

# COLLINGWOOD PRIMARY SCHOOL

## School Aims and Curriculum Policy

### Our Staff and Governors' Vision Statement

At Collingwood children and adults work together in a safe, well disciplined, exciting environment where **all** pupils feel valued and are expected to make good or outstanding progress

Our staff, pupils and parents have high expectations and ensure that pupils produce work of increasing quality, develop their individual strengths, achieve their personal goals and challenges and realise their full potential as lifelong learners and responsible citizens in our global community.

*"We live our lives with arms and minds wide open"*

### **At Collingwood Primary School we aim:**

- to provide a safe, caring and supportive environment which will enable all children to develop their individual talents, realise their full potential and feel confident and secure.
- *to provide a structure of discipline, within which children are encouraged to adopt a caring, responsible attitude towards others in the school and the whole school and global community where discrimination is tackled.*
- to provide, within the framework of the National Curriculum, a broad and balanced education, ensuring continuity and progression through on-going assessment.
- *to encourage pupils and staff to have high expectations of achievement and responsibility and foster in children a positive attitude towards producing work of increasing quality.*
- to recognise that children learn best in different ways and to respond to these individual needs with a variety of approaches.
- *to provide equal opportunities of learning and experience for girls and boys.*
- to develop children's understanding of, and respect for the beliefs and customs of a multi-cultural community.
- *to foster children's emotional development, helping them to acquire a sense of wonder and the skills to express their feelings and ideas.*
- to develop confidence and a sense of achievement through a balanced programme of physical activity.
- *to foster positive communication and co-operation between parents and school, based on a three-way partnership of teacher, parent and child.*

## COLLINGWOOD'S CURRICULUM

The school curriculum comprises all learning and other experiences that each school plans for its pupils. Collingwood pupils follow the National Curriculum in England which all Maintained schools in England are legally required to follow and the Programmes of Study published by the Secretary of State which can be found at [www.gov.uk/dfenationalcurriculum](http://www.gov.uk/dfenationalcurriculum).

"Every state-funded school must offer a curriculum which is balanced and broadly based<sup>1</sup> and which: promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and prepares pupils at the school for the opportunities, responsibilities and experiences of later life."

National Curriculum England

Collingwood Primary School's Governors are responsible for monitoring the curriculum. Governors visit the school regularly, to discuss delivery and implementation of the curriculum with subject leaders and other staff. In addition, governors also receive detailed reports from each subject leader at least annually and observe pupils and teachers at work. Curriculum development, training and financial priorities linked to the curriculum are frequently discussed at Governor's meetings.

Below are the aims for each subject. In the blue boxes below this are examples of some of the methods, strategies and resources used at Collingwood.

### Teaching Methods

Each teacher is responsible for teaching their own mixed ability class but groups within classes and Phases are often used to enable teachers to suit learning to differing abilities. We use a balance of methods including whole class, group and individual teaching as appropriate. Teachers meet weekly to discuss learning outcomes and plan programmes of learning. In this way we ensure that the focus is on progression and continuity for all.

### Staff In-Service Training

In order for staff to be conversant with current educational thinking and good practice, including health and safety, we organise a full programme of training throughout the year. This may take the form of staff-meetings and INSET days, work shops, conferences, courses and visits to other schools. There is an on-going sharing of ideas and expertise between schools across the town, Essex and Nationally.

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### During every child's time at Collingwood we offer:

- An opportunity to take part in a class assembly (annually)
- An opportunity to take part in a performance or presentation to an audience (annually)
- Participation in the Infant Music Festival - either at the Essex Performance or in school (Rec-Yr2)
- A residential trip (usually Year 6)
- An opportunity to become a Playleader. (Year 5 or 6)
- Several opportunities to be elected as a school councillor. (usually Years 1-6)
- Participation in PE lessons run by a qualified Sports Coach. (Years 3-6)
- An opportunity to learn to play the recorder. (usually Years 3 and 4)
- An opportunity to take part in swimming lessons. (usually Years 3 and 4)
- An opportunity to take part in Forest Schools/outside activities. (annually)
- An opportunity to join before/after school clubs. (see website for current list)
- An opportunity to take up individual music tuition. (all year groups)
- An opportunity to invite a relative to Class Lunch. (annually)
- Password access to our school Virtual Learning Environment, "My Learning" including online storage, access to valued websites etc. (all ages)
- Home use via password access to "Mathletics", "Phonics Play" and "Espresso" or other programmes which the school values in supporting learning.
- Opportunities to participate in educational visits/first hand experience/meet with expert visitors in lesson time. (all ages at least annually)

### Numeracy and Mathematics

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

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated

problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

*See Ma1 4 Rules of Number - How calculation is taught at Collingwood*

*See Ma2 Times Tables Olympics*

*See link to Mathematics on our school website [www.collingwood.essex.sch.uk](http://www.collingwood.essex.sch.uk)*

*See useful websites under the "Supporting your child at home" tab on our school website [www.collingwood.essex.sch.uk](http://www.collingwood.essex.sch.uk)*

## English

**(incorporating spoken language, reading, writing, spelling, vocabulary, grammar, punctuation and glossary development)**

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

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

*Handwriting sample to be found at [www.letterjoin.co.uk](http://www.letterjoin.co.uk)*

*See useful websites under the "Supporting your child at home" tab on our school website [www.collingwood.essex.sch.uk](http://www.collingwood.essex.sch.uk) including links to National Curriculum spellings and Phonics Play.*

## Science

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

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

## Art and Design

The national curriculum for art and design aims to ensure that all pupils:

- produce creative work, exploring their ideas and recording their experiences
- become proficient in drawing, painting, sculpture and other art, craft and design techniques
- evaluate and analyse creative works using the language of art, craft and design
- know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms.

