

How can I support
my child
with their
Maths and English?

Aim

The aim of this booklet is to:

- Give parents/carers an idea of what their child is doing in Maths and English and the methods they are taught.
- Give parents/carers different strategies to help them develop their child's progress.
- Give parents/carers confidence when talking to their child about Maths and English work.

The topics looked at in this booklet are:

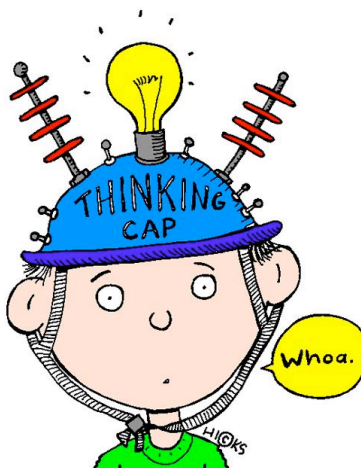
- Where can I go for help?
- Self- esteem
- Homework
- English
 - Spelling
 - Vocabulary
 - Punctuation
 - Paragraphs
- Mathematics
 - Addition
 - Subtraction
 - Multiplication
 - Division
 - Multiplying/Dividing by Powers of 10
 - Shape
 - Probability
- Memory Skills

Where can I go for help?

Speak to your child's form teacher,
English or Maths teacher, Miss Robinson
(Head of Year) or Mrs Hills, (SENCo).
We are here to help.

How can I help support my child at home?

- Try some of the techniques in this booklet to help your child with their English and Mathematics.
- Set aside a short daily session to spend time helping your child.
- Don't be critical - your child's self esteem may be fragile.
- Help your child realise what he or she does well and discourage negative attitudes.



Self Esteem

What is self-esteem?

Self-esteem consists of two parts:

- Self-image - how we see ourselves
- Ideal self - how we would like others to see you



How to identify low self-esteem!

At secondary school it is easy for low self-esteem to manifest itself into depression. Low self-esteem comes in four distinct categories:

- Emotional signs - sadness, despondent, a feeling of hopelessness, anxious, tense and mood swings.
- Cognitive signs - a depressive mood can lead to self-doubting thoughts organising their thoughts, concentrating and remembering. Resulting in failure to complete tasks and homework. They believe that no one else feels the way they do.
- Behavioural signs - this is probably the easiest to spot as your child may become clingy, aggressive and occasionally self-harming.
- Physical signs - weight and appetite loss, sleep disturbances, excessive tiredness and sluggishness. How can I help develop my child's self-esteem?

How can I help my child?

- Focus on what they can do rather on what they can't.
- Positive reinforcement - builds self-esteem; praise your child whenever possible.
- Have realistic expectations - high expectations are a good thing. However, a child who struggles with reading may not read for pleasure.
- Develop hobbies and interests outside of school.
- Discuss successful celebrities and sports stars with dyslexia.



Homework

Rationale

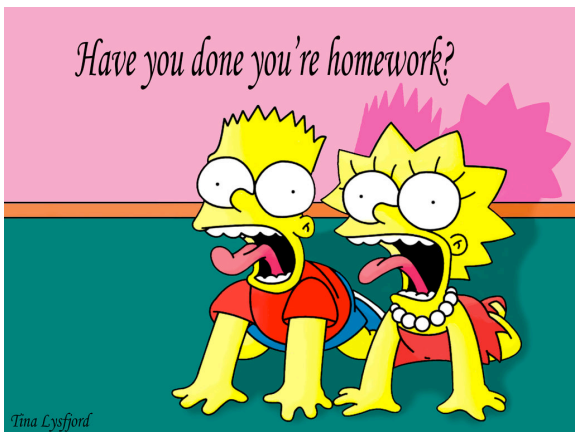
"Homework is not an optional extra, but an essential part of a good education." - *1999 White Paper, Excellence in Schools*

Homework is work that is set to be done outside the timetabled curriculum. It is important in raising student achievement as it enhances student learning, improves achievement and develops students' personal learning and thinking skills and as such is an integral part of the curriculum. Homework is a carefully integrated part of the schemes of work for each curriculum area.

The purpose of homework is:

- To encourage students to develop the confidence and self-discipline to work under their own initiative. An essential skill for adult life.
- To consolidate and reinforce skills and understanding.
- To extend school learning, for example through additional reading.
- To enable students to devote time to particular demands such as GCSE coursework or extended project work.
- For students to take ownership and responsibility for learning.
- To support the home/school relationship.

Homework Club



Homework Club is available to all students Tuesday to Friday lunchtimes in room 12. A member of the Learning Support Department will be available to provide help and support with homework.



English



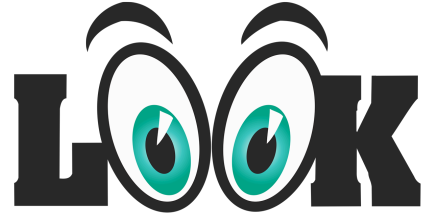
'Yes well, legibility and correct punctuation might not be "street"... but that's how I roll, '

How I can help my child with spellings?

Spelling can only be improved with regular practice, even as little as 5 minutes a day. Detailed below is a variety of spelling strategies that are used within Huish Episcopi Academy.

Calligrams

Create a visual image within a word.



Look, Read, Trace, Write, Check

- focus on every letter in the word
- say the word aloud
- trace over each letter whilst saying the letter name
- cover the word
- write the word from memory
- check the spelling
- if wrong, try the process again

Simultaneous Oral Spelling (SOS)

- make the word with magnetic letters
- look carefully at the word
- say the letter names
- mix up the letters
- rearrange the letters to spell the word
- jumble the word up with a selection of letters
- choose the correct letters and make the word
- Why not try mixing a couple of words at the same time.

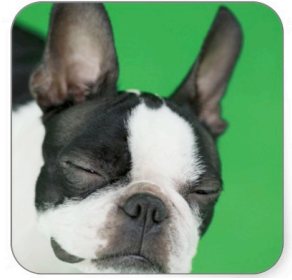


Neuro-linguistic Programming (NLP)

A visual approach to learning which focuses on the fact that good spellers use the upper left visual quadrant to fix their eyes to both file and recall words.

A neuro-linguistic spelling approach involves:

- Writing the word on a piece of paper
- Close your eyes and think of something that makes you feel good or successful
- Open your eyes and look at the spelling
- Move the spelling, on the paper, upwards and towards the left
- Remove the card but try to visualise the word
- Look at the word again in the upper left position
- Put the card down and write the spelling that you are seeing when you look up and left
- Check the spelling. Are you right?
- If not, repeat the process



Mnemonics

We all know:

big elephants can always understand small elephants = because.

