

Summer Scheme of Learning

Reception

#MathsEveryoneCan

2020-21



Overview 2020/21

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Autumn	Getting to Know You			Just Like Me!			It's Me 1 2 3!			Light and Dark			Consolidation	
Spring	Alive in 5!			Growing 6, 7, 8			Building 9 and 10			Consolidation				
Summer	To 20 and Beyond			First Then Now			Find my Pattern			On the Move				

- We have divided the Reception Year into 10 Phases. Each phase roughly lasts 3 weeks long, allowing time for flexibility and consolidation.
- Each phase has a number focus and suggested links to measure, shape and spatial thinking.

Summer 2020/21

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Phase	To 20 and Beyond			First Then Now			Find my Pattern			On the Move		
Number	Building Numbers Beyond 10 Counting Patterns Beyond 10			Adding More Taking Away			Doubling Sharing & Grouping Even and Odd			Deepening Understanding Patterns and Relationships		
Spatial Reasoning	Spatial Reasoning (1) Match, Rotate, Manipulate			Spatial Reasoning (2) Compose and Decompose			Spatial Reasoning (3) Visualise and Build			Spatial Reasoning (4) Mapping		

Phase 7 – To 20 and Beyond

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Phase 7 – Book List

Reading to children is an essential part of their development. Any of these books would be useful during Phase 7

Jack The Builder – Stuart J Murphy

One Moose, 20 Mice – Stella Blackstone

One to 10 and Back Again – Nick Sharratt

A Dozen Ducklings Lost and Found – Harriet Ziefert

Which is Round? Which is Bigger? – Mineko Marmada

1 is a Snail, 10 is a Crab – April Sayre & Jeff Sayre

1 is One – Tasha Tudor

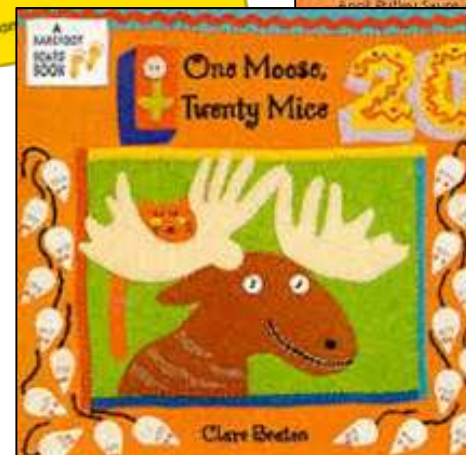
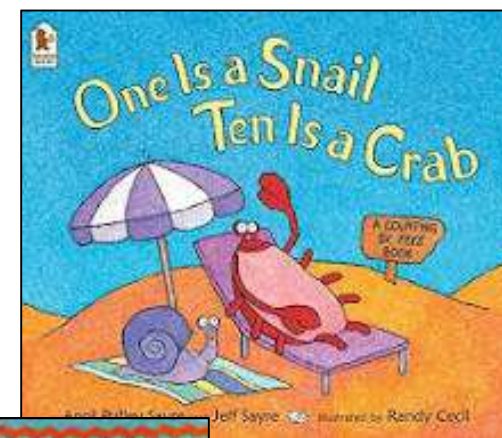
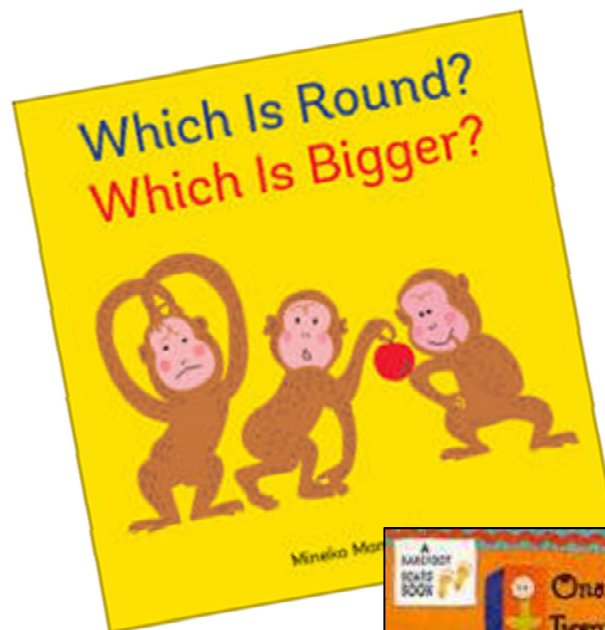
The Real Princess – Brenda Williams