## Computing

Computing is overarching across all curriculum subjects. The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

*See link to My Learning on our school website [www.collingwood.essex.sch.uk](http://www.collingwood.essex.sch.uk)*

## Design Technology

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

## Geography

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

- develop contextual knowledge of the location of globally significant places - both terrestrial and marine - including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
- are competent in the geographical skills needed to:
  1. collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes

2. interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)
3. communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

*See Geo1 Year 6 Residential Trip sample itinerary*

## History

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

- know and understand the history of these islands as a coherent, chronological narrative, from the earliest times to the present day: how people's lives have shaped this nation and how Britain has influenced and been influenced by the wider world
- know and understand significant aspects of the history of the wider world: the nature of ancient civilisations; the expansion and dissolution of empires; characteristic features of past non-European societies; achievements and follies of mankind
- gain and deploy a historically grounded understanding of abstract terms such as 'empire', 'civilisation', 'parliament' and 'peasantry'
- understand historical concepts such as continuity and change, cause and consequence, similarity, difference and significance, and use them to make connections, draw contrasts, analyse trends, frame historically-valid questions and create their own structured accounts, including written narratives and analyses
- understand the methods of historical enquiry, including how evidence is used rigorously to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed
- gain historical perspective by placing their growing knowledge into different contexts, understanding the connections between local, regional, national and international history; between cultural, economic, military, political, religious and social history; and between short- and long-term timescales.

## Languages

All pupils at Collingwood will learn some basic words in French and other languages spoken by staff and pupils e.g. taking the register, colours and numbers etc.

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

- understand and respond to spoken and written language from a variety of authentic sources
- speak with increasing confidence, fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation
- can write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt
- discover and develop an appreciation of a range of writing in the language studied.

## Music

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

- perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians
- learn to sing and to use their voices, to create and compose music on their own and with others, have the opportunity to learn a musical instrument, use technology appropriately and have the opportunity to progress to the next level of musical excellence
- understand and explore how music is created, produced and communicated, including through the inter-related dimensions: pitch, duration, dynamics, tempo, timbre, texture, structure and appropriate musical notations.
- In all areas of the creative arts it is important to develop through discussion, an appreciation of the works of other artists and composers.

*See Mu1 Additional music tuition available*

## Physical Education

The national curriculum for physical education aims to ensure that all pupils:

- develop competence to excel in a broad range of physical activities
- are physically active for sustained periods of time
- engage in competitive sports and activities
- lead healthy, active lives.

*See [www.collingwood.essex.sch.uk](http://www.collingwood.essex.sch.uk) for details on how Collingwood spends it's Sports Premium Funding.*

## Religious Education

All state schools are also required to make provision for a daily act of collective worship and must teach religious education to pupils at every key stage. We follow the local authority's scheme for R.E. We aim to develop knowledge and understanding of Christianity, and its contribution to our culture and traditions; and awareness of other religions and respect for differing views. In addition, we aim to encourage an appreciation of the mystery of the natural world and to foster a caring, sensitive and respectful attitude to others, their beliefs, feelings and experiences.

The Local Authority Scheme of Work for RE can be found at

<http://www.essex.gov.uk/Business-Partners/Partners/Schools/Essex-Grid-Learning/Schools/curriculum-resources/Documents/RE%20Matters%20for%20Every%20Child-Agreed%20Syllabus.pdf>

## Personal, Social and Health and Economic Education (PSHE)

Personal and social education includes aspects such as friendship, respect, care for others and the environment and becoming an active member of today's democratic Britain and global society. We believe that school should provide experiences through which children can develop a sensitive understanding of their own and other cultures, in preparation for living and working within the wider community. It is important that children understand for themselves that difference is not

to be feared or rejected. Encouraging cultural awareness and appreciation includes studying aspects of food, clothes, traditions and special days. We use books and resources which reflect a breadth of cultures and avoid stereotypes and, whenever appropriate and possible, involve members of different ethnic communities with aspects of children's learning.

Health education includes the importance of healthy eating and hygiene. Through a positive emphasis on personal safety, we aim to heighten an awareness of the dangers associated with smoking, drinking, drug taking, solvent abuse, bullying and peer pressure and the internet in particular. Within a broad topic on the human body and its systems, we offer a sex education programme in order to prepare children for the changes of puberty.

*See link to PSHE Association on our school website [www.collingwood.essex.sch.uk](http://www.collingwood.essex.sch.uk)*



**Collingwood Primary School**  
**Progression in the four rules of calculation**

- This policy is intended to aid all staff in their understanding of the four rules and to provide progression in written calculations.
- It builds on the approach from the National Numeracy Strategy Framework.
- The policy guidance should be referred to when planning, in conjunction with the National Numeracy Strategy.
- Written methods of recording will be used once children have secure mental number knowledge and skills.
- The policy is to give guidance regarding progression, which the majority of pupils will make.
- Teachers need to be flexible in their approach and recognise that some children will be ready to progress to the next stage, whilst others will need consolidation of previous stages no matter their age or year group. (It is far better for children to be able to operate effectively at any stage, with understanding, than to move them on too quickly). **Not all children will reach a formal written method in each of the four rules by the end of year 6.**
- Children will be encouraged to use their own effective method to perform calculations.