It is best when your child creates their own mnemonic.



bears eat ants under trees in flowery
unicorn leotards

Syllables

Some words are difficult to spell because the pronunciation does not match the spelling e.g.

Wenesday = wed - nes - day

peeple = pe - o - ple

Breaking words into syllables helps your child focus on the spelling pattern. When learning spellings why not write them on a piece of paper and cut them into syllables.

Say it in a funny way

Friend = fri (fry) end

Scissors = scis (skis) sors

Rhythm and Rhyme

Highlight the difficult parts of the word in different colours

Rainbow writing

- Write the word you are learning to spell
- Choose a different colour pen
- Write over the top of the previous spelling
- Repeat with a different colour pen



Spelling Rules

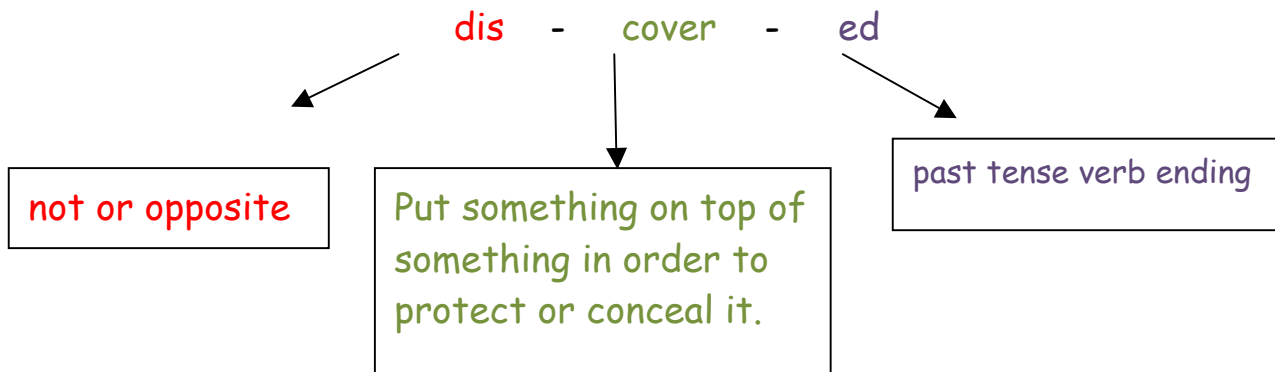
The best way to improve your child's spelling is to help them learn the spelling rules. Useful websites:

www.dyslexia.org/spelling_rules.shtml

www.phonicslessons.co.uk/englishspellingrules.html

Morphemic Approach

Teach your child each unit of meaning.



Four Square Approach

- Fold a piece of paper into four squares
- Write the word in the first square
- Trace over the word with your finger whilst saying the letter names
- Now copy the word in the next square whilst saying the letter names
- Fold the paper so that two blank sections are showing
- Write the word from memory
- Check the spelling
- If correct fold the paper until the last blank section is showing
- Close
- Eyes and write again
- Check
- **If at any stage you make a mistake go back to the first step and start again.**

spelling	

Remember:

Once your child is confident with their spellings encourage them to write the word in a sentence so that it moves into their long term memory.

Remember to revisit the spellings regularly.

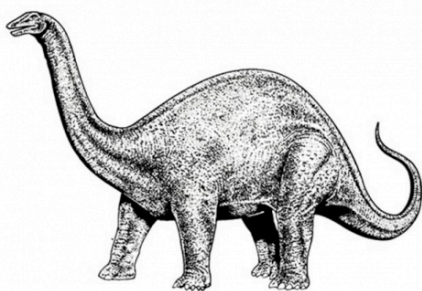
'If they can't learn the way we teach, teach the way they learn.' O. Ivar Lovaas.

How I can help my child develop their vocabulary?

Word classes

The following list shows the eight parts of speech in English.

- **Adjectives:** Words that describe nouns and pronouns: red, more, second, several.
- **Conjunctions:** Words that connect words or groups of words and show how they are related: and, or, for, but, after, although, because.
- **Interjections:** Words that show strong emotion: Oh! Wow!
- **Nouns:** Words that name a person, place, thing, or idea.
 - **Proper nouns** — specific names of people and places: Peyton Manning and Langport— are capitalised.
 - **Pronouns:** Words that take the place of a noun or another pronoun: I, you, me, he, she, it, we, who, they.
 - **Possessive pronouns** show ownership: my/mine, your/yours, their/theirs, our/ours.
- **Prepositions:** Words that link a noun or pronoun to another word in the sentence: by, about, behind, above, across, at, with.
- **Verbs:** Words that name an action or describe a state of being: run, seem.
 - **Adverbs:** Words that describe verbs, adjectives, or other adverbs: yesterday, below, happily, partly.



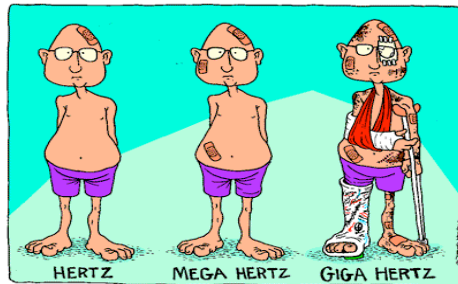
having great vocabulary didn't save the
THESAURUS
from extinction / eradication / extirpation

Expanding your vocabulary is made a little easier with tips that will help you understand the meaning of new words.

Common Vocabulary Prefixes

A prefix, found before the root word, can often offer a clue to a word's meaning:

<i>Suffix</i>	<i>Meaning</i>	<i>Examples</i>
A	Not	Atypical: not the usual.
Anti		Antipathy: not with love.
Dis		Disagree means not in harmony with.
Il		Illegible: not readable.
Im		Immodest: not shy.
In		Individuality: not divided.
Ir		Irremediable: not able to be corrected.
Un		Unhappy: not content.



<i>Suffix</i>	<i>Meaning</i>	<i>Examples</i>
Co	with	Variations include col-, com-, and con: cofounder, commemorate, concussion
De	reduce, remove, to get off of	decaffeinate, decapitate, deplane
In, em, en, il, im, ir	not, in, within, put into, surround	incapable, enrage, impassioned

Common Vocabulary Suffixes

When you're stretching your vocabulary, pay attention to the endings of new words for clues to their meaning; suffixes.