10 on a Train – John O’Leary

20 Big Trucks in the Middle of the Street – Mark Lee

Snail Trail: A Journey Through Modern Art – Jo Saxton

Which One Doesn’t Belong – Christopher Danielson

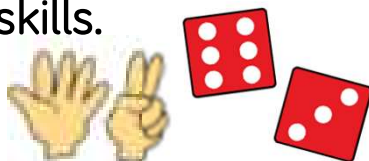


Consolidating key skills

During the summer term, continue to practise and consolidate these key skills.

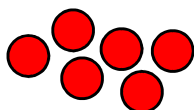


Subitising



Continue to provide regular opportunities for the children to instantly recognise small quantities. Dice, domino and bingo games as well as matching and comparison games will continue to support children's subitising skills. Ensure they include a variety of different representations.

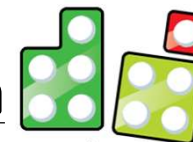
Counting



Provide regular opportunities for the children to practise and consolidate counting on and back within 10.

Support the children to use the counting principles in order to find how many in a set or to count out a required number of objects from a larger group.

Composition



Continue to develop the children's understanding that all quantities are composed of smaller quantities.

Sorting and Matching

Continue to encourage the children to notice similarities and differences as they match and sort objects in new contexts.

Ask: Can you find or build one the same as this?
Can you find or build one which is different to this?
Why is it different?

Can you see how I have sorted these items?
How else could we sort them?

Comparing and Ordering

Build in regular opportunities for the children to continue comparing and ordering quantities and measures.

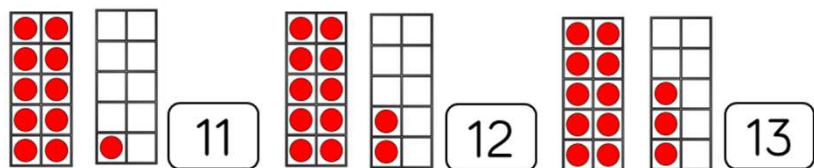
Prompt them to notice which set has more, which has fewer and when 2 sets have the same amount.

Building Numbers Beyond 10

Guidance

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.



Other Resources

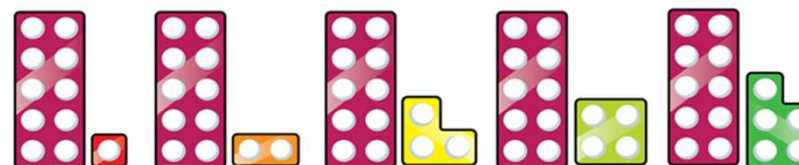
- Numberblocks Series 3
- One Moose, 20 Mice – Stella Blackstone
- 1 is One – Tasha Tudor
- The Real Princess – Brenda Williams
- Jack The Builder – Stuart J Murphy

Prompts for Learning

Show the children 11 using the number shapes or 10 frame. What do the children notice? Can they see which number is represented?

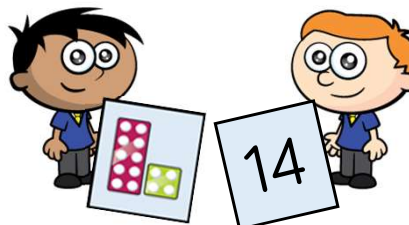
Now build 12. What's the same? What's different? Continue the pattern, ask the children to predict what numbers come next and how they could represent each number.

