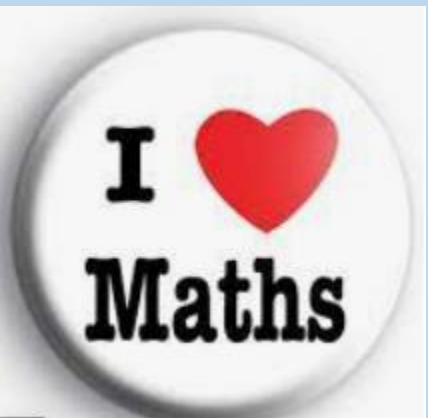




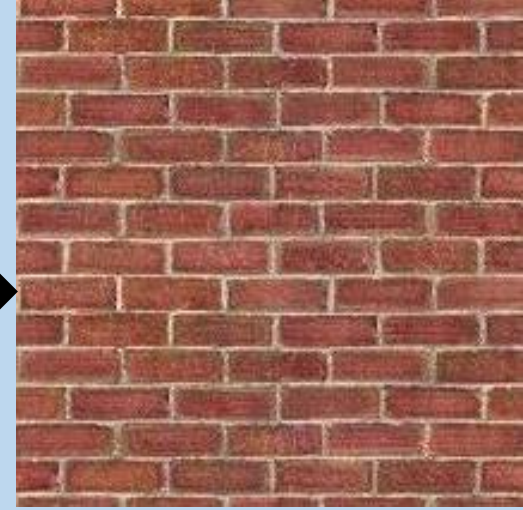
Maths / English

KS2

Curriculum



Building solid foundations



Year 3

Place Value (up to 3 digits)

Addition and Subtraction (up to 3 digits)

Multiplication and Division (2,3,4,5,8,10)

Length and Perimeter

Fractions

Mass and Capacity

Money

Time

Shape

Statistics

Year 4

Place Value up to 4 digits

Addition and Subtraction (up to 4 digits)

Measurement (Area)

Multiplication and Division (all x facts)

Length and Perimeter

Fractions

Decimal

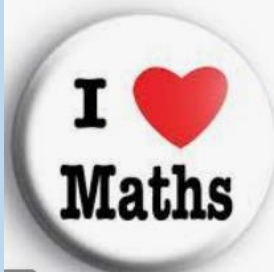
Money

Time

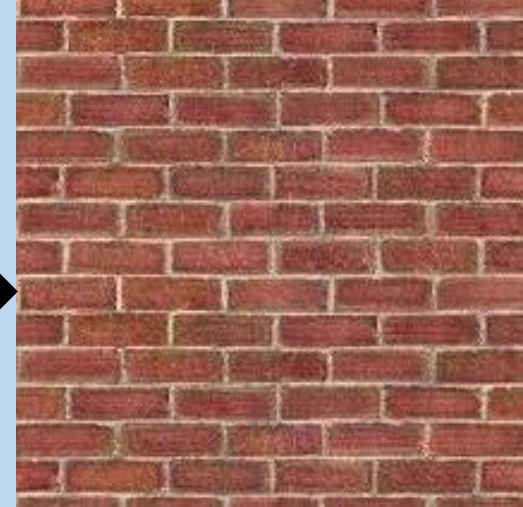
Space

Statistics

Position and Direction



Building solid foundations



Year 5

Place Value

Addition and Subtraction (5 digits)

Statistics

Multiplication and Division (all facts)

Perimeter and area

Fractions

Decimal and Percentage

Property of shape

Position and Direction

Converting units

Measurement and Volume

Year 6

Four operations (+, -, \times , \div)

Fractions

Geometry position and direction

Decimals

Percentage

Algebra

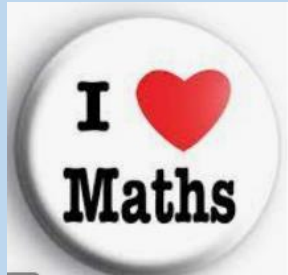
Measurement (converting)

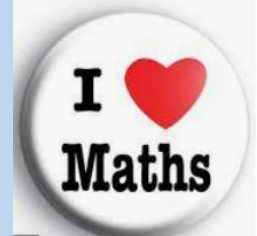
Perimeter, area and volume

Ratio

Statistics

Property of shape





Proficiency in maths -

- Children require a lot of repetition to secure understanding.
- Children are given strategies to help them to be successful – oral chanting, concrete resources to see the maths, rolling numbers. These are all simple strategies.
- Mental calculations develop from this, they still need some thinking time but have a good strategy to think this through.
- Achieving fluency in maths – they just know the answer and can explain their strategy in answering.

