Reception Long Term Map


## Autumn book list

These books are within the White Rose Maths Reception schemes of learning.
They are not an exclusive but support the learning in each step.

## Block 1 - Match, sort and compare

- A Pair of Socks by Stuart J. Murphy
- Seaweed Soup by Stuart J. Murphy
- The Button Box by Margarette S. Reid
- Beep Beep, Vroom Vroom! by Stuart J. Murphy


## Block 2 - Talk about measure and pattern

- Where's My Teddy? by Jez Alborough
- It's the Bear! by Jez Alborough
- The Blue Balloon by Mick Inkpen
- Dear Zoo by Rod Campbell
- My First Book of Patterns by Bobby and June George
- We're Going on a Bear Hunt by Michael Rosen
- A-B-A-B-A - A Book of Pattern Play by Brian P. Cleary


## Block 3-It's me 1, 2, 3

- Anno's Counting Book by Mitsumasa Anno
- How to Count to One by Casper Salmon
- Goldilocks and the Three Bears
- The Gingerbread Man
- A Squash and a Squeeze by Julia Donaldson
- The Three Billy Goats Gruff


## Block 4-Circles and triangles

- Circle, Triangle, Elephant! A Book of Shapes and Surprises by Kenji Oikawa and Mayuko Takeuchi
- Triangle by Mac Barnett and Jon Klassen
- Shapes, Shapes, Shapes by Tana Hoban
- We're Going on a Bear Hunt by Michael Rosen
- Rosie's Walk by Pat Hutchins


## Block 5 - 1, 2, 3, 4, 5

- Witches Four by Marc Brown
- Five Little Fiends by Sarah Dyer
- Pete the Cat and his Four Groovy Buttons by Eric Litwin
- Kipper's Birthday by Mick Inkpen
- The Very Hungry Caterpillar by Eric Carle
- Stella to Earth! by Simon Puttock and Philip Hopman
- Anno's Counting Book by Mitsumasa Anno


## Block 6 - Shapes with 4 sides

- Bear in a Square by Stella Blackstone
- Square by Mac Barnett and Jon Klassen
- Shapes, Shapes, Shapes by Tana Hoban
- Night Monkey, Day Monkey by Julia Donaldson
- The Fox in the Dark by Alison Green

| White Rose Steps |  |  |
| :---: | :---: | :---: |
| Match, sort and compare | Rationale | What could this look like? |
| Step 1 <br> Match objects | Matching is a simple form of sorting and is the beginning of logical thinking. Through matching, children learn one-to-one correspondence. | Point out to children where objects such as water bottles or book bags belong around the classroom to help with routines of the day. |
| Step 2 <br> Match pictures and objects | Matching is a simple form of sorting and is the beginning of logical thinking. Through matching, children learn one-to-one correspondence. Matching objects to pictures develops children's understanding that objects can be represented by pictures. | At tidy-up time, encourage children to match resources to pictures to ensure that they are put away in the correct place. Where does this belong? |
| Step 3 <br> Identify a se $\dagger$ | Identifying and making sets is a precursor to counting. Children need this for the basis of the counting principles of cardinality and one-to-one correspondence. | Task children to pack a lunch box so that everyone has a lunch consisting of the same set of items. Children should ensure that each lunch box has a sandwich, a drink and a piece of fruit. Present children with an incorrect lunch box. Why is this set wrong? What do we need to do to make it right? |
| Step 4 <br> Sort objects to a type | When children sort objects, they are learning that some things are alike, and some are different. Early experiences of sorting objects into groups according to their similarities helps children to learn how to categorise and is a precursor to classifying. | Mix up some resources in a continuous provision area. For example, muddle up the farm animals with the wild animals. Ask children to help sort the different objects and put them back into the correct box or place on the shelf. |
| Step 5 <br> Explore sorting techniques | Links to the curriculum <br> Birth to 5 Matters - Range 6 - Spots patterns in the environment, beginning to identify the pattern "rule". | When lining up during the day, ask children to join the line depending on different attributes, for example, line up if you have a sister. |
| Step 6 Create sorting rules | Links to the curriculum <br> Birth to 5 Matters - Range 6 - Spots patterns in the environment, beginning to identify the pattern "rule". | With children, redesign an area of the classroom. Encourage children to come up with different rules for the specific area, for example the mark-making area. How could we sort the pencils and pens? What will the rule be? Encourage children to reason and explain why the objects are sorted in that way. |
| Step 7 <br> Compare amounts | Links to the curriculum <br> Development Matters - Reception - Compare numbers. Birth to 5 Matters - Range 5 Compares two small groups of up to five | In pairs, children grab a handful of objects, such as cubes, beads or conkers. Can your partner hold more than you, fewer than you or the same amount as you? Support children to line up their objects, with one line underneath the other. |