What happens when they get to 20 and beyond?



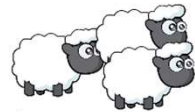
Using one of the texts as a prompt, ask the children to build representations beyond 10 using different resources and talk about the patterns they notice.

Prepare a set of cards showing pictorial representations and matching numerals (e.g. for 11-25) Give one card to each child. Ask them to find their partner. Can they also arrange the cards in order?

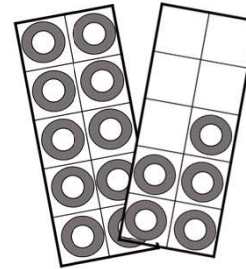


Building Numbers Beyond 10

Small World



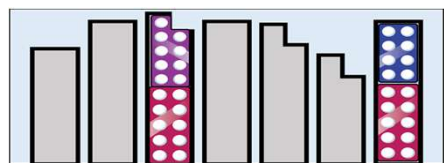
Collect 30 items, filling three 10 frames to start the game. Children take turns to roll a dice and collect the corresponding number of items. The child who takes the last item, wins the game. As the children play, prompt them to see how many they have and how many remain.



Enhancements to areas of learning

Maths Area

Provide black outlines of a cityscape for the children to fill using the number shapes. Can they see which number has filled each tower? Is there more than one way to do this? Can they design their own cityscape?



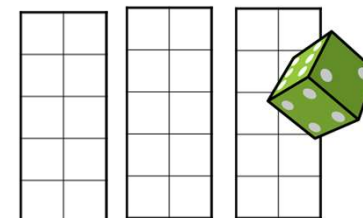
Loose Parts

Provide different collections of loose parts e.g. nuts, bolts and washers. Encourage the children to estimate how many first and to arrange the items onto 10 frames to help them see how many full tens and how many of the next ten.



10 Frame Fill

Each player starts with 3 empty 10 frames. They take turns to roll a dice and collect the corresponding number of counters or cubes. They must roll the exact number to reach 30. The first player to reach 30 wins the game.

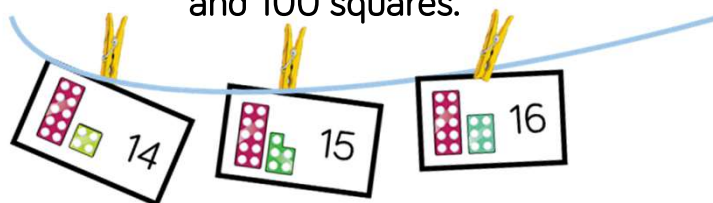


Counting Patterns Beyond 10

Guidance

Provide regular opportunities for children to count on and back beyond 10. Representations and numerals can support children to count on and back and notice the repeating 1-9 patterns. Provide representations which clearly show the full 10s and the part of 10, for example 14 is one full ten and four.

Encourage the children to count on or back from different starting points, to say what comes before or after a given number and to place sequences of numbers in order. You can also challenge them to find larger numbers on number tracks and 100 squares.



Other Resources

Numberblocks Series 3 Tween Scenes

A Dozen Ducklings Lost and Found – Harriet Ziefert

20 Big Trucks in the Middle of the Street – Mark Lee

1 is a Snail, 10 is a Crab – April Sayre & Jeff Sayre

Peg + Cat – The Teens

Prompts for Learning

Daily counting routines and games provide many opportunities to count regularly beyond 10. The children love to correct puppets who make counting errors.

I Count, You Count is a game which can be used to practise counting on from different starting points. Begin by counting as you point to yourself. When you point to the children they continue the count. This is great for creating rhythmic patterns and can be extended to more

than one group of children:

4 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Provide a set of towers to 20 with one tower missing.

Ask the children to order the towers to identify which one is missing.

Can they make the missing tower?