Progression to support children to become fluent in mathematical concepts.

Representation and structure

- In maths lessons children will continue to use a range of strategies to secure their understanding and deepen their knowledge. Phases of this are CPA (Concrete, Pictorial and Abstract)

Representation and structure combines discussion and explanation. We give children stem sentence structures to support their understanding and make connections. We encourage children to make connections through exploration, discussion and the use of resources so that they can physically experience and 'see' the maths. This helps them to imagine it when they are thinking through different stages of a calculation.

Make both numbers on a place value grid.

146
+ 527

Add up the units and exchange 10 ones for one 10.

146
+ 527

Children can draw a pictorial representation of the columns and place value counters to further support their learning and understanding.

7 1 5 1

Start by partitioning the numbers before moving on to clearly show the exchange below the addition.

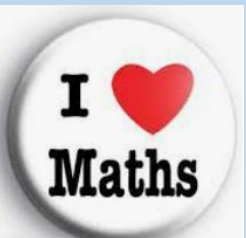
$$\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$$

As the children move on, introduce decimals with the same number of decimal places and different. Money can be used here.

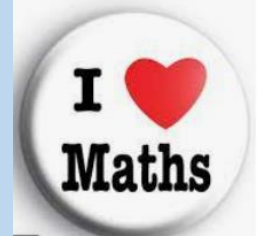
$$\begin{array}{r} 536 \\ + 85 \\ \hline 621 \\ 11 \end{array}$$

The forgetting curve

- If we review something once a week the average person will remember 10-15% the following week when it is revisited.
- If we review something 3-4 times a week the average person remembers 80%
- Approach of lessons supports reviewing learning to help children to continue to remember.

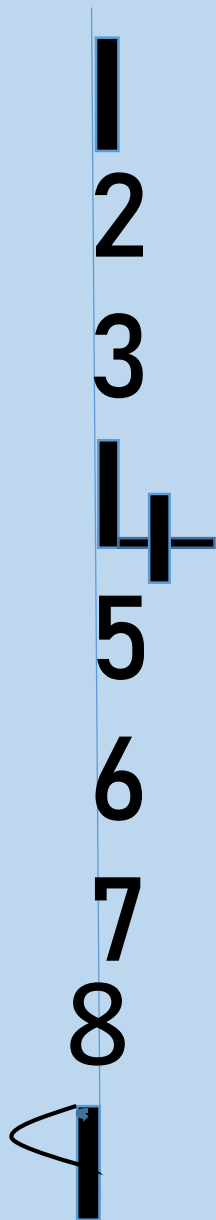


Encouraging children to practice their number facts 3 to 4 times a week supports their cognitive development and aids them in developing long term memory of facts.



Number

- Handwriting

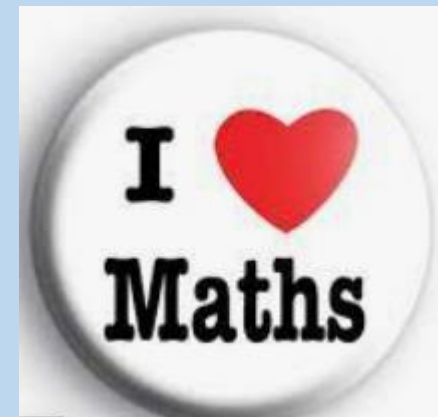


If your child is mirroring their numbers, encourage your child to use a vertical line. Numbers 1 -7 should always be to the right of the line, using the line as a grounding point. 8 sits in the middle. 9 is the only number that faces left. Drawing your child's attention to this along with practise and correction will help to prevent mirrored numbers.

Home learning

- Children
- Home learning.
- Children will use Maths.co.uk as part of their home learning, teachers will supply all passwords. (reviewing learning from lessons)
- TTRockstars – to develop arithmetical proficiency in maths supporting the development of fluency of multiplication and division.
- Supporting
- Encourage your child to actively talk about what they are doing when they are completely work. If they can explain it, they understand it!
- Be active (explore, notice, bake together, shop together, DIY, handle money, talk about the time... a lot!
- School website to support practicing skills – look at your child's year group for additional information

3 to 4 times a week to secure understanding and create long term memories.



