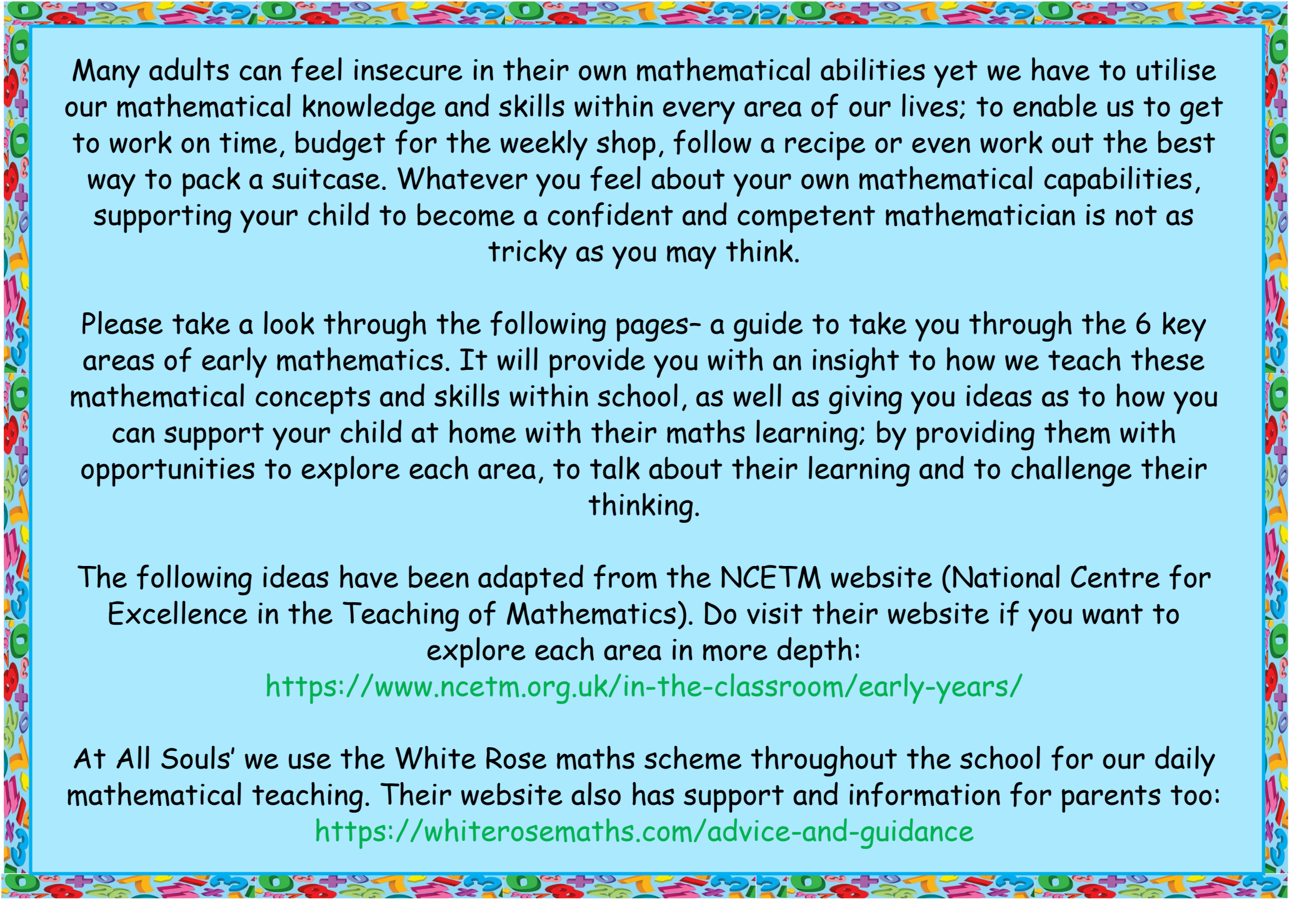




Early Maths

Support for parents/ carers of children in the Reception Class.





Many adults can feel insecure in their own mathematical abilities yet we have to utilise our mathematical knowledge and skills within every area of our lives; to enable us to get to work on time, budget for the weekly shop, follow a recipe or even work out the best way to pack a suitcase. Whatever you feel about your own mathematical capabilities, supporting your child to become a confident and competent mathematician is not as tricky as you may think.

