Start to read and interpret line graphs and pie charts

Measurements, time and money

- **Choose and use appropriate standard units to measure to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels:**
 - length/height in any direction (m/cm);
 - mass (kg/g);
 - temperature ($^{\circ}\text{C}$); only positive numbers
 - capacity (l/ml).
- Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$.
- Combine amounts to make a particular value up to $\pounds 1$.
- 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, including giving change.
- Tell and write the time to five minutes and draw the hands on a clock face to show these times. To use analogue and digital clocks.



Gold



- Find 100 more or less than given number.
- Count from 0 in multiples of 4
- Compare, order and recognise the place value of each digit in a four-digit number and partition
- Partition any 2-digit number into different combinations of 10's and 1's explaining their thinking (verbally, in pictures or using apparatus)
- Compare and order numbers from 0 up to 1000; use $<$, $>$ and $=$ signs.
- Use place value and number facts to solve problems.
- Round any number to the nearest 10
- Near doubles ($6+7=6+6+1$)
- **Add and subtract numbers using written and mental strategies, including:**
- two two-digit numbers;
- a three-digit numbers and ones.
- 3 one-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.
- Recall and use multiplication and division facts for the 3 and 4 multiplication tables.
- 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, including problems in contexts.
- Write simple fractions for example, $1/2$ of $6 = 3$ and recognise the equivalence of $2/4$ and $1/2$.

Geometry and statistics

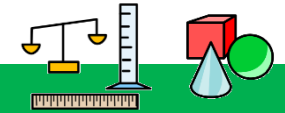
- Draw 2D shapes and make 3D shapes using modelling materials.
- Recognise 3D shapes in different orientations and describe them.
- Identify right angles, recognise that two right angles make a halfturn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.
- Complete complex symmetric figures with respect to a specific line of symmetry.
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- Interpret and present discrete and continuous data using appropriate graphical methods,
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and line graphs.
- Interpret simple pie charts and line graphs.

Measurements, time and money

- **Measure, Estimate, Compare, Add and Subtract:**
 - lengths (m/cm/mm);
 - mass (kg/g);
 - temperature ($^{\circ}\text{C}$); only positive numbers
 - volume/Capacity (l/ml).
- Add and subtract amounts of money to give change, using both £ and p in practical contexts.
- Use different coins to make the same amount
- Tell and write the time from an analogue clock and 12-hour and 24-hour clocks;
- Compare and sequence intervals of time.
- Use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.
- Know the number of seconds in a minute and the number of days in each month, year and leap year
- Compare durations of events [ie. to calculate the time taken by particular events or tasks].



Emerald



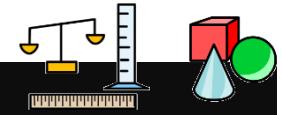
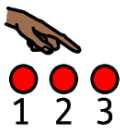
- Count from 0 in multiples of 8, 50 and 100;
- Find 100 or 1000 more or less than a given number.
- Round any number to the nearest 10, and 100
- Count backward from zero to include negative numbers
- Solve number problems and practical problems involving these ideas
- **Add and subtract numbers mentally, including:**
 - a three-digit number and tens;
 - a three-digit number and hundreds.
- Estimate the answer to a calculation and use inverse operations to check answers.
- Recall and use multiplication and division facts for the 8 multiplication table.
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Solve problems, including all the above (include the use of a calculator)
- Count up and down in tenths, recognise the tenths rise from dividing an object into 10 equal parts and in dividing into 10 equal parts
- Compare and order unit fractions, and fractions with the same denominators.
- Solve problems that involve all of the above.

Geometry and statistics

- Recognise angles as a property of shape or a description of a turn.
- Identify lines of symmetry in 2D shapes presented in different orientations.
- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and size.
- Identify acute and obtuse angles.
- Measure angles in degrees ($^{\circ}$).
- Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$.
- Describe positions on a 2D grid as coordinates in the first quadrant.
- Describe movements between positions as translations of a given unit to the left/right and up/down.
- Plot specified points and draw sides to complete a given polygon.
- Complete, read and interpret information in tables, including timetables.
- Interpret and construct pie charts and line graphs and use these to solve simple problems
- Read and interpret information in tables, including timetables.

Measurements, time and money

- **Measure, Estimate, Compare, Add and Subtract:**
 - temperature ($^{\circ}\text{C}$) using positive and negative numbers
- convert between different units of measure [i.e. kilometre to metre; hour to minute].
- Measure the perimeter of simple 2-D shapes.
- 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.
- Estimate and read time with increasing accuracy to the nearest minute.
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days



Jet

- Read roman numerals to 100 (C)
- Count in multiples of 6, 7, 9, 25, 1000.
- Round any number to the nearest 1000
- Interpret negative numbers in context.
- Count backward and forward with positive and negative numbers
- Solve number problems and practical problems involving these ideas
- Compare numbers with the same number of decimal places up to 2 decimal places.
- Solve addition and subtraction 2-step problems in contexts, deciding which operations and methods to use and why.
- Solve problems involving multiplication and division, deciding which operations and methods to use and why.
- Solve money and measure problems involving fractions and decimals
- Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$].
- Round decimals with one decimal place to the nearest whole number

Geometry and statistics

- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.
- Identify, estimate and measure acute, obtuse and reflex angles
- Draw given angles, and measure them in degrees ($^{\circ}$)
- Represent the position of a shape following a reflection or translation
- Interpret and construct pie charts and line graphs and use these to solve problems.
- Calculate and interpret the Mode, Median, Mean and Range

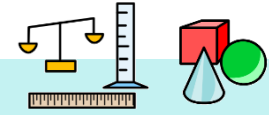
Measurements, time and money

- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.
- Find the area of rectilinear shapes by counting squares.
- Tell and write time from an analogue clock, including using Roman numerals from I to XII.
- Estimate and read time with increasing accuracy to the nearest minute.
- Record and compare time in terms of seconds, minutes and hours
- Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)



1 2 3

Diamond



- Find 1000 more or less than a given number
- Order and compare numbers beyond 1000
- Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
- Solve number problems and practical problems that involve all of the above
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
- Add and subtract numbers mentally
- Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- Solve problems that involve all of the above.

Geometry and statistics

- Use the properties of rectangles to deduce related facts and find missing lengths and angles
- Distinguish between regular and irregular polygons on reasoning about equal sides and angles.
- 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.

Measurements, time and money

- Add and subtract amounts of money to give change, using both £ and p in practical contexts.
- Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- Measure and compare the area of rectangles (including squares), and including the using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of regular shapes.
- Solve problems involving converting between units of time.
- Use all 4 operations to solve problems involving measure.