| Autumn term 1 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Getting to know you |  | Just like me |  |  |  |  |
|  |  | Match | Sort | Compare amounts | Compare size, mass, capacity | Simple patterns |
| Opportunities for settling in, introducing the areas of provision and geting to know the children. |  | Provide opportunities for the children to explore and match objects which are the same. <br> Can you find one exactly like mine? How do you know it's the same? Can you find one different to mine? Why is this one not like mine? | Children learn that collections can be sorted into sets based on attributes such as colour, size or shape. Sorting enables the children to consider what is the same about all the objects in one set and how they are different to the other sets. They begin to understand that the same collection of objects can be sorted in different ways | Once children can confidently sort collections into sets they learn that these sets can be compared and ordered. They understand that when making comparisons a set can have more, the same or fewer than another set. NOTE - it is easier for children to notice the difference between sets when the difference is greater. Start by asking the children to compare 2 and 5 rather than 5 and 6 | Children learn that objects can be compared and ordered according to their size. Encourage the use of language such as big and little, small and large to describe a range of objects. More specific language such as tall, long, short can also be introduced. | Children copy, continue and create their own patterns. It is important to provide patterns with at least three full units of repeat. Encourage the children to say the pattern out loud |
|  |  | Noah's Ark <br> Monkey Puzzle by JD <br> Snap games and cards | The Button Box M Reid Frog and Toad - A Lost Button Arnold Lobel | A squash and a squeeze - JD <br> Seaweed soup - Stuart J <br> Murphy <br> The enormous turnip | Where's my Teddy? - Jez <br> Alborough <br> It's the Bear - Jez Alborough <br> Dear Zoo - Rod Cambell <br> A new house for mouse - Petr <br> Horacek <br> Mr Big - Ed Vere <br> My cat likes to hide in boxes - <br> Eve Sutton | In and out the dusty bluebells Tongue twisters - Red lorry, yellow lorry |


| Autumn term 2 |  |  |
| :---: | :---: | :---: |
| 1 | 2 | 3 |
| It's me 1, 2, 3! |  |  |
| Representing 1,2,3 | Comparing 1,2,3 Circles and triangles | Composition of 1,2,3 Spatial awareness |
| Children identify, representations of 1,2,3. <br> They subitise or count to find out how many and make their own collections of 1,2 and 3 objects. <br> They match the number names we say to numerals and quantities. <br> They count up to 3 objects in different arrangements by touching each object as they count and recognise that the final number they say names the set. <br> They use their own mark making to represent 1,2 and 3 | Children begin to understand that as we count, each number is one more. Similarly, as we count back, each number is one less than the previous number. <br> Circles and triangles <br> Children learn that circles have 1 curved side and that triangles have 3 straight sides. <br> They begin to recognise these shapes on everyday items in the classroom and outside. <br> Encourage the children to build their own circles and triangles. <br> It is important to show circles and triangles in a variety of different shapes and sizes and orientations and sides of different lengths | Introduce the children to the idea that all numbers are made up of smaller numbers. <br> Allow them to explore and notice the different compositions of 2 and 3 , for example 3 can be composed of 1 and 1 and 1 or 2 and 1 or 1 and 2 . <br> Spatial awareness <br> Children hear and begin to use positional language to describe how items are positioned in relation to other items. <br> They build life-sized journeys outdoors and travel through them, exploring them from different perspectives. They begin to represent real places they have visited or places in stories with their models, drawings or maps. |
| S1 Episodes 1 (One) | S1 Episodes 2 (Another One) S1 Episodes 3 (Two) | S1 Episodes 4 (Three) |
| Circle 1 on the clock 1p | 2 on the clock <br> 2 step repeating patterns $2 p$ | Triangles <br> 3 on the clock, Making 3p <br> 3 step repeating patterns |
| Hickory Dickory Dock 123 at the zoo - Eric Carle <br> I'm number one - Michael Rosen One Bear at bedtime - Mick Inkpen | The three bears The three little pigs <br> The little bear and the wish fish - Debi Gliori <br> When Goldilocks went to the house of the bears song <br> Pink Tiara cookies for three - Maria Dismondy | The Three Billy Boats Gruff Number Farm - Stephen Holmes |