**Teaching Points**

When approaching a calculation, children should be encouraged to ask themselves the following questions . . . .

- Can I do this in my head?
- Do I know the approximate size of the answer?
- Do I need to use a calculator to work this out?
- If I can't answer it wholly in my head, what do I need to write down in order to help me calculate the answer? (jottings)
- Which written method would be helpful?

Whenever appropriate, children should do a mental calculation. For example which of these would you do mentally?

$$3002 - 2998 =$$

$$9563 - 3771 =$$

**In order to encourage mental calculations strategies, calculations should always be presented to children horizontally so that they can decide how to tackle them. Ensure when using textbooks that questions are presented appropriately and that explanations of methods follow the school policy.**

When modelling calculations use language that reflects the size of the numbers involved. (E.g. carry ten rather than carry one).

## Overview of Methods

- It is expected that addition/subtraction and multiplication/division be taught alongside each other so that pupils can see the relationship between them.
- Pupils should be taught to estimate their answers first and check calculations with a variety of strategies including the inverse operation.

Further details can also be found in 'Teaching written calculations: Guidance for teachers at KS1 and KS2.

### Addition

#### Stage 1

Counting, knowing the order of numbers, lots of practical activities with no written recording.

Combine two groups of objects and begin to record pictorially.

E.g., Jane has 3 bears. She was given 2 more. How many does she have now?



Children will use a mixture of words and symbols in order to explain to someone else the methods they have used.

#### Stage 2

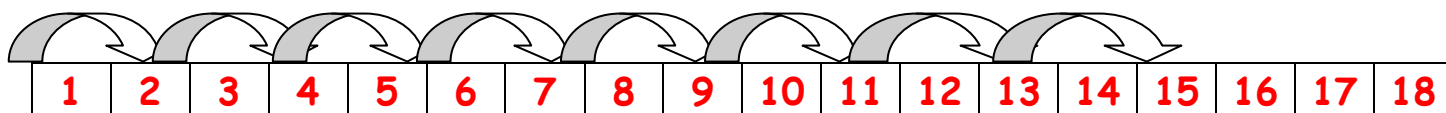
The use of numbered number tracks and lines is very helpful for teaching children the order of numbers and for images of addition and subtraction. It may begin with children physically jumping forwards and backwards along a numbered number track.

E.g. 5 + 3



Children can then use the track for finding patterns.

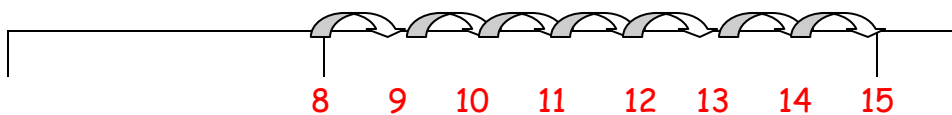
E.g., Mark the numbers you land on when you hop forward in twos from different starting numbers.



### Stage 3

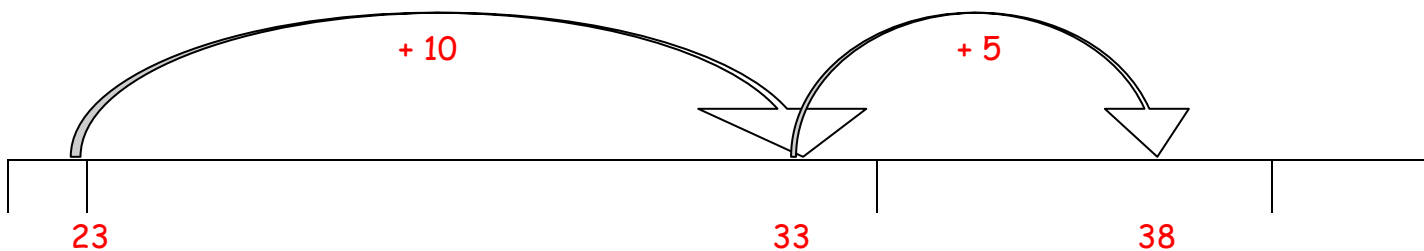
Building on mental methods using an empty number line.

E.g.  $8 + 7 = 15$

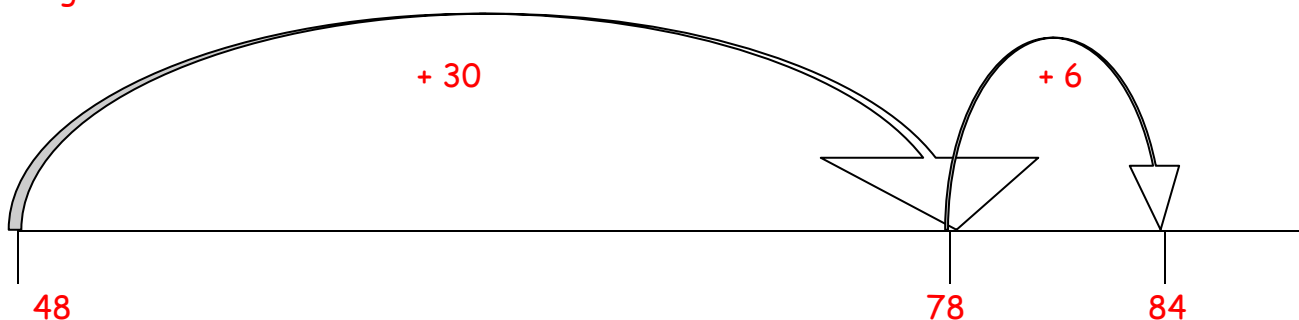


The mental methods that lead to column addition may involve partitioning, e.g. adding the tens and units separately, often starting with the tens.