Arithmetical proficiency

- Secure understanding of number bonds to 20 and beyond and the relationships of number (fact families) and use the skills to unitise
- Development of multiplication facts to $12 \times *$ (fact families) and be able to unitise

Looking for relationships of number

By the end of KS1 children should aim to be secure in their number facts to 20.
By the end of Y4 children should know all their multiplication facts to $12 \times$

Arithmetical proficiency

Knowing key facts supports children to identify patterns and relationships in number.

- If I know
- **6 + 9 = 15**

I also know:

$$9 + 6 = 15$$

$$15 - 6 = 9$$

$$15 - 9 = 6$$

Using facts to support with calculation:

$$60 + 90 = 150$$

$$9000 + 6000 = 15000$$

$$15000 - 9000 = 6000$$

$$0.6 + 0.9 = 1.5$$

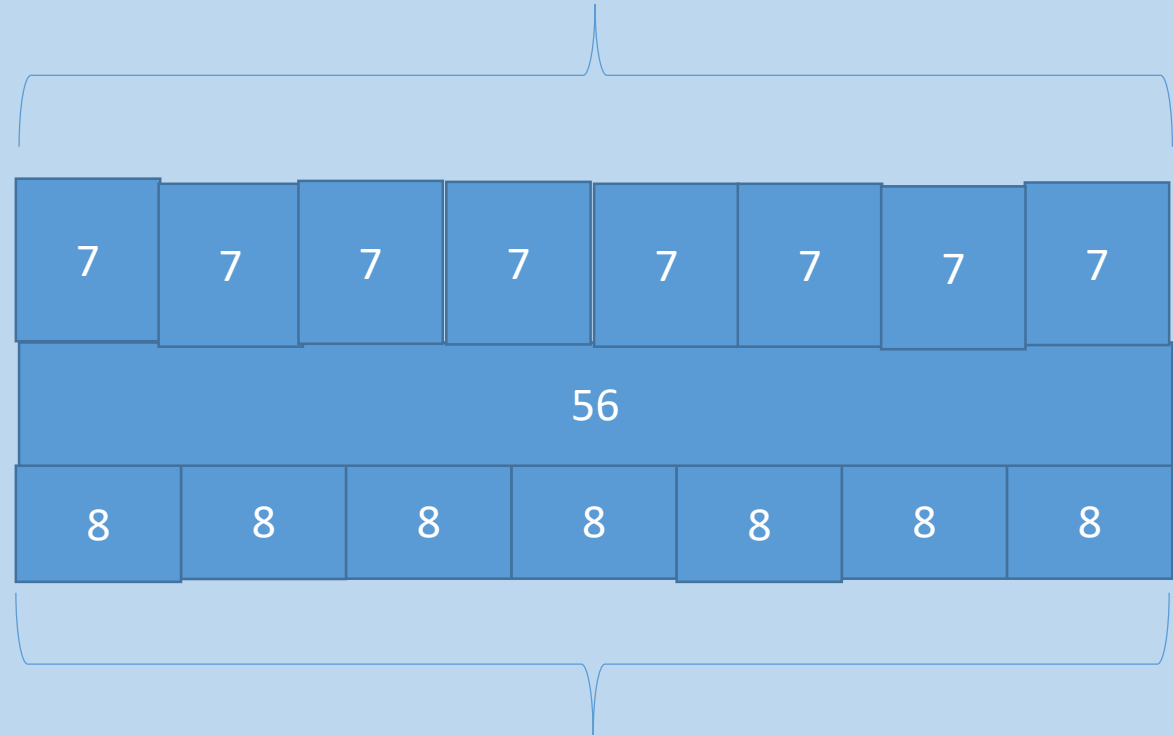
15	
6	9

Making connections –

- If I know:
- $7 \times 8 = 56$ I also know
- $8 \times 7 = 56$
- $56 \div 8 = 7$
- $56 \div 7 = 8$
- $\frac{1}{8}$ of 56 is 7
- $\frac{1}{7}$ of 56 is 8

$$8 \times 7 \text{ (8 groups of 7) } = 56$$

$$7+7+7+7+7+7+7+7$$



$$8+8+8+8+8+8+8$$

$$7 \times 8 = 56$$

Year 3 & 4

Supporting arithmetical proficiency:

Securing number facts to 20 and beyond – key skill revision in class (home support NumBots (same log in as ttrackstars) & 1 minute maths.