Please take a look through the following pages- a guide to take you through the 6 key areas of early mathematics. It will provide you with an insight to how we teach these mathematical concepts and skills within school, as well as giving you ideas as to how you can support your child at home with their maths learning; by providing them with opportunities to explore each area, to talk about their learning and to challenge their thinking.

The following ideas have been adapted from the NCETM website (National Centre for Excellence in the Teaching of Mathematics). Do visit their website if you want to explore each area in more depth:

<https://www.ncetm.org.uk/in-the-classroom/early-years/>

At All Souls' we use the White Rose maths scheme throughout the school for our daily mathematical teaching. Their website also has support and information for parents too:

<https://whiterosemaths.com/advice-and-guidance>

Cardinality and Counting



Information adapted from NCETM website- <https://www.ncetm.org.uk/in-the-classroom/early-years/>

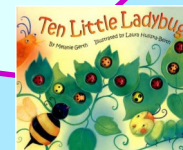
In this area we are supporting our children to become familiar with the value of each number or 'how much' each number represents. Children will say each number name to 5 (then 10 and beyond) in order, will 'tag' each object with a number name as they count and will know that the total number of objects in the group will be the final number they say—the cardinal number.



Support at home by...

Providing opportunities to count forwards and backwards e.g. through number rhymes and songs
<https://www.bbc.co.uk/teach/school-radio/nursery-rhymes-counting-songs/zn67kmn>

Sharing number books e.g. 10 little Ladybugs or looking for numerals in the environment (such as on doors or at the bus stop). Play board games, such as snakes and ladders, or target games to support number recognition too.

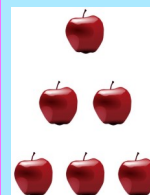


Playing estimation games with small quantities e.g. "How many conkers are in the pot?" then count to discover the actual amount.

Playing games using spotty dice and spotty dominoes to practice the skill of 'subitising' (knowing the value of a set without needing to count). Children will begin to recognise the pattern of the spots on the dice/ dominoes and their corresponding value.

Providing opportunities to count physical objects e.g. teddies on the bed and things that cannot be seen or touched e.g. counting claps.

Watch out for miscounting! Children may not say number names in the correct order or they may not give one number name to each object that is counted. Encourage your child to slow their counting down if needed.



Online games e.g. 'Underwater Counting' by TopMarks

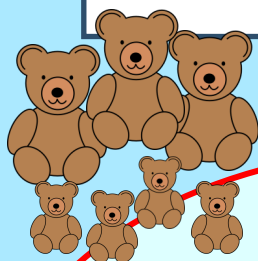
<https://www.topmarks.co.uk/learning-to-count/underwater-counting>

Comparison of number



Information adapted from NCETM website- <https://www.ncetm.org.uk/in-the-classroom/early-years/>

In this area we are supporting our children to know which numbers are worth 'more' or 'less' than each other. They will compare groups of physical objects to identify which group has 'more' or 'fewer' objects in it and recognise when the groups are 'equal'. They will begin to recognise that the numbers on the number line increase by 'one more' each time and, when counting down, the number value becomes 'one less'.



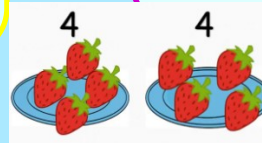
Providing opportunities to sort and compare a variety of things e.g. coloured leaves, big and small teddies.
Watch out for misunderstanding! Children can become focused on the size of objects rather than the actual number of objects when comparing, e.g. they may say 3 big teddies are "more" than 5 small teddies.

Support at home by...

Playing a target game e.g. skittles with a friend. Who knocked 'more' skittles down?



Exploring 'equal' groups. Can we spot when two plates have the same number of biscuits on them? If groups are not equal, explore how they can be made equal...
For example if there are 4 apples in a bowl and 2 apples in another bowl, how can we make the number of apples in each bowl equal? What can we do?