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## Autumn term 2 Contd

| 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: |
| Light and Dark |  |  |  |
| Four <br> Shapes with 4 sides | Five | One more and one less | Night and day |
| Children count on and back to 4. <br> They count and subitise sets of up to 4 objects to find out how many and make their own collections. <br> They match the number names to numerals and quantities and are able to say which sets have more and which have fewer items. <br> When counting they continue to learn that the final number they the names the | Children continue to subitise up to 5 items and to count forwards and backwards using the counting principles. They represent up to 5 objects on a 5 frame and understand that if the frame is full then there are 5. | Children continue to count, subitise and compare as they explore 1 more and 1 less. <br> Encourage children to use a five frame to represent numbers and to predict how many there will be if they add 1 more or take 1 away. <br> Prompt children to see the link between counting forwards and the one more pattern and counting backwards and the | Children talk about night and day and order key events in their daily routines. They use language to describe when events happen e.g. day, night, morning, afternoon, before, after, today, tomorrow. <br> Children begin to measure time in simple ways e.g. counting the number of sleeps until an important event or using timers to measure durations of events. |

They use their own mark making to represent numbers to 4.

## Shapes with 4 sides

Children learn that squares and rectangles have 4 straight sides and 4 corners.
They begin to recognise these shapes on everyday items in the classroom and outside.
Encourage the children to build their own squares and rectangles.
It is important to show squares and rectangles in a variety of different shapes and sizes and orientations

| S1 Episode 6 (Four) <br> S1 Episode 8 (Three Little Pigs) | S1 Episodes 7(Five) <br> S1 Episodes 9 (Off We Go!) <br> S1 Episodes11(Stampolines) | S1 Episode 10(How to Count) <br> S1 Episode 15(Hide \& Seek) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Quadrilaterals | Pentagons |  |

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| 4 on the clock |
| :--- |
| Pete the cat and his 4 groovy buttons - |
| Eric Litwin |
| Witches four0 Mark Brown |
| Washing line - Jez Alborough |
| Anno's counting book - Mitsumasa Anno |
| Shapes with 4 sides |
| Square - Mac Barnett and Jon Klassen |
| Mr Strong - Roger Hargreaves |
| Bear in a square - Della Blackstone |

Square - Mac Barnett and Jon Klassen
Mr Strong - Roger Hargreaves
Bear in a square - Della Blackstone

Fox in the dark - Alison Green
The gingerbread man
The enormous turnip
The very hungry caterpillar
Stella to Earth - Simon Puttock
5 speckled frogs
5 currant buns
5 little ducks

Peace at last - Jill Murphy
Kipper's monster - Mick Inkpen
Day monkey, nught monkey - Julia
Donaldson
The dark, dark tale - Ruth Brown
Funnybones - Janet \& Allen Allberg
Days of the week song

| Spring term 1 |  |  |
| :---: | :---: | :---: |
| 1 | 2 | 3 |
| Alive in 5 |  |  |
| Introducing zero | Comparing numbers to 5 | Composition of 4 \& 5 |
| The children will already have some practical understanding of 'nothing there' or 'all gone'. Here, they learn that the number name zero and the numeral 0 can be used to represent this idea. <br> The children should be given opportunities to apply this understanding within the classroom. E.g. There are 0 children playing in the sand. Number songs which count back help to develop the understanding that 0 is one less than one | Children continue to understand that when comparing numbers, one quantity can be more than, the same as or fewer than another quantity <br> Use a range of representations to support this understanding and encourage the children to compare quantities using a variety of objects and representations. Support the children to make comparisons in different contexts as they play. <br> Compare mass <br> Children may already have some experience of weight through carrying heavy and light items. <br> Encourage them to make direct comparisons holding items to estimate which feels the heaviest then use scales to check. Prompt them to use the language of heavy, heavier then, heaviest, light, lighter than, lightest to compare items starting with items which have an obvious difference in weight. Avoid the common misconception that bigger items are always heavier by providing some small heavier items and some large lighter ones. | Children will continue to develop the understanding that all numbers are made up of smaller numbers. <br> Allow them to explore and notice the different compositions of 4 and 5 . For example 5 can be composed of 1 and 1 and 3 or 2 and 3 or 1 and 4 . <br> Compare capacity <br> Encourage children to build on their understanding of full and empty to show half full, nearly full and nearly empty. Provide opportunities to explore capacity using different materials such as sand, water, rice and beads. Provide different shaped containers to investigate. Prompt them to use the language of tall, thin, narrow, wide and shallow. <br> Encourage the children to make direct comparisons by pouring from one container into another. They can also use small post or ladles to make indirect comparisons by counting how many pots it takes to fill each container |