Counting Patterns Beyond 10

Maths Area

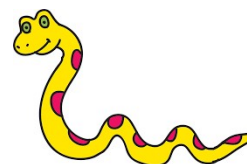
Provide a set of birthday cards for different ages. Ask the children to peg the cards onto a washing line in ascending and descending order. Ask them to close their eyes whilst you make one change. Can they spot what is wrong?



Enhancements to areas of learning

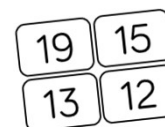
Race to 20 (and Beyond)

Provide a number track for each child. Children take turns to roll a dice. If they roll 1-5, they collect the corresponding counters to fill their track. If they roll a 6 they miss a turn.

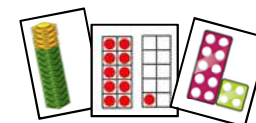


Snakes and Ladders

Show the children how to play the game. Encourage them to count on using the numbers on the board. For example, if they start on 23 and roll a 4, they count 24, 25, 26, 27. They can also use the board to race to find a given number. E.g. Who can be first to find 72?



Bingo



Have sets of numerals from 11 to 20 and corresponding pictorial representations. Ask the children to choose 4 picture cards each. Hold up the numeral cards one by one. If the children have a matching picture they place a counter on their card. The first player to cover all their cards wins.

Digging Deeper

How Many is 100?

Prepare collections of objects, some with exactly 100, some with fewer and some with more.

Challenge the children to guess which sets have exactly 100 items.

Once they have made their guess, they can check by arranging the objects onto ten 10 frames. Are they surprised?

They might also like to make their own collections of 100

Encourage the children to investigate 100 in different ways:

How far can you travel in 100 steps?

How long would a paper chain with 100 links be?

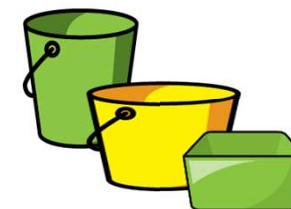
How tall is a tower of 100 linking cubes?

(Building the paper chain and tower in 10s, changing the colour after each set of 10, makes it easier to keep track of the ten 10s)

Which Holds the Most?

Provide a set of containers in a range of different sizes and shapes. Ask the children to predict how many cubes each container will hold. Fill the containers using cubes and then tip them out to find how many.

Instead of counting in ones, encourage the children to arrange the cubes into ten frames to see how many full tens they have and how many ones.



Key Questions

How many cubes do you think will fit inside this container?

Do you think this one will hold more or this one?

Do tall containers always hold more cubes?

What could we do to help us remember how many cubes each container held?

Which container holds the most cubes?

Can you arrange the containers in order from smallest to largest?

Spatial Reasoning (1)

Guidance

Provide regular opportunities for the children to complete jigsaws and shape puzzles. They need opportunities to select and rotate shapes to fill a given space. Encourage them to explain why they chose a particular shape and why a different shape wouldn't fit.

Provide opportunities for the children to match arrangements of shapes, prompting them to use positional language to describe where the shapes are in relation to one another. Ask the children to select shapes to complete picture boards or tangram outlines.

Other Resources

Snail Trail: A Journey Through Modern Art – Jo Saxton

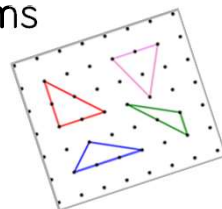
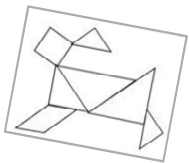
Which One Doesn't Belong – Christopher Danielson

Jigsaws and shape puzzles & Tangrams

Pattern blocks & Cuisenaire rods

Geo boards

Numicon and base board overlays



Prompts for Learning

Find My Match.

Show the children a set of shapes and ask them to find the shape which matches the one you hold up.

Add challenge by making the shapes more similar and changing the orientations.



Extend to arrangements of linking cubes.