End of block checkpoint

## Checkpoint 1

The box that the buttons are stored in has been dropped.

There are buttons everywhere.
Ask children to sort the buttons and put them back in the box in sets.


Observe children as they sort the buttons.
Can they explain how they have sorted them?
Can they find another way to sort them?
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| Talk about Measure and Pattern | Rationale | What could this look like? |
| :---: | :---: | :---: |
| Step 1 Compare size | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds Make comparisons between objects relating to size, length, weight and capacity. <br> Birth to 5 Matters - Range 4 - Explores differences in size, length, weight and capacity. | Build in the construction area using a variety of large, small, long and short blocks. Encourage children to make big houses, little houses, tall towers and short towers. Ask children what size of animal or person could live in their house or tower |
| Step 2 <br> Compare mass | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds Make comparisons between objects relating to size, length, weight and capacity. <br> Birth to 5 Matters - Range 5 - In meaningful contexts, finds the longer or shorter, heavier or lighter and morel less full of two items. | Wrap up a range of boxes, each with a different mass. Ensure that some of the small boxes are heavy and some of the large boxes are light. Pick up a box and ask children to predict if it will be heavy or light. Ask them to test their predictions using a balance scale. Are all small boxes light? |
| Step 3 <br> Compare capacity | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds Make comparisons between objects relating to size, length, weight and capacity. <br> Birth to 5 Matters - Range 5 - In meaningful contexts, finds the longer or shorter, heavier or lighter and morel less full of two items. | Have a range of different boxes including some small, large, tall and thin. Show children one of the boxes and ask what could be inside. Could they fit in the box? Why or why not? Present a range of objects from around the classroom. Could these objects fit in the box? |
| Step 4 <br> Explore simple patterns | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds Talk about and identify the patterns around them. <br> Birth to 5 Matters - Range 5 - Explores and adds to simple linear patterns of two or three repeating items. | Demonstrate simple action patterns for children to copy. jump, clap, jump, clap, jump, clap <br> hands up, hands down, hands up, hands down, hands up, hands down <br> Say the pattern aloud and encourage children to join in. |
| Step 5 <br> Copy and continue simple patterns | Links to the curriculum Development Matters - Reception - Continue, copy and create repeating patterns. | Show children a range of $A B$ patterns in images and with real-life objects. Encourage children to say what they see. Prompt children |

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\begin{array}{|l|l|l|}\hline & \begin{array}{l}\text { Birth to } 5 \text { Matters - Range } 5 \text { Explores and } \\
\text { adds to simple linear patterns of two or } \\
\text { three repeating items. Joins in with simple } \\
\text { patterns in sounds, objects, games and } \\
\text { stories, dance and movement, predicting } \\
\text { what comes next. }\end{array} & \begin{array}{l}\text { to carry on the pattern and encourage them to say what would come } \\
\text { next }\end{array}
$$ <br>
Provide children with a range of musical instruments. Use a drum <br>
or tambourine to tap out a simple beat, for example: tap, shake. <br>
Encourage children to copy the beat after you. Pick different <br>
children to be the leader and allow them to tap out a simple beat <br>

for the rest of the class to copy and follow\end{array}\right]\)| Provide a selection of fruit cut into small pieces, such as bananas |
| :--- |
| and strawberries. Encourage children to make an edible repeating |
| ptep 6 |
| Create simple patterns and prompt them to describe the pattern before they eat |
| their snack. This can be extended to children making their own |
| fruit kebabs with a repeating pattern. |