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Spring term 1 Contd

| 4 | 5 | 6 |
| :---: | :---: | :---: |
| Growing 6,7,8 |  |  |
| 6,7 \& 8 | Making pairs | Combining 2 groups |
| Children continue to apply the accounting principles and counting to 6,7 and 8 they represent 6,7 and 8 in different ways and can count out the required number of objects from a larger group arranging 6, 7 or 8 items into smaller groups or support the children to conceptually subitise and see how the numbers are made up of smaller numbers <br> E.g. I know it is eight because I see four and four encourage the children to order and compare their representations noticing one more less patterns as they count on and back to 8 | Children build on their earlier work and matching to find and make pairs they begin to understand that a pair is to provide collections of items which come in pairs encourage the children to arrange a small quantity into pairs and noticed that some quantities will have an odd one leftover was no partner teach the children to play games which involve matching pairs for example snap on memory games <br> Length and height <br> Children begin by using language to describe length and height e.g. the tree still definitely short making direct comparisons they may initially say something is bigger than something else increase in which is more specific mathematical vocabulary relating to length longer shorter height taller shorter and breath my dinner I will encourage the children to making direct comparisons using objects such as block so cubes to measure items e.g. this Andres for blacks long the table is five blocks along the sand tray shorter than the table | Children begin to combine 2 groups to find how many altogether. <br> They should be given opportunities to do this in many contexts using real objects. E.g. There are 3 frogs on the log and 4 in the pool. How many frogs altogether? <br> Encourage the children to subitise where possible although they may need to count in ones to find how many altogether. <br> The interactive whiteboard files can also be used to create pictorial scenes for the children to discuss. <br> Time <br> Children continue to order and sequence important times in the day and use language is such is now before later soon after and then and next to describe when events happen they begin to recognise that regular events happened on the same day each week and use the vocabulary yesterday today and tomorrow to describe on events happen children are able to describe significant events in their lives and talk about events they are looking forward to the left to their own experiences in the stories they read that some processes such as growing vegetables take a longer time |

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## FS2 White Rose Maths LTP



| Spring term 2 |  |  |
| :---: | :---: | :---: |
| 1 | 2 | 3 |
| Building 9,10 |  |  |
| 9 \& 10 | Comparing numbers to 10 | Bonds to 10 |
| Children continue to reply accounting principles and counting to 9 and 10 forwards and backwards they represent nine and 10 in different ways arranging nine or 10 items into small groups will support the children to conceptually subitise these large numbers and explore their composition e.g. I know it's nine because I see three and three and three children noticed a 10 frames film and there is 10 I can use 10 frames fingers and bits of string to subtypes groups and nine and 10 | Children continue to make comparisons by lining items up with one-to-one correspondence to compare them directly or by counting each set carefully and comparing their position in accounting order as children sense of number develops so does analogy of where each number six in relation to the other numbers they understand that when making comparisons a second I'm more items for your items are the same number of items is another set they begin by comparing to quantities and progress to ordering three or more quantities <br> 3d shape <br> Children will naturally exploring manipulate 3-D shapes through their black plate and modelling prompt them to consider which shape stack and which shapes role and why that is. They should be given opportunities to build using a variety of shapes and construct and 3-D shapes in different ways children can be introduced to the names of the shapes and be given the opportunities to explore similarities and differences between them as they play and to sort them according to what they notice | The children explore number bonds to 10 using real objects in different concept contexts e.g. there are 10 apples how many in the tree and how many on the ground 10 frames or egg boxes with 10 holes can be partially filled with objects and the children asked how many more do we need to make a full 10 other manipulatives such as fingers beads and strings and number shapes I will see useful for exploring bonds to 10 <br> Pattern <br> Build on the children's earlier a B pattern work by introducing more complex patterns the children explore patterns which use the terms items more than once in each repeat for example $A B B A A B$ <br> Again it is important that each pattern new model has at least 34 units of repeat the more units of repeat the easier it is to identify and continue the pattern encourage the children to sage pattern aloud and create patterns around the edges of shapes as well as in straight lines |