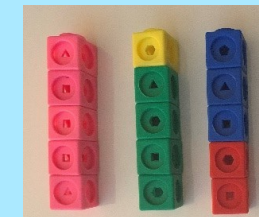


Providing opportunities to support your child's reasoning skills by encouraging them to compare numbers that are far apart, near to and next to each other on the number line, for example they may explain that "8 is a lot more than 2 because it is far away from 2 on the number line but 3 is only a little bit more than 2 because it is next to 2 on the number line".
Can your child use their understanding of number to explain 'unfair' sharing, e.g. stating that "That horse has 3 apples, that horse has 6 apples- that's not fair because 6 is more than 3".

Online games e.g. 'Mucky Monsters' by ictgames.com
<https://www.ictgames.com/mobilePage/muckyMonsters/>

Composition of Number

Information adapted from NCETM website- <https://www.ncetm.org.uk/in-the-classroom/early-years/>



In this area we are supporting our children to show an understanding of 'part-whole'. They will learn how larger numbers can be made up of two or more smaller numbers, for example '6' can be made with '4 and 2' or '3 and 3' or '2 and 2 and 1 and 1'. Using physical objects, children will begin to see these 'parts' as well as the 'whole' number at the same time and will learn to partition whole numbers into smaller parts and recombine these parts back into a whole- an important skill that will support their understanding of addition and subtraction as inverse operations.

Support at home by...



Providing opportunities to make different arrangements with familiar objects e.g. collect 5 pebbles and arrange them in different ways. What smaller groups can you see? Can you see a 4 or a 3?



Singing songs/ rhymes that explore partitioning e.g. 5 currant buns. At each point in the song explore how many have been taken away..how many are still in the shop... and how many buns there are altogether?

Watch BBC's Numberblocks on iPlayer for lots of number adventure fun!

<https://www.bbc.co.uk/iplayer/episodes/b08bzfnh/numberblocks>



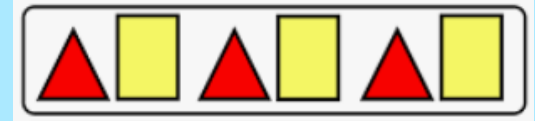
Playing 'hiding' games! Use a cardboard box or similar and find 5 toys. The adult hides some of the toys in the box. Explore and discuss...If we can still see 2 toys, can we work out how many toys are in the box?

Playing games and activities that enable your child to practise partitioning whole numbers into two parts e.g. finding different ways to park 6 toy cars in two car parks. If we park 4 cars in this car park, how many will park in the other car park? Enjoy a game of skittles. Set up 10 skittles and roll the ball—explore the number of skittles standing/ knocked down each time to find pairs of numbers that make 10.

Online games e.g. 'Save the Whale' number bond game by ictgames.com

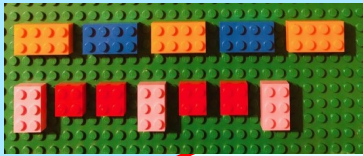
<https://www.ictgames.com/saveTheWhale/index.html>

Pattern



Information adapted from NCETM website- <https://www.ncetm.org.uk/in-the-classroom/early-years/>

In this area we are supporting our children to explore patterns that repeat. They will continue and copy simple repeating patterns (AB) e.g. red brick, yellow brick and create their own simple repeating patterns identifying the 'unit of repeat'. They will use their knowledge to 'spot the mistake' in a pattern made and explain why, then move on to explore more complex repeating patterns (ABC or ABBC) and challenges.



Providing opportunities to create patterns with different objects e.g. lego bricks, cutlery, toy animals, fruit, stickers.

Have fun making patterns with sounds and actions too. Can you create a dance with a repeating pattern such as stamp, stamp, clap...stamp, stamp, clap?

Support at home by...

Learning about pattern with Milo the Monster on YouTube:

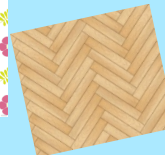
Remember internet safety- always supervise your child when using the internet.

https://www.youtube.com/watch?v=fo5cjd15_5s



Making musical patterns together. Use shakers, triangles, drums, bells etc.. And take turns to create a musical pattern for a family member to continue.

Looking for repeated patterns in the environment. Ask "What would come next?"



Making a 'spot the mistake' game.

Start by creating a simple pattern e.g. book, pencil, book, pencil, book, pencil.

Now change one of the items to make a 'mistake' e.g.

Book, pencil, book, pencil, hedgehog, pencil.

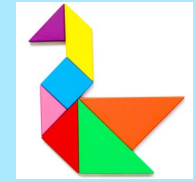
Encourage your child to point out what the mistake is and explain how they know.