## End of block checkpoint



| Its me 1,2,3 | Rationale | What could this look like? |
| :---: | :---: | :---: |
| Step 1 <br> Find 1, 2 and 3 | Links to the curriculum <br> Development Matters - Reception - Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value. <br> Birth to 5 Matters - Range 5 - Links numerals with amounts up to 5 and maybe beyond. | Give children a set of number cards. Some cards should show 1,2 and 3 as numerals. The other cards should show different representations of 1,2 and 3 Ask children to find each number. Get them to check each other's answers |
| Step 2 <br> Subitise 1, 2 and 3 | Links to the curriculum <br> Development Matters - Reception - Subitise <br> Birth to 5 Matters - Range 5 - Subitises one, two and three objects (without counting) | Share stories such as How to Count to One by Casper Salmon. Encourage them to subitise and notice where they see 1,2 and 3 Where can they see 1,2 and 3 groups of objects or characters from the story? Can they show you 1,2 and 3 ? |
| Step 3 <br> Represent 1, 2 and 3 | Links to the curriculum <br> Development Matters - Reception - Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value. <br> Birth to 5 Matters - Range 5 - Links numerals with amounts up to 5 and maybe beyond. | Give each child a five frame and 3 cubes or counters. Clap twice. Ask children to show the number of claps on their five frame. Then, get children to come up to the front and represent either 1,2 or 3 using sounds or actions for others to show on their five frame. |
| Step 4 <br> 1 more | Links to the curriculum <br> Development Matters - Reception - Understand the 'one more than/one less than' relationship between consecutive numbers. <br> Birth to 5 Matters - Range 5 - Beginning to recognise that each counting number is one more than the one before. | After reading the story The Gingerbread Man, support children to build the 1 more pattern by bringing in each character using images or the children themselves as characters, to introduce 1 more each time. Extend this by building the pattern with cubes, adding 1 cube for each character. |
| $\begin{aligned} & \text { Step } 5 \\ & 1 \text { less } \end{aligned}$ | Links to the curriculum <br> Development Matters - Reception - Understand the 'one more than/one less than' relationship between consecutive numbers. <br> Birth to 5 Matters - Range 5 - Positive relationships Emphasise the one more, one less pattern in rhymes and traditional tales, asking children to predict the next number | Task the children with dropping pebbles into a bucket or into a cup. Encourage them to count the sounds. Ask them to predict how many pebbles there would be if you took one out. Count together to check. This can also be used for reinforcing 1 more. |
| Step 6 <br> Composition of 1, 2 and 3 | Links to the curriculum <br> Development Matters - Reception - Explore the composition of numbers to 10 | Ask children to count out 3 double-sided counters, shake them in their hand and drop them down. How many are red? How many are yellow? Can they get all red or all yellow? |

## End of block checkpoint

## Checkpoint 1

Set up a tuff tray with an assortment of wood, autumn leaves and seeds.

Hide several ladybirds with 1,2 or 3 spots.

How many spots does the ladybird have?
Do all the ladybirds with 3 spots look the same?
Can you find a ladybird with 1 less or 1 more spot than mine?


## Checkpoint 3

Set up a small world bridge and 2 fields.

Each player builds a 1,2 and 3 tower to represent the 3 goats.
Roll a 1-3 dice and move the corresponding tower over the bridge.
The winner is the first player to move all 3 'goats' over the bridge.