| Summer term 1 |  |  |  |
| :---: | :---: | :---: | :---: |
| 1 | - | 2 | 3 |
| To 20 and beyond |  |  |  |
| Building numbers beyond 10 | Counting patterns beyond 10 |  | Spatial reasoning - Match, rotate, manipulate |
| Encourage the children to build and identify numbers to 20 (and beyond) using a range of resources. 10 frames, number shapes, towers of cubes, rekenreks and bead strings all support the children to see that larger numbers are composed of full 10s and part of the next 10 Provide opportunities for children to recognise that the numbers 1-9 repeat after every full 10 . So they have 1 full ten and 1,1 full ten and 2. 1 full ten and 3 etc. Then 2 full tens and 1,2 full tens and 2, 2 full tens and 3 and so on | Provide regular opportu and back beyond 10 rep support children to coun repeating 1 to 9 pattern which clearly show the example 14 is wonderfu children to count on or points to say what com number and to play seq you can also change and number tracks and 100 | for children to count on entations in numerals can and back and noticed the ovide representations ens and part of 10 for and four encourage the from different starting fore or after a given ces are numbers in order nd larger numbers and ares | Provide regular opportunities for the children to complete jigsaws and shape puzzles They need opportunities to select and rotate shapes to fella given space inclusion to explain why they chose a particular shape of my different shape wouldn't fit provide opportunities for the children to match arrangements of shapes prompting to use positional language to describe where the shapes are in relation to one another ask the children select shapes to complete picture boards or tangram outlines |
| S4 Episode 6 eleven S4 Episode 11 thirteen <br> S4 Episode 7 twelve S4 Episode 12 fourteen <br>  S4 Episode 13 fifteen | S5 Episode 5 sixteen S5 Episode 7 seventeen S5 Episode 8 eighteen | S5 Episode 10 nineteen S5 Episode 11 twenty |  |
| 11 and 12 on the clock <br> 24 hour clock <br> Toes, Fingers 10p 20p |  |  |  |
| One Moose, 20 mice - Stella Blackstone 1 is one - Tasha Tudor <br> The Real Princess - Brenda Williams Jack the Builder - Stuart J Murphy | A Dozen Ducklings Lost 20 Big Trucks in the Mi 1 is a Snail, 10 is a Crab Peg + Cat The T | Found - Harriet Ziefert of the Street - Mark Lee April Sayre \& Jeff Sayre | A Journey Through Modern Art - Jo Saxton Which One Doesn't Belong - Christopher Danielson Jigsaws and shape puzzles \& Tangrams Pattern blocks, Cuisenaire rods, Geo boards Numicon and base board overlays |


| 4 | 5 | 6 |
| :---: | :---: | :---: |
| First, then now |  |  |
| Adding more | Taking away | Spatial reasoning - Compose and decompose |
| The children will use real objects to see that the quantity of a group can be changed by adding more, The first, then, now structure can be used to create mathematical stones in meaningful contexts. <br> At first, the children may need to re-count all of the items to see how many they have altogether, $\mathrm{Eg} 1,2$, 3, 4. 5, 6,7 <br> When they are ready, support them to count on E.g, 4... 5, 6,7 <br> Encourage the children to represent the number stories using 10 frames, number tracks and their fingers. | The children use real objects to see that the quantity of a group can be changed by taking items away. The first, then, now structure can again be used to create mathematical stories in meaningful contexts. Encourage the children to count out all of the items at the start take away the required about practically and then subitise or recount see how many are left. Continue to encourage the children to represent them on the stories using 10 frames, number tracks and their fingers. | Children understand that shapes can be combined and separated to make new shapes, <br> Provide opportunities for the children to fit shapes together and break shapes apart and to notice the new shapes they have created. <br> Investigate how many different ways a given shape can be built using smaller shapes. <br> Encourage the children to explore the different shapes they can make by combining a set of given shapes in different ways. |
| S2 Episode 12 Fluffies <br> S2 Episode 13 the Two Tree <br> S3 Episode 3 The Numberblocks Express | S3 Episode 11 What's the Difference S3 Episode 12 Numberblocks Rally |  |
| Mouse Count - Ellen Stoll Walsh <br> Mr Gumpy's Outing - John Burningham <br> Rosie's Zoo - Ailie Busby <br> One Ted Falls Out of Bed - Julia Donaldson <br> Quack and Count - Keith Baker <br> My Granny Went to Market - Stella Blackstone | Other Resources <br> Incey Wincey Spider game - Nrich <br> Tad - Benji Davis <br> Mouse Count - Ellen Stoll Walsh <br> The Shopping Basket <br> John Burning/ham <br> Monster Math - Anne Miranda <br> Elevator Magic - Stuart J Murphy | Grandpa's Quilt - Betsy Franco <br> Jack and the Flumflum Tree - Julia Donaldson <br> Pezzettino - Neo Lionni <br> Shape puzzles \& Tangrams <br> Pattern blocks \& Cuisenaire rods |