E.g.  $23 + 15 = 38$



E.g.  $48 + 36 = 84$



The empty number line helps to record the steps on the way to calculating the total.

### Stage 4

Once children are secure with mentally partitioning numbers, record mental methods using partitioning. Add the tens and then the units to form partial sums and then add these partial sums.

E.g.  $43 + 76 = 40 + 70 + 3 + 6$   
 $= 40 + 70 + 9$   
 $= 110 + 9$   
 $= 119$

Partitioning both numbers into tens and units mirrors the column method where units are placed under units and tens are placed under tens.

E.g.  $43 + 76 =$

43	=	40 + 3
+76	=	<u>70 + 6</u>
		110 + 9 = 119

### Stage 5

Move on to a layout showing the addition of the tens to the tens and the units to the units separately. To find the partial sum children should be taught to add the units digits first.

E.g.  $87 + 45 =$

$$\begin{array}{r} 87 \\ + 45 \\ \hline 12 \quad (7 + 5) \end{array}$$

120 ( $80 + 40$ )

132

Of course this method can be used for adding three digit numbers.

E.g.  $438 + 275 =$

$$\begin{array}{r} 438 \\ + 275 \\ \hline 13 \\ 100 \\ \hline 600 \\ 713 \end{array}$$

This expanded method will lead to the more compact method so that they can understand its structure and efficiency.

### Stage 6

In this compact, column method, recording is reduced further. Carry digits are recorded below the line, using the phrases 'carry ten' or 'carry one hundred' not carry one. This method can be applied to numbers with varying numbers of digits.

E.g.,	$47$	$258$	$366$
	$+76$	$+87$	$+458$
	<u>123</u>	<u>345</u>	<u>824</u>
	11	11	11

### Stage 7 - Using and applying addition methods in a problem solving context and to decimal numbers. (EXTENSION)

E.g. Find the total weight of 5 adults weighing 72kg, 57.4kg, 89.75kg, 72.9kg and 89.4kg to determine if they can all get in a lift with a total weight restriction of 400kg.

$$\begin{array}{r} 72.00 \\ 57.40 \\ 89.75 \\ 72.90 \\ +89.40 \\ \hline 381.45 \\ 32 \end{array}$$

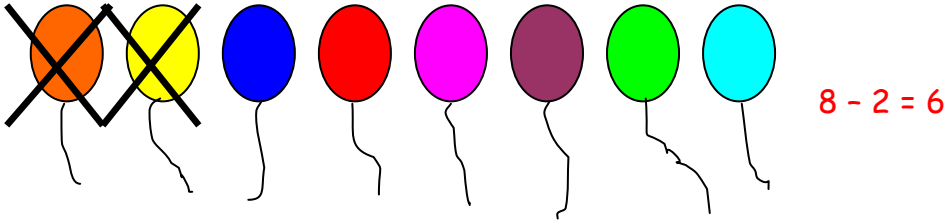
## Subtraction

### Stage 1

Counting backwards, knowing the order of numbers, lots of practical activities with no written recording.

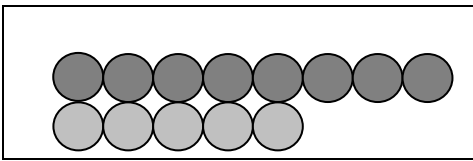
Children need practical activities of taking away that is finding how many are left from a collection of objects when some are removed.

E.g. There were 8 balloons. Two popped. How many balloons are left?



Children also need practical activities around 'finding the difference', which involves making a comparison between the numbers in two groups of objects. They need to recognise that this is another example of subtraction.

E.g. How many more biscuits does Sally have than you? (The biscuits are represented by counters).



'Sally has 3 more than me'.

A mixture of words and symbols will be used by children in order to explain to someone else the methods that they have used. Children will use a variety of ways of recording subtraction, reflecting the mental methods used.

### Stage 2

The use of numbered number tracks and lines is very helpful for teaching children the order of numbers and for images of addition and subtraction. It may begin with children physically jumping forwards and backwards along a numbered number track.

E.g., There are 20 children in our class. Three are away today. How many are here?