<i>Suffix</i>	<i>Meaning</i>	<i>Examples</i>
able/ible	capable or worthy of, fit for; tending to, causing, given to, or liable to	commendable, edible, impressionable
d/ed	indicates past tense of a verb	baffled, flummoxed,
ence/ance	quality or state; an action or process	clearance, reference, remembrance
ing	indicates the present-perfect tense of a verb (such verbs are called gerunds)	admiring, discussing, perplexing
ion	act, result of an act, or state or condition	integration, obsession, possession
ment	an action, process, or act of a specified kind	bereavement, merriment, movement
s/es	indicates the plural form of a noun	analyses, arguments, results

Web Sites for Building Your Vocabulary

A fun way to build your vocabulary is to make flash cards or visit Web sites that offer word games and word challenges. Visit these sites at your leisure and be prepared to spend some time and have some fun.

- www.learninggamesforkids.com/vocabulary_games.html
- www.vocabulary.co.il/
- www.merriam-webster.com/game/index.htm
- www.english-online.org.uk/games/gamezone2.htm
- <http://www.slimekids.com/games/spelling-games/>

You can build your vocabulary using flash cards, word games, and plain, old, everyday reading. Whether you're reading cereal boxes, the newspaper, Web articles, office memos, or research papers, use the tips in the following list to improve your vocabulary as you read:

How can I help with Paragraphs?

Paragraphs are like stepping stones - they lead the reader from one end of your writing to the other.



But when do you start a new paragraph? Well some people like using **TiPToP**, so let's see how this works.

Ti - stands for **Time**, so start a new paragraph for a different time period.

P - stands for **Place**, so start a new paragraph for each new place.

To - stands for **Topic**, so start a new paragraph for each new topic, idea or subject.

P - stands for **Person**, so start a new paragraph for each new speaker.

It's important to use paragraphs, and to use them in the right places. So **TiPToP**. There is no set length for a paragraph either. A short paragraph, sometimes just a line long, can be ideal and grab your attention.

How can I identify sentence types?

Simple sentences:

Contains one piece of information, uses one noun and one verb:

James ran home.

The dog chased the postman.

Compound sentences

Simple sentences joined by a conjunction:

*James ran home **because** his dinner was ready.*

*The dog chased the postman **and** bit him on the bottom!*



Complex sentences

A complex sentence contains a **main clause** and at least one **subordinate clause**. The main clause can come at the start, at the end, or somewhere in the middle of the sentence.

*I'll meet you tonight at six, **if I can**.*

***When Ceri speaks**, everyone listens.*

Subordinate clauses

Subordinate clauses are extra bits of information in a sentence. The sentence makes sense without the clause, but it makes the sentence more interesting.

*The dwarves, **gasping and sweating**, ran into the cave.*



How I can help my child develop their punctuation?

Apostrophes (')

They can be used for two different reasons: omission, possession.

a) Apostrophes are used to indicate where two words have been made into one (contracted) and a letter or letters have been left out, omission. The apostrophe goes where the missing letter/letters should be.

I have = I've

you are = you're

Important exceptions:

It's means *it is* or *it has* and does not indicate possession. (use **its**)

Its shows possession (there is no apostrophe)

Who's means *who is* or *who has* and does not indicate possession. (use **whose**).

b) They can be used to show that one thing belongs to another. This is called **possession** or ownership.

The apostrophe is placed on the word that does the owning.

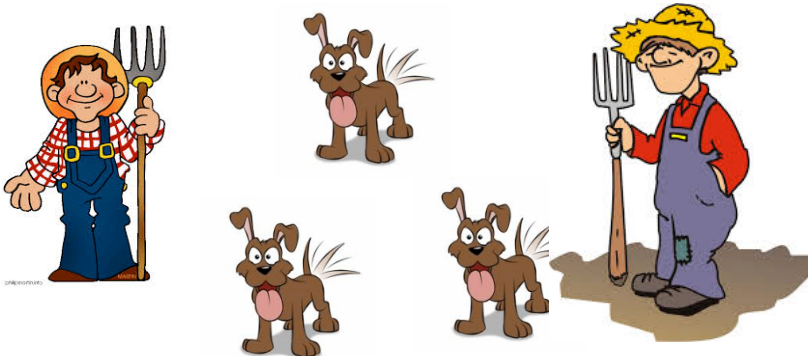
If there is one owner the apostrophe goes before the s:

e.g.: *The farmer's dog.* (One farmer owning a dog)



If there is more than one owner, the apostrophe goes after the S:

The farmers' dogs. (Several farmers owning several dogs)



Capital Letters

A capital letter must mark the beginning of every sentence; they also are used with proper nouns (names of people, places, days of the week and months)

Once upon a time there was...

London, Jenny, France, July, Friday

Commas (,)

Commas are used to separate actions or adjectives in a sentence

I arrived home feeling tired, hungry and generally pleased.

My dad is the richest, most extravagant, most demanding chef in the world.



OR to separate items in a list:

Remember to buy one pineapple, 4kg of bananas, and some ice-cream for tea tonight.

Do not use a comma where there should be a full stop!

Colons (:)

Introduce a list or a set of details.

You will need: scissors, paper and a pencil.

Or it tells you to expect more detail:

The ingredients are: eggs, butter, flour and milk.

Semi-colons (;)

Semi-colons can be used to separate main clauses:

The guide opened the door; he showed us into the room.

Or can break up lists containing more than one word, like a comma:

Before the picnic we packed everything: a box for the plates and cutlery; cartons of sandwiches; two bottles of lemonade; a table cloth and serviettes.

Semi-colons are half way between a comma and a full stop.

Exclamation marks (!)

Are used to indicate a **voice raised**, **order**, **strong emotion**, or **humour**.

"Help!" she cried.

"Come here!"

The boy was furious!

The teacher wore her slippers to school by mistake!

REMEMBER: Question and exclamation marks **already have their own full stop.**

Question marks (?)

Are used at the end of sentences which ask a question:

Where is your blazer?

Speech marks ("")

- Use speech marks when writing down what people actually say.
- Only the words actually spoken - the direct speech - go inside the speech marks.
- Introduce speech using a comma.
- Punctuation should go inside the speech marks. There are three basic patterns to know:

Pattern 1: *He said, "Hello."*

Pattern 2: *"That is my book," he said.*

Pattern 3: *"Hello," he said, "my name is John."*

REMEMBER: every time there is a new speaker you must start a new paragraph!

How I can help my child with their reading?