| Summer term 2 |  |  |
| :---: | :---: | :---: |
| 1 | 2 | 3 |
| Find my pattern |  |  |
| Doubling | Sharing and grouping | Spatial Reasoning - Visualise and Build |
| The children will learn that double means twice as many. <br> They should be given opportunities to build doubles using real objects and mathematical equipment. Building numbers using the pair- wise patterns on 10 frames helps the children to see the doubles. Mirrors and barrier garnes are a fun way for children to see doubles as they build and to explore early symmetry, <br> Encourage children to say the doubles as they build them, e.g. Double 2 is 4 <br> Provide examples of doubles and non-doubles for the children to sort and explain why | The children will probably already have some experience of sharing and will be quick to point out when items are not shared fairly, <br> During snack time or group activities, encourage them to check that the items are shared equally and that everyone has the same. <br> The children should also be given opportunities to recognise and make equal groups. <br> For example can you put 3 crackers on each plate or plant 2 flowers into each pot. What groups do they notice on a bead string? <br> The children will notice that sometimes there are items left over when they share or group. Encourage them to come up with their own suggestions for how to resolve this. <br> Odd and Even <br> The children begin to understand that some quantities will share equally into 2 groups and some won't. <br> They may also notice that some quantities can be grouped into pairs and some will have one left over. <br> Provide opportunities for them to explore these ideas in different contexts as they play and to talk about what they notice. <br> Encourage the children to notice the odd and even structure on the number shapes and by building pair-wise patterns on the 10 frames. | Children understand that places and models can be replicated and need to experience looking at these from different positions. Provide opportunities for children to replicate simple constructions, models, real places and places in stories. <br> Prompt them to use positional language to describe where objects are in relation to other items. The Use of gesture to accompany the positional language can also support understanding. <br> Encourage children to visualise simple models by playing barrier games and providing verbal instructions for them to follow as they build. |
| S2 Episode 9 double trouble (doubling and halving) | S6 Episode 3 Lair of Shares |  |
| Specials double back - (doubling numbers) | S2 Episode 11 odd and even |  |

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Double Trouble - Nrich
This is the Story of Alison Hubble - Allan Ahlberg
Two of Everything - Lilly Hong
Double Dave - Sue Hendra
Double the Ducks - Stuart J Murphy

The Doorbell Rang - Pat Hutchins Nrich- Maths Story Time
The Gingerbread Man - Traditional
Bean Thirteen - Matthew McElligott
One Hungry Cat - Joanne Rocklin
Ness the Nurse - Nick Sharratt
One Odd Dav - Doris Fisher
Pete the Cat and the Missing Cupcakes - James Dean
Underwater Counting - Jerry Pallotta
10 Fat Sausages song

Rosie's Walk - Pat Hutchins
What the Ladybird Heard - Julia Donaldson We're Going on a Bear Hunt - Michael Rosen Mr Gumpy's Motor Car - John Burningham Cockatoos - Quentin Blake

Summer term 2 Contd

| 4 | 5 | 6 |
| :---: | :---: | :---: |
| On the Move |  |  |
| Deepening Understanding | Patterns \& Relationships | Spatial Reasoning - Mapping |
| Children need time and opportunities to engage in extended problem solving and develop their critical thinking skills. <br> These problems can be linked to familiar stories or come from the children's suggestions or real problems that arise as they play. <br> Encourage the children to discuss different possible starting points. <br> Children might need support to carry out their plans and to make adaptations as they go along. Afterwards, encourage the children to review and discuss their strategies. Which were the most successful, which didn't work and why? | Children should be given opportunities to explore and investigate relationships between numbers and shapes. Classroom resources based around a standard unit such as Cuisenaire rods, pattern blocks and the unit construction blocks are particularly good for exploring these relationships. <br> Children should also continue to copy, continue and create a widening range of repeating patterns and symmetrical constructions. <br> Draw children's attention to patterns in stories from a range of cultures. | The children understand that we can make maps and plans to represent places and use these to see where things are in relation to other things. <br> Provide a range of maps and plans for the children to look at and discuss. What can they see on the map? Where would we put the carpet area on a map of our classroom? Provide opportunities for them to create their own maps to represent the models they build, familiar places and places in stories. |
| S 6 Episode 7 We're Going on a Square Hunt |  |  |
| Mr Gumpy's Outing - John Burningham Billy's Bucket - Kes Gray Harry and his Bucketful of Dinosaurs - Ian Whybrow Who Sank the Boat - Pamela Allen Mr Archimede's Bath - Pamela Allen | Ants Rule The Long and Short of it - Bob Barner <br> Pattern Fish - Trudy Harris <br> Pattern Bugs - Trudy Harris <br> The Leopard's Drum - Jessica Souhami <br> Jamil's Clever Cat - Fiona French | The Secret Path - Nick Butterworth Me on the Map - Joan Sweeney Little Red Riding Hood - Traditional If1 Built a House - Chris Van Dusen In Every House on Every Street - Jess Hitchman Once Upon a Time Map Book - B.G. Henness |