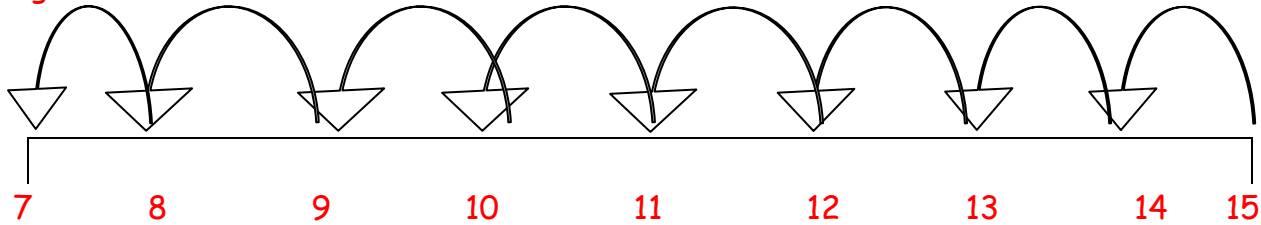
$$20 - 3 = 17$$

### Stage 3

The empty number line helps to record or explain the steps in mental subtraction. Steps in subtraction can be recorded on a number line. The steps often bridge through a multiple of 10

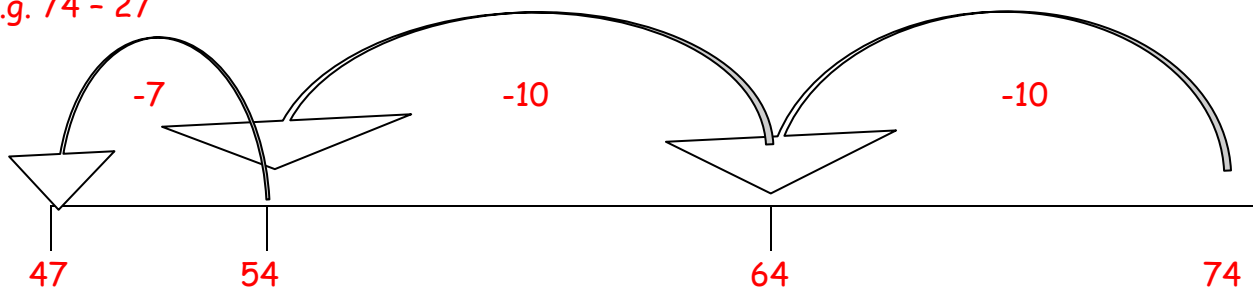
(i) Counting back in units

E.g.  $15 - 8$



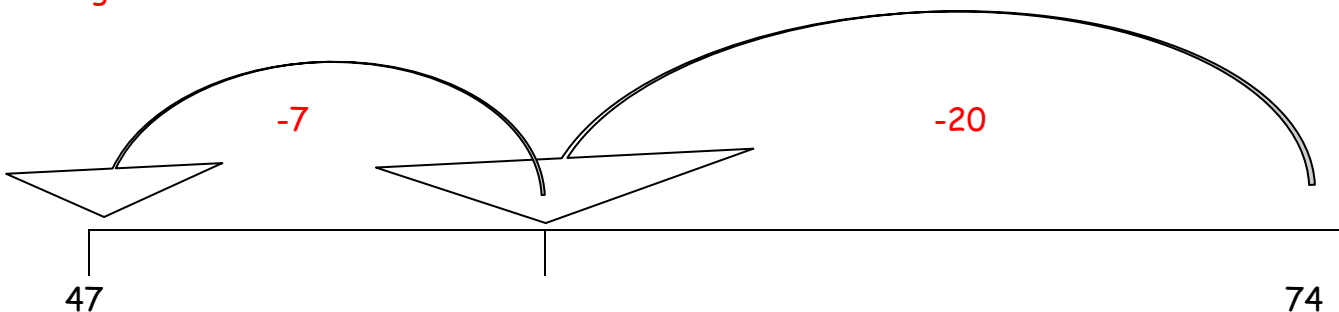
(ii) Counting back by partitioning the number into tens and units

E.g.  $74 - 27$



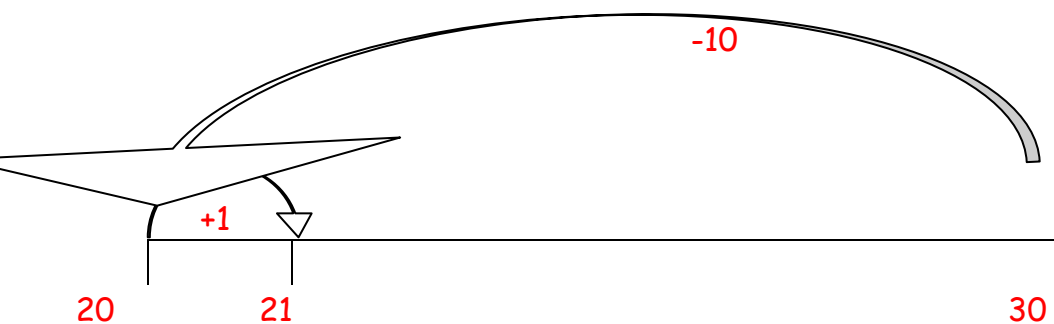
(iii) With practice children will need to record less information

E.g.  $74 - 27 = 74 - 20 - 7 = 54 - 7 = 47$



(iv) Children may use efficient mental methods to inform their written methods, e.g. adjusting

E.g.  $30 - 9$



Some children prefer to count on from the smaller to the larger number to find the difference. Particularly mentally this may be a more efficient method. For example consider whether you would count up or back when solving these calculations.