Encourage your child to read for pleasure. As you know, if we are interested in the book we are more likely to read. If your child doesn't like reading books why not try an electronic book.

When listening to your child read help them develop reading strategies:

- Encourage them to read on in the text. This may help them guess the word.
- Discuss the pictures.
- Create your own mental picture.
- Summarise the main idea of the text in your own words.
- Look up definitions of words you're not familiar with or are uncertain about.
- If your child makes an error ask:
 - Does that look right?
 - Does it sound right?
 - Does it make sense?



Library

The library stocks a wide range of books for all abilities including books for reluctant readers. As a 'dyslexia inclusive school' we stock a large selection of dyslexia friendly books, including books from Barringtonstoke and Risingstars:

- Left justified - helps with tracking (moving from one line to the next)
- Printed on pastel paper
- 1 $\frac{1}{2}$ line spacing
- Dyslexia friendly font
- High interest but lower reading age



Just tell the librarian what type of books you like; is always happy to recommend books.

P Q R S T

Preview Question Read Self-Recitation Test

This will help improve your child's memory and understanding of key ideas and information.

PQRST is preferable to just reading a chapter from a text book as it helps you organise the information as you read. Up to 80% of your time should be used actively self-reciting.

Preview

- 📖 Look at the headings, pictures and illustrations.
- 📖 Now read the summary section at the end of the chapter. This will give an overview of the chapter and will help you organise your thoughts.
- 📖 Make notes of any questions that come into your mind.

Question

- 📖 Now look at a section in the book.
- 📖 Read the headings and subheadings
- 📖 Now make the topic headings into questions that you think might arise in that section

Read

- 📖 Read the section
- 📖 Underline key words, phrases or sentences
- 📖 Try to answer the questions that you came up with in the question section.
- 📖 Try to connect this information to other things you know
- 📖 Only make notes after you have read the complete section so that you can judge the relevant importance.

Self Recitation

- 📖 Try to recall all the main ideas - out loud. This helps you organised your thoughts and the information and will show what you need to learn.
- 📖 Keep repeating these steps until you complete the chapter.

Test

- 📖 Now test yourself
- 📖 Can you recall all the main facts from your notes? Try to understand how the facts relate to each other.
- 📖 Reread the chapter summary. Can you add additional information?

Year 7 Accelerated Reading

Please can you encourage your son/daughter to read for 20 minutes, three times a week?

Once they have read their book they will need to log onto:

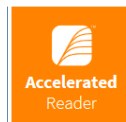
<https://ukhosted17.renlearn.co.uk/2231931> and complete a quiz **before 6pm**.

Your child will have their login details. Every quiz completed earns points towards certificates of achievement and inter-form competitions. Quizzes can also be completed in:

- Library at; breaktimes, lunchtime and after school
- Homework club; Tuesday to Friday lunchtime in room 12.

How to complete a Quiz

Once logged into the site, click on



then click on your **class**. Now type

in the title of your book.

A screenshot of the Accelerated Reader interface for the book 'War Horse' by Michael Morpurgo. It shows the book cover, title, author, level (5.9 MY), genre (Fiction), and quiz ID (204089 EN). A description of the book is provided. On the right, there are two buttons: 'Take Quiz' and 'View Vocabulary'. An arrow points from the text 'Now click on take a quiz and read by myself etc.' to the 'Take Quiz' button.

War Horse
by Michael Morpurgo
Level 5.9 MY • Fiction • Quiz 204089 EN • 6.0 Points

In England, Albert is growing up on a Devon farm with his young horse, Joey. However Albert, Joey and many other people will all be drawn into the nightmare of war as they all struggle to survive in the blasted wilderness of the Western Front.

Take Quiz

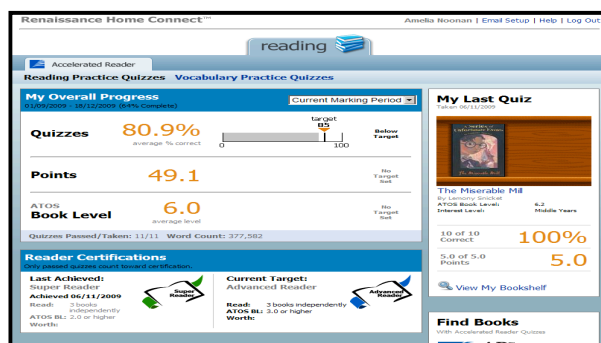
View Vocabulary

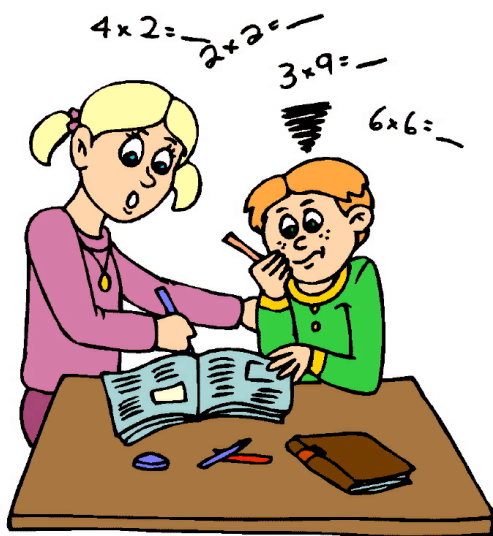
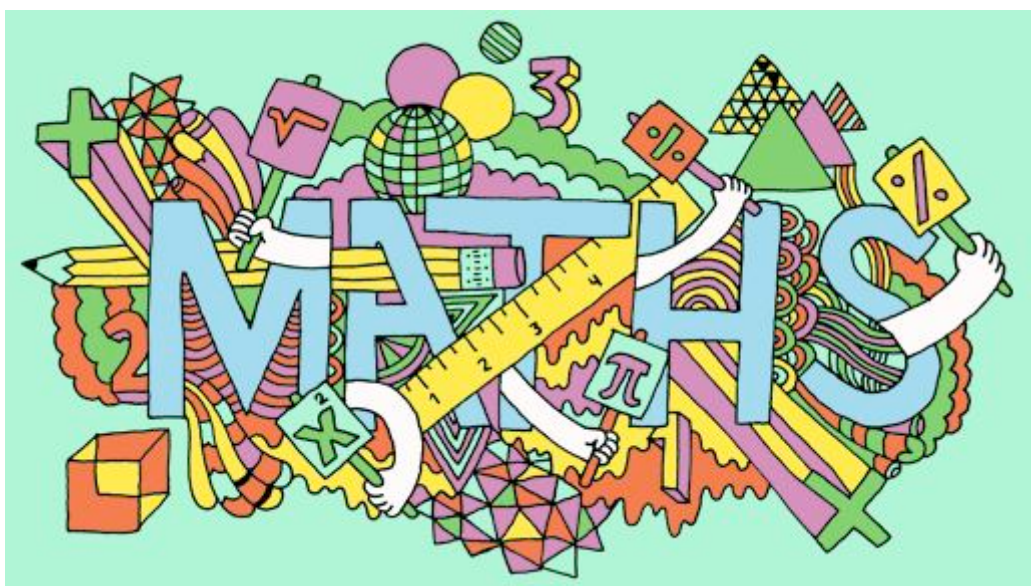
Now click on
take a quiz and read
by myself etc.