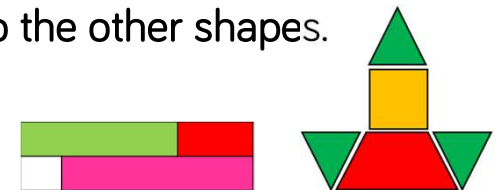
Can they find the set which matches yours? Talk about the position of the cubes in relation to one another.



Make a simple shape arrangement.

Ask the children to match your arrangement exactly, thinking about which shapes to select and where to place them in relation to the other shapes.

This can also be done on a larger scale outside.

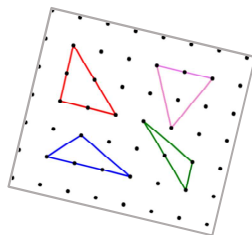


Spatial Reasoning (1)

Funky Fingers

Use the geoboards and elastic bands. Challenge the children to make as many different triangles as they can.

How do they know they are all triangles? How many 4-sided shapes can they make? Does the geoboard work for making circles?



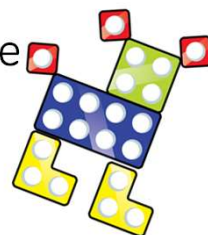
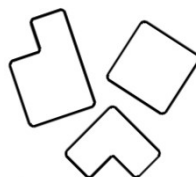
Enhancements to areas of learning

Maths Area

Provide outlines of the number shapes in different orientations. Ask the children to select the shape to match each outline.

Provide baseboard overlays or number shape outlines for the children to match and fill.

Encourage the children to use positional language as they build.

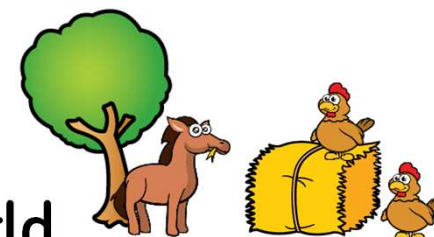
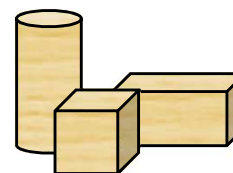


Construction

Provide simple models or pictures of models.

Ask the children to select the shapes they need and position them to replicate the model. Can they design a model for their friend to replicate?

This can be done on a larger scale outside.



Small World

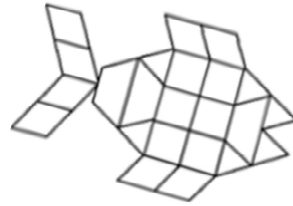
Set up a small world scene or provide pictures of scenes for the children to replicate. Encourage them to talk about where things are in relation to other things. Can they design their own scenes for a friend to replicate? Can they draw a map of their scene?

Digging Deeper

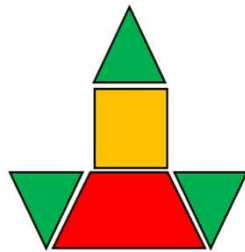
Build it

Provide a set of pattern blocks or similar and picture templates.

The children can progress from matching shapes with coloured pictures, to pictures with outlines only. They will need to look carefully to select the correct shapes and rotate them to fit the outline.



Design it



Encourage the children to design their own picture using the pattern blocks.

Can they create a template to help them remember their design?

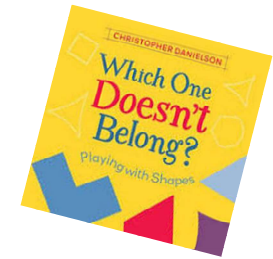
Can their friends use the template to recreate their design?

Key Questions

- Which shape will you start with?
- How many triangles will you need?
- Can you find a shape like this?
- Does that shape fit? Do you need to turn it round?

- Tell me about your shape picture.
- What will your design be?
- Which shapes will you use?
- How could we remember your design?
- Can you make a picture to help you make your design again?

Which One Doesn't Belong?



- Using the book as a prompt, ask the children to explain which shape is different to all the rest.
- Can they find more than one answer?
- Challenge them to find a reason why each of the images could be different to the rest.