Online games e.g. 'Biscuit Patterns' by FUSE Education

<https://fuse.education.vic.gov.au/Resource/LandingPage?objectId=7a342439-3181-415c-acf1-9873bef4e207>

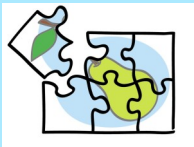
Shape and Space



Information adapted from NCETM website- <https://www.ncetm.org.uk/in-the-classroom/early-years/>

In this area we are supporting our children to become familiar with the vocabulary linked to simple shapes and their properties as well as developing spatial awareness. They will explore how shapes can be turned and manipulated through creating pictures with shapes, constructing models and completing jigsaws. They will use positional and directional language such as 'behind' or 'forwards' and identify similarities between shapes. As they become more confident in their understanding of shape, children will begin to spot shapes within shapes and explore what happens when, for example a rectangle shape is folded in half.

Support at home by...

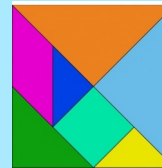


Enjoying jigsaws and construction games where pieces need to be turned in order to fit accurately. Challenge your child to think about the shapes they need or would be best when, for example, constructing an insect house. Can they find the train track pieces needed to create a complete circle?



Going on a shape hunt in the local environment or making different shapes with twigs and sticks. Try printing with 3d shapes- what 2d shapes do you recognise when you print with each face?

Trying out a 'tangram' puzzle. What pictures can you create?



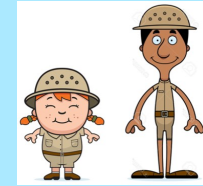
Playing games and activities that encourage your child to use positional language e.g. 'on top of', 'next to', 'behind', 'in front of', 'in', 'on', 'under'. You could play a game of 'hide the teddy' or talk about where different objects are in the dolls house or farm set.

Playing games and activities that encourage the use of directional language. Grown-ups: It is your role to introduce and reinforce the language of 'along', 'past', 'across', 'through', 'over', 'under', 'around', 'forwards', 'backwards', 'right', 'left'. Suggestions include...riding a scooter in the park, creating obstacle courses, making treasure maps or directing a remote controlled car along a route.



Online games e.g. 'Geo Board' by maths learning centre
<https://apps.mathlearningcenter.org/geoboard/>

Measures



Information adapted from NCETM website- <https://www.ncetm.org.uk/in-the-classroom/early-years/>

In this area we are supporting our children to explore the different attributes of objects; length, height, weight and capacity. They will compare objects by direct comparison, for example holding two pencils side by side to identify which is 'longest'. They will understand that the amount stays the same even if the appearance is altered (for example if playdough is stretched out or rolled into small balls). They will explore how two objects can be compared using a third item such as a stick and begin to use non-standard units, for example unifix cubes, when measuring to enable a numerical value to be recorded.

Support at home by...



Providing opportunities to introduce specific vocabulary related to measures. Encourage your child to use words such as 'longer' 'taller' 'wider' rather than general vocabulary such as 'big' and 'little'. Sand and water play, as well as using playdough, are excellent ways to do this. Ask your child questions as they explore e.g. "Whose snake is the longest?"

Trying out sequencing activities to support your child's understanding and use of the language of time such as.. 'before', 'now', 'next'. You could make a picture timetable of activities you will do during the day e.g. "Now it is lunch. Next we will go to the shops and after that we will go to the park."

Set a 1 min timer on the phone. How many blocks can you stack in just one minute?

Going on a scavenger hunt. How many things can we find to fit in a matchbox?



Creating 'odd one out' games which focus on a particular attribute. For example, make 4 towers with bricks. Can your child say which is the odd one out and why? E.g. "That tower is the odd one out because it is short, the others are all tall."

Playing games and activities that enable your child to practise their reasoning skills based on measures, for example...Can we pack the shopping bag making sure the lighter things do not get squashed by the heavier things? Can we construct a bed for teddy with the wooden blocks- how will we know that teddy will fit? Use digital scales to measure out ingredients when cooking or work out how to make a paper crown that will fit perfectly on your head.



Online games e.g. 'Let's compare' on the TopMarks site
<https://www.topmarks.co.uk/early-years/lets-compare>