If you want to find out if a book has a quiz go to: www.arbookfind.co.uk
Accessing quiz results from home.

Do you want to know your son/daughters quiz results? You can access the quiz results from home through 'Home Connect' using their login at:

<https://ukhosted17.renlearn.co.uk/2231931/HomeConnect/Login.aspx>



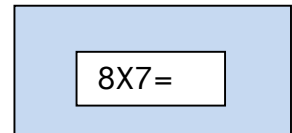


How I can help my child with their mathematics?

Timetables can be problematic.



- Teach timetable strategies
 - 9 times table - place your hands next to each other and number them 1 -10. To calculate 3 X 9 fold down your third finger. The digits before the bent finger are 10s $2 \times 10 =$ twenty and the fingers after the bent finger is counted in ones $7 \times 1 = 7$ so the total is $20 + 7 = 27$.
 - Youtube -Times tables using your hands! (6x6 - 10x10) Simon Deacon
- Practice money skills
 - Encourage your child to help with shopping. Give them their own shopping list and encourage them to calculate and pay for the shopping. To start with why not use a calculator.
- Symbols can cause problems - highlight + and X in different colours to reduce confusion.
- If your child loses their place in the text book try cutting a small window in a piece of card so that just one sum can be viewed.
- Focus on your child's strengths - remind them what they know
- Play maths/number games.



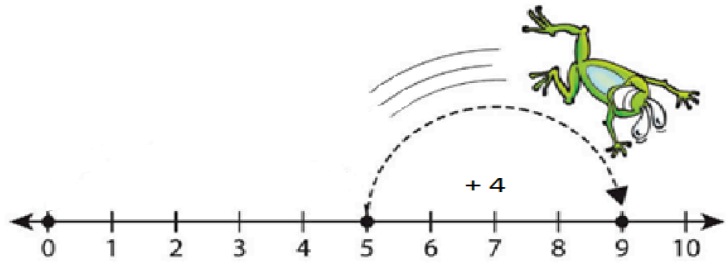
Useful websites

- www.educationquizzes.com/ks3/maths/
- www.mymaths.co.uk
- www.bbc.co.uk/bitesize/ks3/maths/
- www.millionaireforschools.co.uk/quizzes
- <http://www.maths-games.org/times-tables-games.html>

Addition

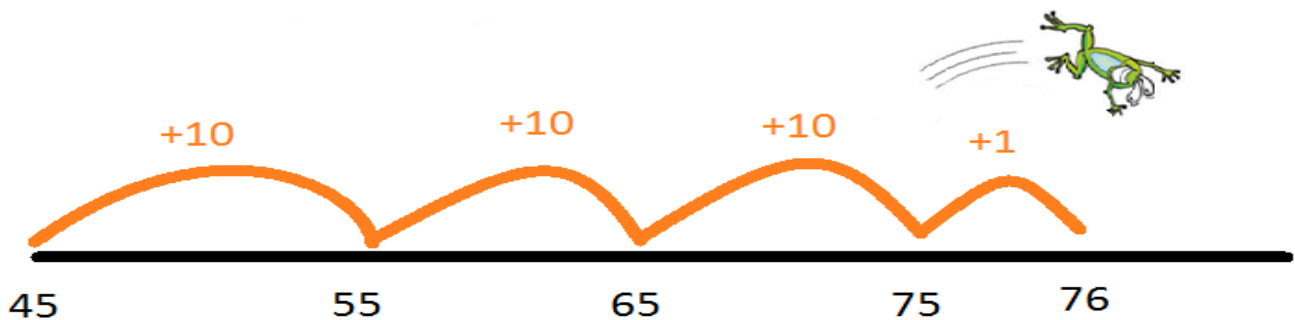
Number Line

$$5 + 4 = 9$$



Start at 5 and hop forwards 4 = 9

$$45 + 31 = 76$$



Method - Partitioning

This is similar to the number line method, in that we split each number into its tens and units.

Work out $45 + 23$

$$45 = 40 + 5 \quad 23 = 20 + 3$$

So

$$\begin{aligned} 45 + 23 &= (40 + 5) + (20 + 3) \\ &= (40 + 20) + (5 + 3) \\ &= 60 + 8 \\ &= 68 \end{aligned}$$

Column Addition

This is the more traditional method that most parents will have been taught in school with a few minor adjustments.

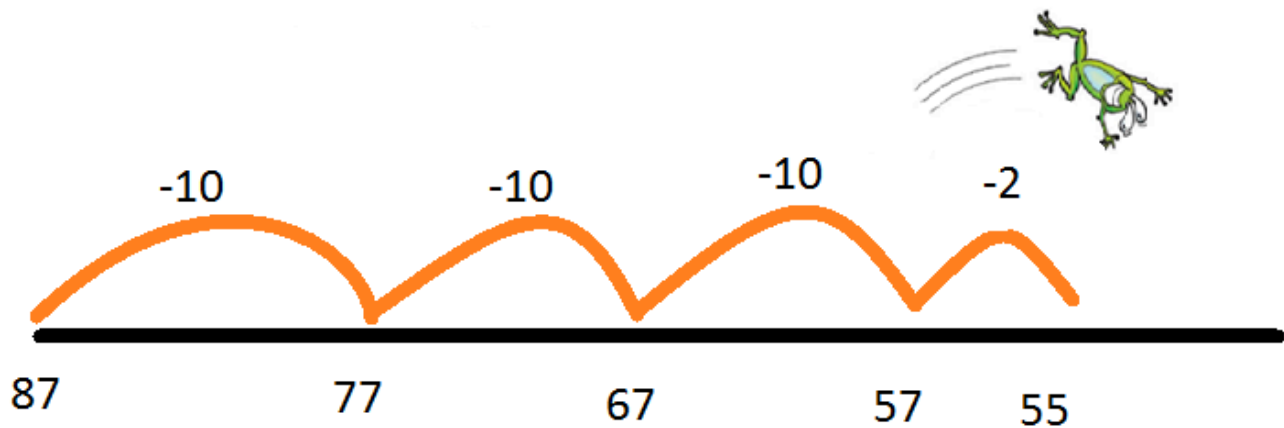
$$\begin{array}{r} 42 \\ + 34 \\ \hline 6 \text{ (} 4 + 2 \text{)} \\ + 70 \text{ (} 40 + 30 \text{)} \\ \hline 76 \end{array}$$

$$\begin{array}{r} 254 \\ + 127 \\ \hline 11 \text{ (} 7 + 4 \text{)} \\ 70 \text{ (} 50 + 20 \text{)} \\ + 300 \text{ (} 200 + 100 \text{)} \\ \hline 381 \end{array}$$