Encourage the children to notice how many goats are on each side of the bridge as they play.


| Circles and Triangles | Rationale | What could this look like? |
| :---: | :---: | :---: |
| Step 1 <br> Identify and name circles and triangles | Links to the curriculum <br> Development Matters - 3 and 4-year-olds - Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. <br> Birth to 5 Matters - Range 6 - Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes. | Display works of art featuring circles and triangles, such as Kandinsky's Circles in a Circle and Stained in Triangle. Encourage children to use mathematical language to describe the shapes that they find. In small groups, support children to create their own art in a similar style |
| Step 2 <br> Compare circles and triangles | Links to the curriculum <br> Development Matters - 3 and 4-year-olds - Talk about and explore 2 D and 3 D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. <br> Birth to 5 Matters - Range 6 - Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes. | Have a mystery box with lots of circles and triangles inside. Ensure that the shapes are of different sizes and represent different types of triangles.? Ask children to select a shape from the box and talk about what they notice. Explore how shapes can be sorted by size and type |
| Step 3 <br> Shapes in the environment | Links to the curriculum <br> Development Matters - 3 and 4-year-olds - Talk about and explore 2 D and 3 D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. <br> Birth to 5 Matters - Range 6 - Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes. | Go on a walk around the local environment and hunt for shapes. How many circles can children find? How many triangles can they find? Children could take photographs of the shapes they see on the walk and these could be used to make a shape display when you get back to school. |
| Step 4 <br> Describe position | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. <br> Birth to 5 Matters - Range 5 - Responds to and uses language of position and direction. | Many stories, such as We're Going on a Bear Hunt by Michael Rosen and Rosie's Walk by Pat Hutchins, focus on positional language and journeys. Read one of these stories with children, using gestures as you read to emphasise the positional language. Provide children with resources to build the scenes from the story in the small world area or on a large scale outside. Prompt them to recreate the journey that the characters go on.. |

## End of block checkpoint

## Checkpoint 1

Hide different-sized circles and triangles around the classroom and outdoor area.

Place two hoops on the carpet.


Can children identify the triangles and circles and sort the shapes by placing them into the hoops?
Are they able to explain why they have placed each shape in the chosen hoop?
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## Checkpoint 2

Place a toy, such as a bear, on top of your head. Where is the bear?

Position the bear in different areas of the classroom, for example, under the chair, next to the box and on the shelf.


Are children able to identify where the bear is positioned in relation to other objects?

## Checkpoint 3

Set up a small world area related to children's interests. While playing, check that children are able to follow and use the language related to position, for example, "The cow is walking around the pond", or "The elephant is standing next to the giraffe".


Give children different instructions to follow, and encourage them to give you instructions.
$\left.\begin{array}{|l|l|l|}\hline \text { 1,2,3,4,5 } & \text { Rationale } & \text { What could this look like? } \\ \hline \begin{array}{l}\text { Step } 1 \\ \text { Find 4 and 5 }\end{array} & \begin{array}{l}\text { Links to the curriculum } \\ \text { Development Matters - Reception - Link the number } \\ \text { symbol (numeral) with its cardinal number value. } \\ \text { Birth to } 5 \text { Matters - Range 5 - Points or touches (tags) } \\ \text { each item, saying one number for each item, using the } \\ \text { stable order of 1, 2, 3, 4, 5. }\end{array} & \begin{array}{l}\text { Place six picture cards showing 4 or 5 items face-down on } \\ \text { the table. Children take turns to turn over two cards each. If } \\ \text { the two cards show the same quantity, they can keep the } \\ \text { cards. Otherwise, they turn the cards face-down again. The } \\ \text { winner is the child with the most cards when all the cards } \\ \text { have been taken. Once children know the rules, leave out } \\ \text { resources for them to lead their own game. }\end{array} \\ \hline \begin{array}{l}\text { Step 2 } \\ \text { Subitise 4 and 5 }\end{array} & \begin{array}{l}\text { Links to the curriculum } \\ \text { Development Matters - Reception - Subitise. } \\ \text { Birth to 5 Matters - Range 6 - Engages in subitising }\end{array} & \begin{array}{l}\text { Share stories such as Pete the Cat and his Four Groovy } \\ \text { Buttons by Eric Litwin with children. Encourage them to } \\ \text { subitise and notice where they see 4 without having to } \\ \text { numbers to four and maybe five. }\end{array} \\ \text { nount. Show them a five frame with 4 or 5 buttons. Prompt }\end{array}\right\}$