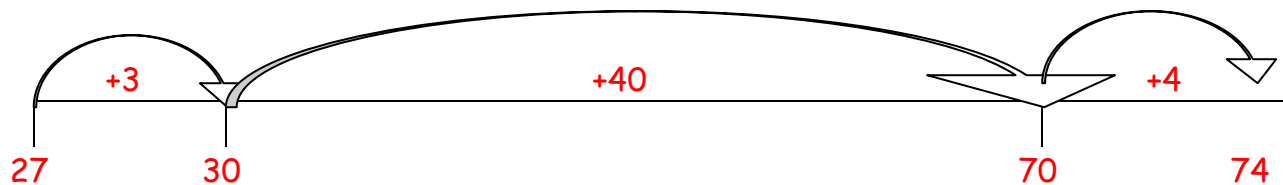
$$57 - 12$$

$$86 - 77$$

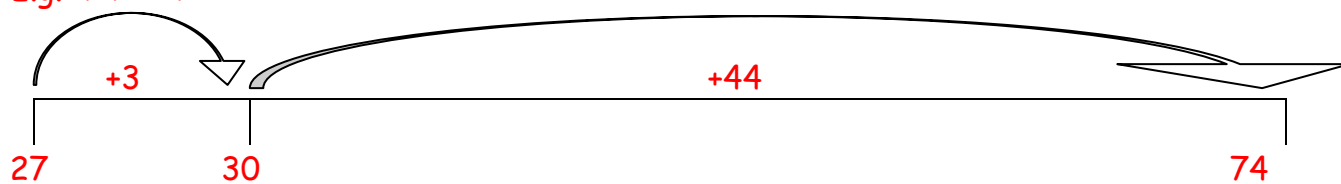
$$43 - 28$$

Each of the methods explained in points (i) - (iv) can be applied to this counting on method as explained in these examples:

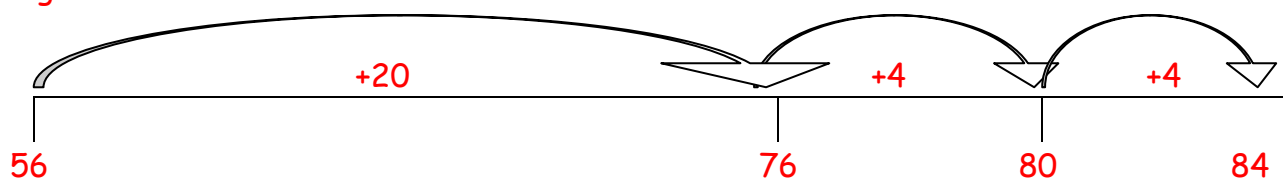
E.g.  $74 - 27$



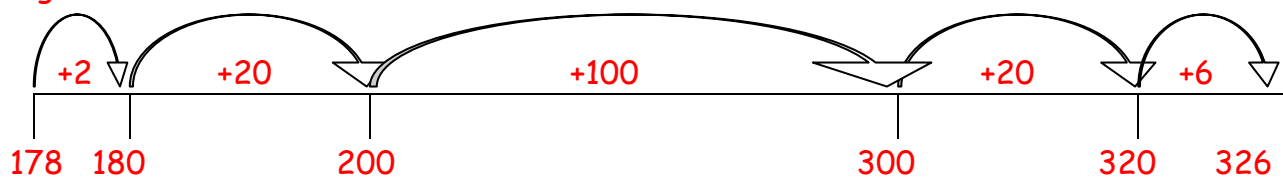
E.g.  $74 - 27$



E.g.  $84 - 56$



E.g.  $326 - 178$



E.g.  $326 - 178$







## Multiplication

### Stage 1

It is expected that there will be lots of practical activities to support children's growing awareness and understanding of multiplication.

Children can complete practical activities involving grouping objects. Rhymes and stories can be used that involve counting in different intervals.

Use apparatus to sort objects into groups.

E.g. Sort six compare bears into 2 groups. How many in each group?



2 lots of 3

2 groups of 3

$3 \times 2$

A mixture of pictures, words and symbols will be used by children in order to explain to someone else the methods that they have used.

### Stage 2

Children will begin to recognise multiplication as repeated addition.

E.g. What is the value of 4 five-pence coins?

$5 + 5 + 5 + 5$

4 groups of 5

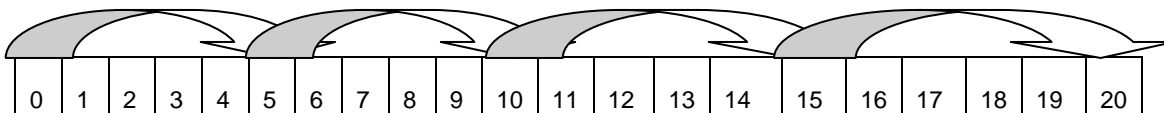
$5 \times 4$

+5

+5

+5

+5



### Stage 3

This method of mental multiplication using partitioning allows the tens and units to be multiplied separately to form partial products and these are then added to find the total product.

E.g.  $43 \times 4 =$

$$\begin{array}{r} 40 + 3 \\ \downarrow \quad \downarrow \\ 160 + 12 = 172 \end{array}$$

E.g.  $43 \times 4 =$

$$\begin{array}{l} (40 + 3) \times 4 \\ (40 \times 4) + (3 \times 4) \\ 160 + 12 = 172 \end{array}$$

To be able to use written methods of multiplication successfully it is important children's mental methods of calculation are practised and secured alongside their learning and use of an efficient written method for multiplication. For example;

\* recalling multiplication facts.

\* multiplying by 10 and 100.

\* partitioning numbers into multiples of hundreds, tens and one.