Times table tracker:

Award	Tables	Tests (in order) - multiplication and division facts for:	Total Tests
Bronze	10, 5	10 / 5 / <u>5,10</u>	3
Silver	2, 4, 8	2 / 4 / 8 / <u>5,10,2,4,8</u>	4
Gold	3, 6, 9	3 / 6 / 9 / <u>5,10,2,4,8,3,6,9</u>	4
Platinum	7	7 / <u>All tables 1-10</u>	2
Diamond	11, 12	11 / 12 / <u>All tables 1-12</u>	3

And beyond ...

Year 5 & 6

Using what I know to find out what I don't know ...

*Weekly times table and division check.

Opportunities to develop maths at home

- Aritmetical Proficiency
- TTRockstars
- NumBots
- 1-minute maths

- Measure
- Tell the time
- Use money
- Bake / build (discuss measure grams, litres, millilitres, notice maths around.
- Design, look at how things are made – conversational language of maths, horizontal, vertical, shape – noticing and knowing 2d and 3d shapes...
- Logic – supports reasoning, playing games – chess, sudoku, cards, connect four, games that encourage strategy and thinking support mathematical reasoning.

Time

We cover the learning of time up to year 4



Discussion of time, reading digital and analogue clocks,

Timetables – train / bus journeys (real life skills) what time do we need to arrive, so what time do we need to leave ...

Please discuss and continue to explore time throughout KS2 with your child in a range of different ways.

Everyone can be a mathematician!

- **Dice Games** – are fun, easy to play and a great way of practicing maths skills. For a comprehensive list of traditional dice games have a look at https://en.Wikipedia.org/wiki/List_of_dice_games
- **Playing Card Games** – games with playing cards can be a great way to help your child develop a wide range of maths skills from number recognition to decision making. Playing games like Snap or Pairs can be a great way to engage younger children, whereas Uno or Top Trumps might appeal to slightly older children. For a list of card games for you to try, take a look at www.primarygames.com/puzzles/card_games.php
- **Puzzles and problems** - Spot the difference, Dot-to-Dot, painting by numbers, Sudoku and crossword puzzles can also be great ways to develop your child's number awareness and problem solving skills.
- Construction games / board games / making your own board game / maths songs and rhymes / maths story books / online maths games

Further information can be found on the school website:

<https://www.whitehouseprimary.co.uk/teaching-mathematics-for-mastery-at-whitehouse-primary/>

Please also look at the appropriate year groups for your child/ren.

At Whitehouse we are passionate about creating a well rounded curriculum for your child. By the time they leave KS2, the subjects of English and Maths are closely linked. This question, while not for KS1, is an indication of how Maths becomes very language focused as they go up through the school.



“The best readers are often the best mathematicians”