Addition

You can also use a number line for subtraction, take-aways.

$$87 - 32 = 55$$



This is a more formal way of recording working out using grids. Some questions require us to exchange a ten for ten units.

Work out $68 - 47$

$$68 = 60 + 8$$

$$47 = 40 + 7$$

Again we split the numbers into tens and units.

60	8	$60 - 40 = 20$ $8 - 7 = 1$
40	7	
20	+ 1	
$68 - 47 = 21$		

Work out $63 - 47$

$$63 = 60 + 3$$

$$47 = 40 + 7$$

Again we split the numbers into tens and units.

This time we need to exchange a ten for ten units because we can't do $3 - 7$. So we change: $60 + 3 \longrightarrow 50 + 13$

60	3	Becomes →	50	13	50 - 40
40	7		40	7	13 - 7
					10 + 6

Multiplication

It is essential that pupils know the basics of multiplication as well as recalling times tables up to 12×12 . Try to practice your times tables with your child. A multiplication grid may help.

Times Table - 12x12												
	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Again there are several methods of multiplication.

Grid Method

Multiply each pair of numbers and write them in the grid. Then add the two products, answers to each multiplication, to find the answer

$$35 \times 7 =$$

X	30	5
7	210	35
210 + 35 = 245		

7 × 30
7 × 5

The grid method can also be used for more difficult multiplications, such as 35×26 .

X	30	5
20	600	100
6	180	30
$600 + 100 = 700$ $180 + 30 = 210$ $700 + 210 = 910$		

Column Multiplication

Once your child has mastered the grid method, then you can move on to using column multiplication. This is probably familiar to you.

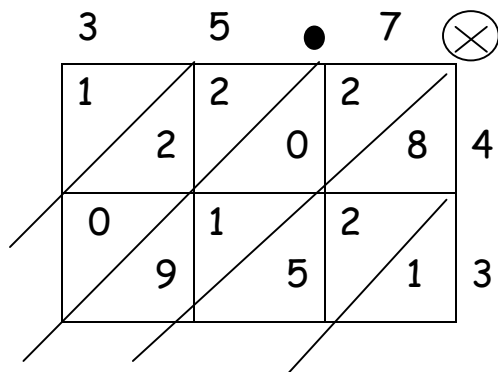
Work out 27×5

$$\begin{array}{r}
 27 \\
 \times 5 \\
 \hline
 35 \text{ (} 5 \times 7 \text{)} \\
 + 100 \text{ (} 5 \times 20 \text{)} \\
 \hline
 135
 \end{array}$$

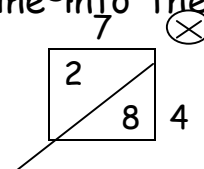
Work Out 127×18

$$\begin{array}{r}
 127 \\
 \times 18 \\
 \hline
 56 \text{ (} 8 \times 7 \text{)} \\
 160 \text{ (} 8 \times 20 \text{)} \\
 800 \text{ (} 8 \times 100 \text{)} \\
 70 \text{ (} 10 \times 7 \text{)} \\
 200 \text{ (} 10 \times 20 \text{)} \\
 + 1000 \text{ (} 10 \times 100 \text{)} \\
 \hline
 2286
 \end{array}$$

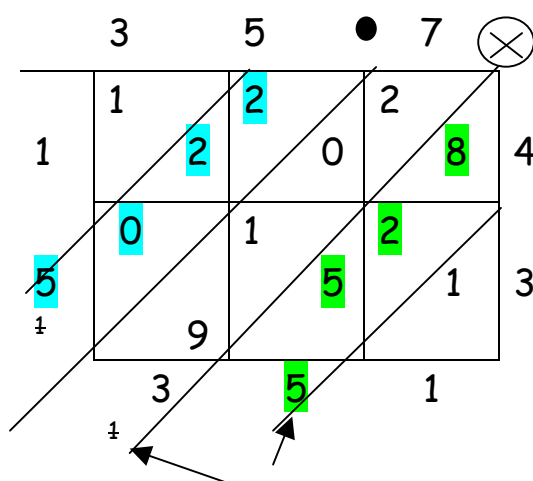
Horizontal
The decimal points meet here
The boxed column 1
Napier's Bones
The answer to 35.7×43 is 1535.1
A) 35.7×43



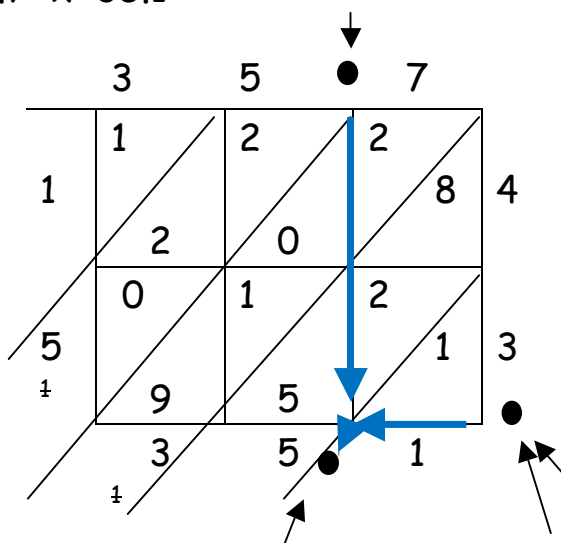
Multiplying each of the
Napier's bones is great for
multiplying decimals.
(highlighted in the example).
The box Ten is in the top
Follow the lines by the
triangular and units in the
decimal points vertically and
horizontally until they meet.
be started in the bottom left
diagonal working left or up
the diagonal rows into the
answer.



b)



c) 35.7×35.1



Can you work out how to use Napier's bones to find the answer to 24×6 ?