- \* add two or more single digit numbers mentally.
- \* add multiples of 10 or 100.
- \* add combinations of whole numbers using the column method.

#### Stage 4

The grid method is the main method taught and found to be the method staff feel produces the least amount of errors.

E.g.  $38 \times 7 =$

x	7
30	210
8	56
	266

E.g.  $56 \times 27 =$

x	20	7	
50	1000	350	1350
6	120	42	162
			1512

#### Stage 5

Extend the grid method to HTU x TU

E.g.  $286 \times 29$

x	20	9	
200	4000	1800	5800
80	1600	720	2320
6	120	54	174
			8294

## Stage 6

The grid method can be extended to bigger numbers and decimals

This can be presented vertically however the grid method is the most straightforward and efficient way of multiplying and would allow children to tackle any multiplication problem.

$$\begin{array}{r} 56 \\ \times 27 \\ \hline 42 \\ 350 \\ 120 \\ \hline 1000 \\ \hline 1512 \\ 1 \end{array} \quad \begin{array}{l} (6 \times 7 = 42) \\ (50 \times 7 = 350) \\ (6 \times 20 = 120) \\ (50 \times 20 = 1000) \end{array}$$

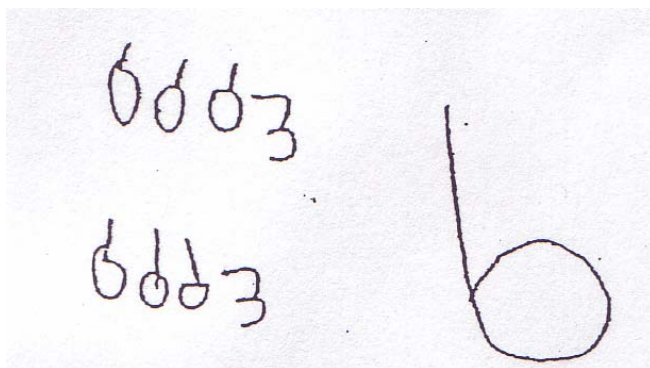
This moves on to ...

$$\begin{array}{r} 56 \\ \times 27 \\ \hline 392 \\ 1120 \\ \hline 1512 \\ 1 \end{array}$$

## Division

### Stage 1

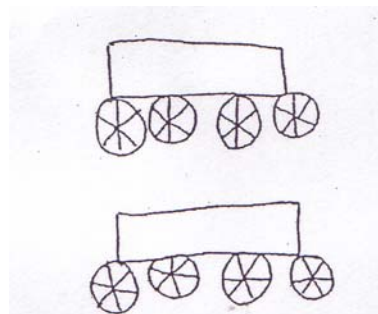
Young children will be familiar with the language of sharing and understand that six shared equally among three people means everyone has two each and that if they were shared between two people, both would have three.



### Stage 2

Children can draw pictures to explain to someone else how they have solved a simple division problem.

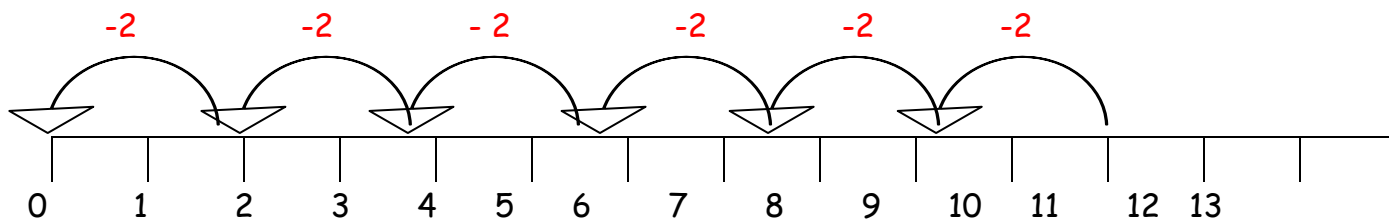
E.g. How many cars can you make with 4 wheels each if you have eight wheels?



### Stage 3

Children will begin to recognise division as repeated subtraction.

E.g.  $12 \div 2$



E.g.  $24 \div 4 =$

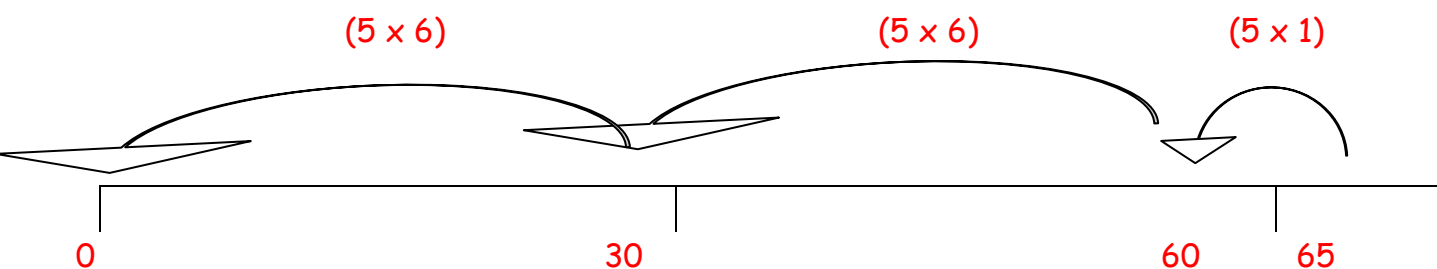
$$\begin{aligned}
 &24 - 4 = 20 \\
 &20 - 4 = 16 \\
 &16 - 4 = 12 \\
 &12 - 4 = 8 \\
 &8 - 4 = 4 \\
 &4 - 4 = 0 \qquad = 6 \text{ (lots of 4 subtracted)}
 \end{aligned}$$

Once mastered both stages 2 and 3 can be repeated using calculations that involve remainders.