|  | Birth to 5 Matters - Range 6 - Shows awareness that <br> numbers are made up (composed) of smaller numbers, <br> exploring partitioning in different ways with a wide range <br> of objects. | move into the 'yes' or 'no' hoop. How many children are in <br> each hoop? |
| :--- | :--- | :--- |
| Step 7 <br> Composition of 1-5 | Links to the curriculum <br> Development Matters - Reception - Explore the <br> composition of numbers to 10. | Give children a range of Numicon representing 1 to 5. <br> Encourage them to investigate combining two smaller <br> numbers to make a whole. Children could check by sitting <br> the two parts on top of the whole number. Is there another <br> way? |
| Birth to 5 Matters - Range 6 - Shows awareness that <br> numbers are made up (composed) of smaller numbers, <br> exploring partitioning in different ways with a wide range <br> of objects. | ( |  |

## End of block checkpoint



| Shapes with 4 sides | Rationale | What could this look like? |
| :---: | :---: | :---: |
| Step 1 <br> Identify and name shapes with 4 sides | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds - Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. <br> Birth to 5 Matters - Range 6 - Uses informal language and analogies, (e.g. heart-shaped and handshaped leaves), as well as mathematical terms to describe shapes | Read shape books such as Bear in a Square by Stella Blackstone and pay particular attention to the square and rectangle pages. Encourage children to identify the different shapes on each of the pages. Where can you see a square? Where can you see a rectangle? Prompt children to talk about the properties of each shape. |
| Step 2 <br> Combine shapes with 4 sides | Links to the curriculum <br> Development Matters - Reception - Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Birth to 5 Matters - Range 5 - Enjoys partitioning and combining shapes to make new shapes with 2 D and 3D shapes. | Have a range of flat paper squares and rectangles for children to explore. Ask children to investigate which new shapes they can make by combining different combinations of the shapes. Task children to make a large, medium or small square or rectangle. Is there a different way to make the same size shape? |
| Step 3 <br> Shapes in the environment | Links to the curriculum <br> Development Matters - Reception-3 and 4-year-olds <br> - Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. <br> Birth to 5 Matters - Range 5 - Shows awareness of shape similarities and differences between objects. | Go on a shape hunt around school. Ask children to point out where they see squares and rectangles on the surface of everyday objects. <br> Challenge children to say what is the same and what is different about the shapes they find. Ask children to explain how they know it is that shape. |
| Step 4 <br> My day and night | Links to the curriculum <br> Development Matters - 3 and 4 -year-olds - Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' <br> Birth to 5 Matters - Range 6 - Is increasingly able to order and sequence events using everyday language related to time. | Use stories and nonfiction books, such as Night Monkey, Day Monkey by Julia Donaldson or The Fox in the Dark by Alison Green, to introduce the idea of nocturnal animals. Explain that as we go to sleep, some animals are waking up because they come out at night. <br> Provide children with different pictures illustrating things that we do during the day and at night. Encourage children to sort the images into two piles and talk about what we do in the day and at night. |

## End of block checkpoint

## Checkpoint 1

Hide a range of flat 2-D shapes in a feely bag or underneath a cloth.
Partially reveal a shape, encouraging children to say what different shapes it could be or could not be and why.


Pull the shape out further. Do they still think it could be the same shape?
What has changed about the shape? What is the same?


## Checkpoint 3

Label a daytime and night-time area outside.

Call out an activity familiar to children and ask them to run to the daytime or night-time area. For example, stars appear, we put on our pyjamas, we get dressed, we eat lunch or owls wake up.


Encourage children to suggest some of their own daytime and night-time activities.
Which ways will not work?