Reading

Q3

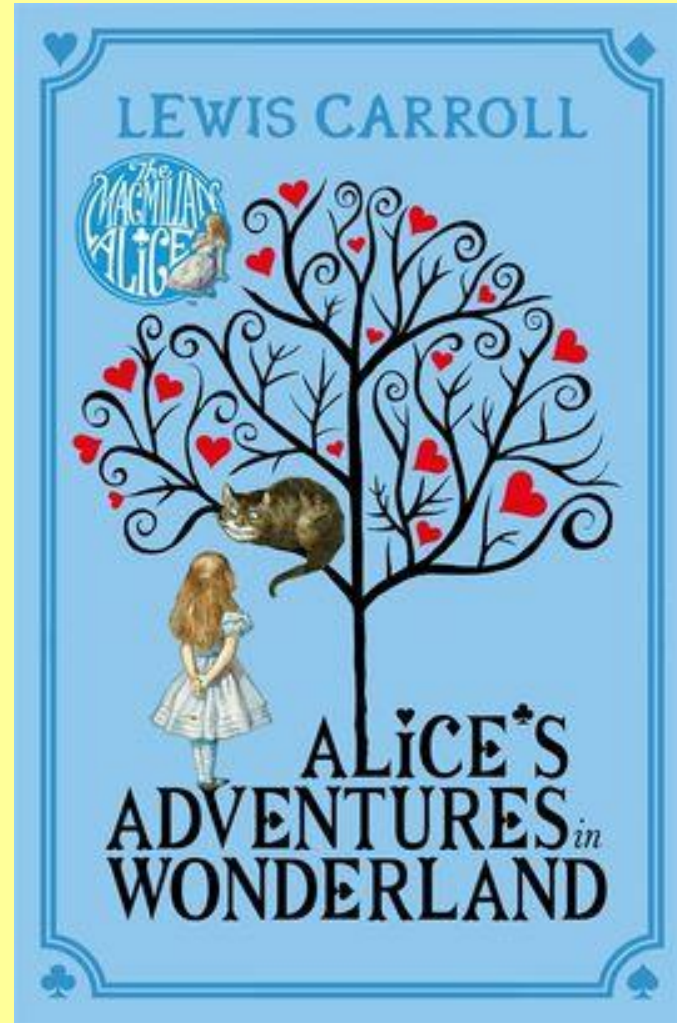
Bags of parsnips weigh 3.45kg each.

A restaurant orders 4 of these bags and then the chef uses 2.35kg of the parsnips on the day they are ordered.

What mass of parsnips is left?



This is an incredibly famous book, known and loved by many. Did you know the Author was actually a professor of Maths at Oxford University?



Reading at School

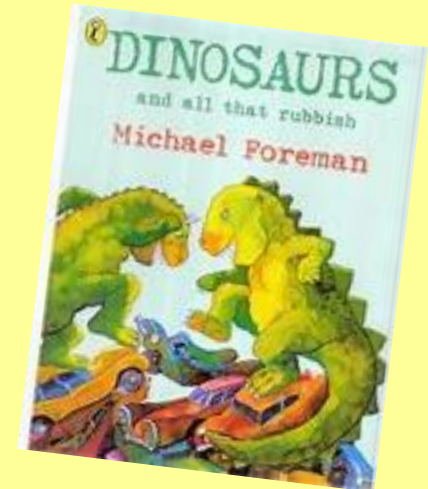
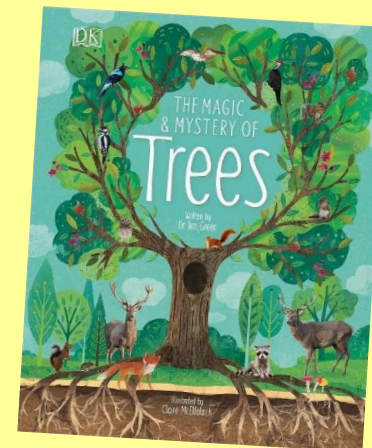


Reading skills lessons

- Exposure to a range of different authors and text types
- High quality texts- 'The five plagues'
- Discussion based



Retrieval
Prediction
Inference
Authorial intent
Word meanings





Doug Lemov's Reading Reconsidered 5 Plagues of the developing reader

Misleading/Narratively Complex

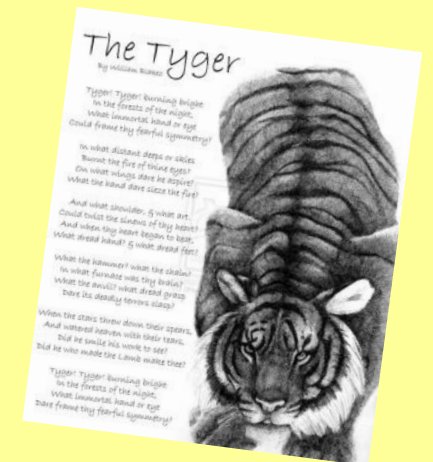
Books are sometimes narrated by an unreliable narrator e.g. the horse that tells the story in *Black Beauty*. Some books have multiple intertwined and apparently (for a time) unrelated plot lines. These are harder to read than books with a single plot line.