#### Stage 4

Repeated subtraction on a number line can be used with larger numbers by taking away more than one group at a time.

E.g.  $65 \div 5 =$



#### Stage 5

Chunking - Using tables facts to help. The chunking method is the method which staff feel produces the fewest amount of errors.

E.g.  $128 \div 4$

$$\begin{array}{r}
 128 \\
 \underline{- 40} \quad (4 \times 10) \\
 88 \\
 \underline{- 40} \quad (4 \times 10) \\
 48 \\
 \underline{- 40} \quad (4 \times 10) \\
 8 \\
 \underline{- 8} \quad (4 \times 2) \\
 0
 \end{array}
 \qquad = 10 + 10 + 10 + 2 = 32$$

Examples should also include calculations that leave remainders.

E.g.  $97 \div 3$

$$\begin{array}{r} 97 \\ -60 \quad (3 \times 20) \\ \hline 37 \\ -36 \quad (3 \times 12) \\ \hline 1 \end{array} \qquad = 20 + 12 = 32$$

$97 \div 3 = 32$  remainder 1

### Stage 6

In readiness for year 7, more able year six children will be introduced to standard written methods of long division, initially using the chunking strategy, but may look at other written methods (see E.g. 2).

E.g.  $972 \div 36$

$$\begin{array}{r} 36 \overline{) 972} \\ - 720 \quad (36 \times 20) \\ \hline 252 \\ - 252 \quad (36 \times 7) \\ \hline 0 \end{array} \qquad = 20 + 7 = 27$$

$972 \div 36 = 27$

At this stage remainders may now be divided further leading to a decimal answer.

E.g. 2  $634 \div 5$

$$\begin{array}{r} 126.8 \\ 5 \overline{) 634.0} \end{array}$$



## COLLINGWOOD PRIMARY SCHOOL TIMES TABLE OLYMPICS

To motivate the children to learn their multiplication tables, an award system has been designed involving a series of staged medals. There are six medals to achieve. The children need to learn the following tables (multiplication and division facts and missing digit questions) to achieve each medal.

Collingwood Finalist	Medal	- 2, 5, and 10 times tables
Collingwood Bronze	Medal	- 2,3, 4, 5 and 10 times tables
Collingwood Silver	Medal	- 3, 4, 6 and 11 times tables
Collingwood Gold	Medal	- 7, 8, 9 and 12 times tables
Collingwood Championship Medal		- 80 tables mixed
Collingwood Olympic	Medal	- 80 mixed questions

To achieve the each medal the children need to complete a 3 minute timed test and answer **all** the questions correctly.

This should form part of your weekly maths plan (e.g. the test can be incorporated into the mental and oral starter).

Only allow the children to sit one test a week.

Certificates will be awarded during Celebration Assembly and may be obtained from Anna / Egnyte.

KS2 children should start on the Collingwood Practise Finalist test.

Timings	Location	Activity	Transport
<b>Monday 21<sup>st</sup> Oct</b>			
1pm	Preston Montford	Arrive, introductions, settle in.	Your Long Mynd Coach
2 - 5pm		Orienteering and map building Set mammal traps	
6pm		Dinner	
7-8pm		Journey Rucksacks and Sense of Place Diaries	
8-9pm		Quiz night	
<b>Tuesday 22<sup>nd</sup> Oct</b>			
9.30am	Preston Montford	Check mammal traps	Long Mynd coach pick up 10.45am and 4.15pm
10am		Rivers Day intro	
10.30am – 4pm	Cardingmill River Journey,	River measurements, field sketch, stream invertebrates, stories and games.	
6pm	Preston Montford	Dinner	
7-8pm		Rivers follow-up and design an animal Diaries	
8-9pm		Film night	
<b>Wednesday 23<sup>rd</sup> Oct</b>			
9.30am	Preston Montford	habitats	Long Mynd Coach pick up at 12.30am and 4.30pm
12.30– 4.30pm	Ironbridge & Blists Hill Museum	Field sketching, museum tour and shopping time.	
6pm	Preston Montford	Dinner	
7-8pm		The Trading Game Diaries	
8-9pm		Campfire	
<b>Thursday 24<sup>th</sup> Oct</b>			
9.30am	Preston Montford	Site intro and kit check	Long Mynd Coach pick up at 10am and 4.30pm
10am – 4.30pm	Stiperstones Stomp	Ridge walk, Devils Chair, stories and mineral hunt	
6pm	Preston Montford	Dinner	
7-8pm		Poems and Stories by the fire	
8-9.30pm		Disco	
<b>Friday 25<sup>th</sup> Oct</b>			
9.30 - noon	Nesscliffe Country Park	Orienteering	Long Mynd Coach pick up 10am and 12.30 noon
12.45 -1pm lunch Depart 1.30pm	Preston Montford	Depart after lunch	Your Long Mynd coach home