How about 461×4 ?

Now try 8931×6 .

Division

Division is the operation that people find the most difficult.

Bus Stop



$$82 \div 7 =$$

First see how many 7s are in 8. The answer is 1 remainder 1.

$$\begin{array}{r} 1 \\ 7 \overline{)812} \end{array}$$

The remainder now moves into the next column so **2** now becomes **12**.

We now see how many 7s are in 12. The answer is **1** remainder **5**.

So the answer is $82 \div 7 = 11$ remainder 5.

$$386 \div 6 =$$

First see how many 6s are in 3. The answer is 0 remainder 1.

$$\begin{array}{r} 0 \\ 6 \overline{)386} \end{array}$$

The remainder moves into the next column so 6 becomes 36.

Next, see how many 6s are in 36. The answer is 6.

$$\begin{array}{r} 06 \\ 6 \overline{)386} \end{array}$$

6 goes into 36 exactly 6 times.

Finally, see how many 6s are in 8. There is 1 remainder 2. So the final answer is $368 \div 6 = 61$ remainder 2.

Multiplying and Dividing by Powers of 10

Powers of 10 are numbers that have a digit followed by a number of zeros. Eg 10, 100, 1000, etc.

When multiplying/dividing by powers of 10, we must keep the decimal point still but move the numbers. *Most parents were taught to move the decimal point but this can become confusing when working with decimals.*

The general rule for **multiplying** is:

- ☂ Multiply by 10 _ move the digits one space to the left.
- ☂ Multiply by 100 _ move the digits two spaces to the left.
- ☂ Multiply by 1000 _ move the digits three spaces to the left.

$13 \times 10 = 130$ - All the digits have moved one space to the left and a zero has been put in the units column as a placeholder.

$0.461 \times 100 = 46.1$ - All the digits have moved two spaces to the left. The decimal point has stayed still.

The general rule for **dividing** is:

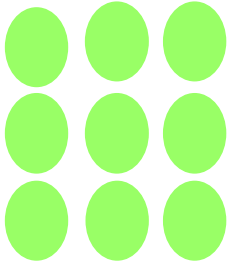
- Dividing by 10 ☾ move the digits one space to the right.
- Dividing by 100 ☾ move the digits two spaces to the right.
- Dividing by 1000 ☾ move the digits three spaces to the right.

Divide →								
Th	Hu	T	U	.	1/ 10	1/ 100	1/ 1000	1/ 10000
			0	.	0	1	7	2

$$17.2 \div 1000 = 0.0172$$

Square Numbers

These are numbers that have been found by multiplying a number by itself. They are called square numbers because if we had that number of counters we can make a square shape.



$$1^2 = 1 \times 1 = 1$$

$$2^2 = 2 \times 2 = 4$$

$$3^2 = 3 \times 3 = 9$$

$$4^2 = 4 \times 4 = 16$$

$$5^2 = 5 \times 5 = 25$$

$$6^2 = 6 \times 6 = 36$$

$$7^2 = 7 \times 7 = 49$$

$$8^2 = 8 \times 8 = 64$$

$$9^2 = 9 \times 9 = 81$$

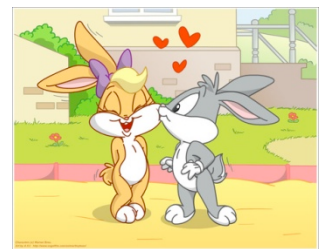
$$10^2 = 10 \times 10 = 100$$

Multiples

Multiples are numbers that are in another numbers times tables.

The first 5 multiples of 4 are:

4 (4x1), 8 (4x2), 12 (4x3), 16 (4x4), 20 (4x5)...



Factors

Factors are numbers that another number can be divided into.

The factors of 12 are all the numbers that we can divide 12 by:

1, 2, 3, 4, 6, 12

To check we have them all we can pair them up.

$$1 \times 12$$

$$2 \times 6$$

$$3 \times 4$$







Prime Numbers

A prime number is a number that has exactly two factors - 1 and itself. 3 is a prime number because we can only divide it by 1 and 3 (itself).

9 is NOT a prime number because we can divide it by 3, as well as 1 and 9 (itself).

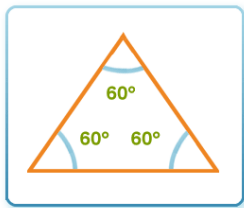
Polygons

A polygon is a shape with all straight sides that are joined up. A Regular polygon is a shape with all sides the same length and all vertices (corners) the same angle.

Name	Number of Sides	What does it look like regular?	Interior angle
Triangle	3		60°
Quadrilateral	4		90°
Pentagon	5		108°
Hexagon	6		120°

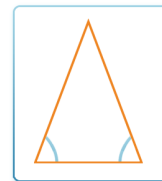
Triangles

Triangles have three sides and three angles. There are four types of triangle.

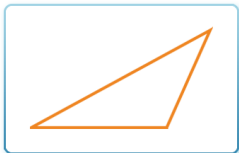


Equilateral (or regular) – All three sides and all three angles are the same (60°).

Isosceles – Only two sides are the same and two angles are the same.

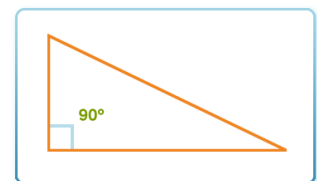


angles are the same.



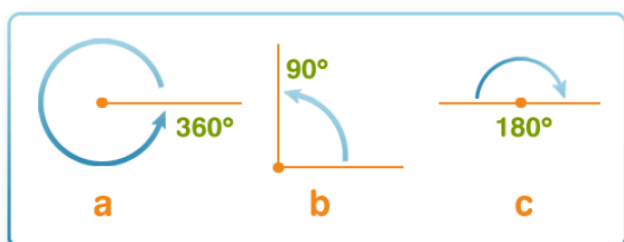
Scalene – No sides are the same and no angles are the same.

Right Angled – One of the angles is a right angle (90°).



Angles

Angles are a measure of how much something has turned. They are measured in degrees.



One whole turn is 360° . a is an example of a whole turn.

One quarter turn is 90° or a right angle.

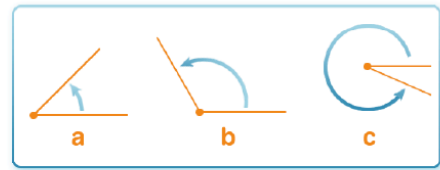
One half turn is 180° or a straight line.