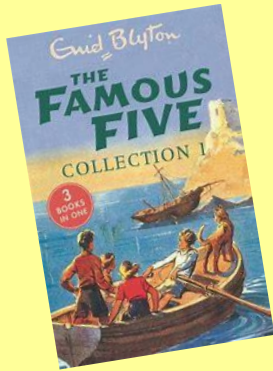
Figurative/Symbolic e.g. *The Lion, the Witch, and the Wardrobe*.

These texts happen on a symbolic level and offer complexity.

Resistant Text

These are texts written to deliberately resist easy meaning-making by readers. It requires the reader to assemble meaning around nuances, hints, uncertainties and clues.



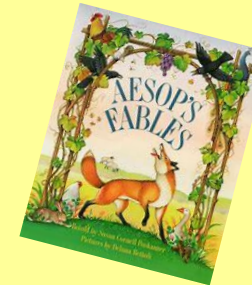


Reading at School



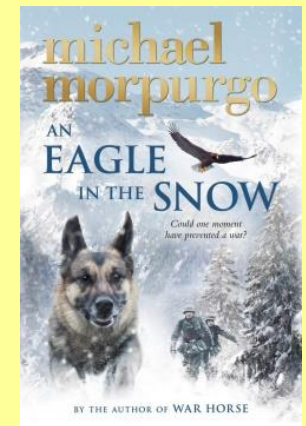
Archaic Language

The vocabulary, usage, syntax and context for cultural reference of texts over 50 or 100 years old are vastly different and typically more complex than texts written today. Students need to be exposed to and develop proficiency with antiquated forms of expression.



Non-Linear Time Sequences

Books where aspects of the narration are nuanced to create an exact image, time moves in fits and start. It often doubles back.



READ 15!

Reading challenge for **ALL** our learners at Whitehouse!

- Broaden our reading offer even further!
- Celebrate a wide range of genres and authors
- Encourage children to discover new interests/preferences
- Encourage children to identify with the books they read
- Learn to read for pleasure
- Read to learn
- Be inspired!



The words here are backwards. Try and read it aloud to yourself. This is to give you a sense of the process your child is going through now when decoding letters. Every bit of help we can give, at home and at school, is so important.

Reading at Home



**"Ti saw on derbhguoroht. Tub ti dah kcuts
ot sti tsop - ekilnu eht rehto step. Yeht dah
deraepasid nehwh eht elbuort nageb. Won
yeht erew no eht tops. Yeht erew deppart"**

Reading at Home



- 1) Colour Coded/Free reading book**
- 2) Read 15 book**
- 3) Library book**
- 4) Any other sources-comics, magazines, board game rules**

All should be discussed with an adult- this builds fluency and comprehension.

Home Learning

- **Reading frequency: 3-4 days a week, 15-20 minutes. Adult discussion really helps develop comprehension and fluency.**
- **(Discussion of the book can be in any language)**
- **Audiobooks are also available, there are plenty of free books available online. Start with YouTube if you are unsure, there are paid options available too.**

Home Learning

Handwriting

At Whitehouse Primary, we teach cursive handwriting using the Letterjoin script. Handwriting is regularly practised throughout the week in dedicated lessons, so the children are familiar with the correct letter formation. Any writing at home should be joined and parents can log onto the Letterjoin site to access resources and guidance using the following login details:

Username: lj3297

Password: home

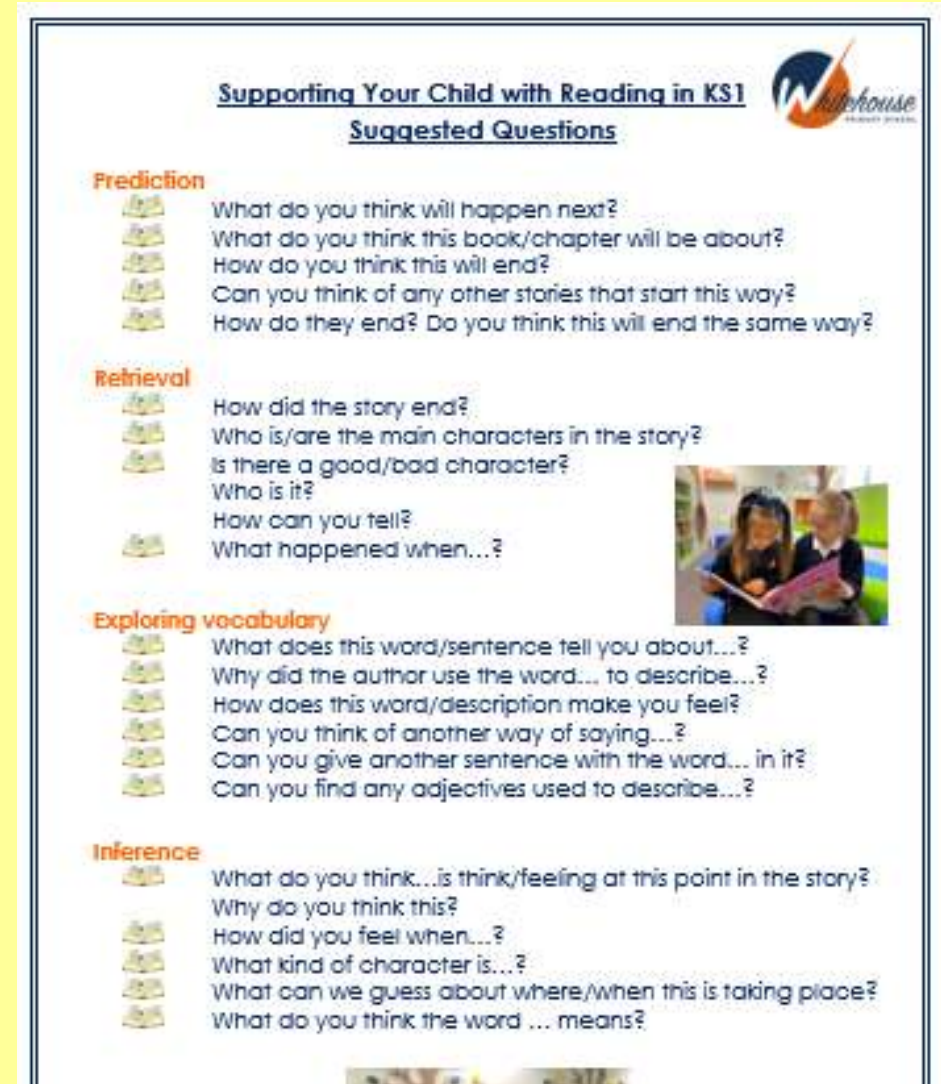
Home Learning

Spellings

Spelling Shed is another exciting online platform that helps the children to learn spelling patterns in a more engaging way. Every week, they will learn new spelling rules and words, building on their prior knowledge. They are then expected to practise these spellings via their assignment on the Spelling Shed app or website, ready for their weekly check where they will get the chance to test their knowledge. This practice should be 5-10 minutes, 3-4 times a week.

Other ways to support...

- Suggested question stems
- Free ebooks
- Spelling Shed
- Audiobooks online



Supporting Your Child with Reading in KS1
Suggested Questions

Prediction

- What do you think will happen next?
- What do you think this book/chapter will be about?
- How do you think this will end?
- Can you think of any other stories that start this way?
- How do they end? Do you think this will end the same way?

Retrieval


- How did the story end?
- Who is/are the main characters in the story?
- Is there a good/bad character?
Who is it?
- How can you tell?
- What happened when...?

Exploring vocabulary

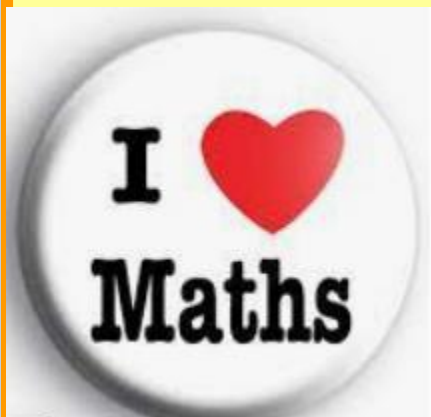
- What does this word/sentence tell you about...?
- Why did the author use the word... to describe...?
- How does this word/description make you feel?
- Can you think of another way of saying...?
- Can you give another sentence with the word... in it?
- Can you find any adjectives used to describe...?

Inference

- What do you think...is think/feeling at this point in the story?
Why do you think this?
- How did you feel when...?
- What kind of character is...?
- What can we guess about where/when this is taking place?
- What do you think the word ... means?



Aspire, Believe, Achieve... Together



Thank you for your support!