Types of angles

a) an angle less than 90° is acute

b) an angle between 90° and 180° is obtuse

c) an angle greater than 180° is reflex



Data Handling

Averages

There are three types of average - **Mode**, **Median**, **Mean**. The **Range** is not an average but a spread of data. It is normally linked in with averages.

Mode - This is the most common value in a group of data. The number that appears the most often.

7 9 11 6 13 6 6 3 11

The mode = 6 because there are more 6s than any other number.

Median

This is the value in the middle of the data when it is put in order from smallest to biggest. **7** is the median number as it is in the **middle**.

3 6 6 6 7 9 11 11 13

Mean

This is the average. It is found by adding all of the data values together then divide by how many values there are.

Find the mean of these ages.

Example

Find the mean of these ages.

3 6 6 6 7 9 11 11 13

There are 9 values so we do

$$\frac{3 + 6 + 6 + 6 + 7 + 9 + 11 + 11 + 13}{9} = \frac{72}{9} = 8$$

So mean = 8

Range

0 This is the difference between the largest number and the smallest number.
Difference means subtract so take the smallest number away from the largest:
Largest = 13 - Smallest = 3

Find the range of this data.

7 9 11 6 13 6 6 3 11

The range is = $13 - 3 = 10$

Probability

Probability is all about the chance of something happening. It is measured on a scale of 0 to 1.



Probability can be expressed as a decimal, fraction or percentage. Something impossible has a probability of 0. Something certain has a probability of 1. Something with an even chance of happening has a probability of $0.5 = \frac{1}{2} = 50\%$.

How I can help my child develop their memory skills?

Spend quality time with your child whilst having fun and discreetly developing their memory skills. Why not play:

- Match Pairs
- Guess Who
- iPad/computer games
- I went to the shop and bought...



Teach them memory strategies:

- Categorisation method -
 - Place a selection of objects or word cards on the table
 - Can you group any of the objects together? Cat, dog, mouse = **animals**
 - Now create a silly sentence to help you remember each group. The **animals** played **instruments** at the **seaside**.



- Roman Room -
 - visualise your bedroom or a journey through your house
 - now place an object at each point
 - visualise your bedroom or journey through your house while saying each object as you go.

We Remember:

0% of what we hear,

0% of what we see, How can I help my child develop Study Skills?

0% of what we say,

0% of what we do. Make your child's learning relevant.

10% of what we see, hear, say, and do.

- Create mindmaps or revision cards

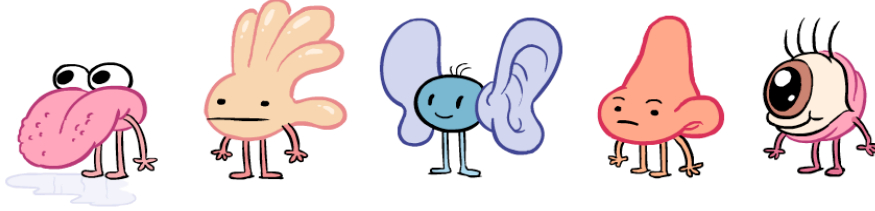
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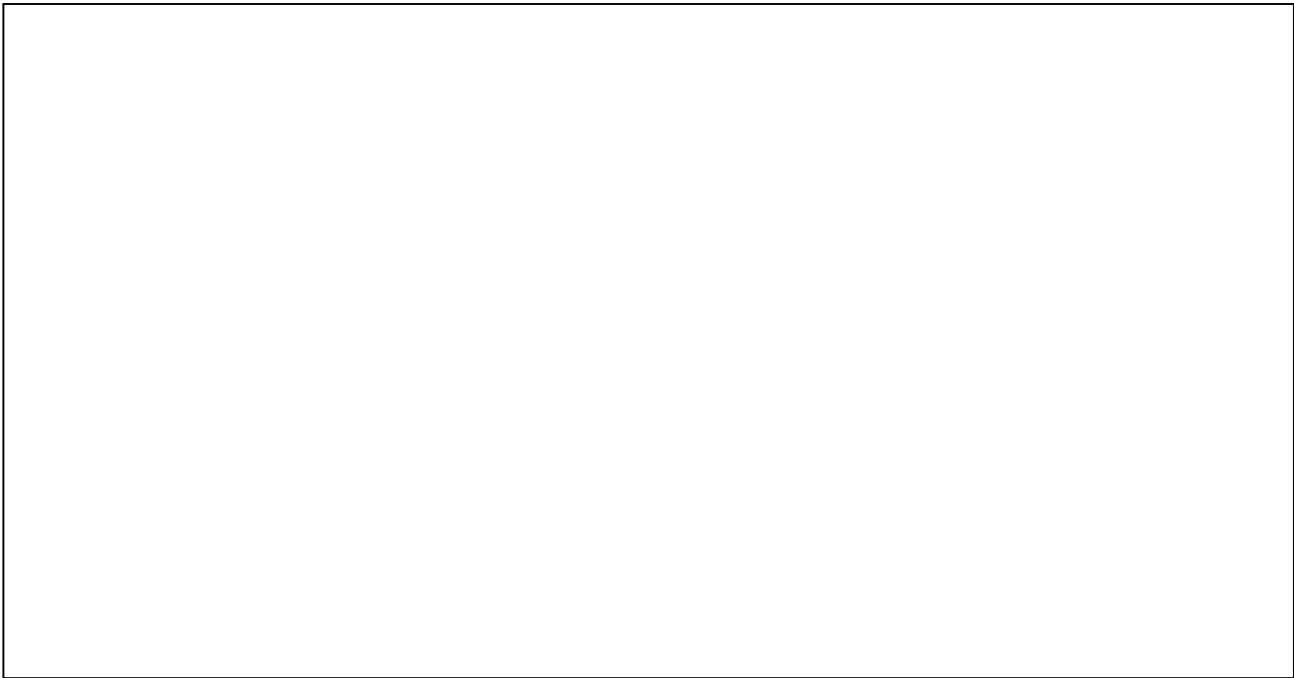
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- Post notes around the bedroom or on your mirror – you will see it every day.
- Matchpairs – match word with definition



Hope this booklet has been useful.

We are here to help!



If you have any concerns

or

require additional information

please contact:

Mrs Douglas - English and Dyslexia.

Ms Robinson - Head of Year 7 and English.

Mr Tubb - Mathematics.

or

your child's class teacher.

