



# Carnforth Community Primary School

## Reception Mathematics Planning

### Autumn Term



## Year R Mathematics Yearly Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Week 1</b>		Number 5	Counting and Comparing	Addition	Counting, Comparing and Ordering	Time
<b>Week 2</b>		Number 6	Partitioning and Understanding Part-Whole	Subtraction	Understanding Part – Whole with Addition and Subtraction	Space
<b>Week 3</b>	Number 1	Number 7	Understanding 'Teens' Numbers	Halving and Doubling	Fractions	Money and Sorting
<b>Week 4</b>	Number 2	Number 8	Distance (length, height, width)	Number Sense	Distance and Mass/Weight	Number Sense
<b>Week 5</b>	Number 3	Number 9	Mass/Weight and Capacity/Volume	Addition and Subtraction	Capacity/Volume and Money	Addition and Subtraction



**Week 6**

Number 4

Number 10

Shape and Sorting

Shape and Sorting



**Autumn Term (10 weeks)**

**Elements of Key Learning that can be introduced through Number Land:**

**Rote counting**

Rote count from 1

Rote count on from a given number between 1 and 10

Rote count back from a given number between 0 and 10

Know what number comes before and after a given number

Say a number between two given numbers

**Counting objects**

Understand that counting is to find out how many if you don't already know

Use one to one correspondence when counting

Understand that the last number said is the number in the set

Count up to 10 objects, pictures, sounds and actions

Understand and use conservation of number

Use the word 'zero' to represent 'none'

Compare two sets of different objects saying which set is more, greater, fewer, less, same, equal

Order three or more sets of objects

State without counting (subitise) quantities within 5

Make a sensible guess of quantities within 10

**Shape**

Know that shapes can appear in different ways and be different sizes

Name common 2-D shapes (circle, triangle, square rectangle, oblong rectangle)

Talk about shapes using mathematical language (straight, curved, sides, flat)

**Number sense**

Partition a set of objects in different ways using the terminology part-part-whole

**Number recognition**

Recognise and identify numerals 1-10

Select the numeral that represents a set of objects

Order numerals 0-10

**Number graphics**

Represent amounts in their own ways, explaining what they mean

Represent and explain their thinking in their own ways

Write numerals 0 to 10

**Calculating**

Understand the concept of addition by practically combining sets of objects to find how many and use the terminology part-part-whole

Understand the concept of subtraction by practically removing one amount from within another to find how many are left and use the terminology part-part-whole

Relate subtraction to addition in practical situations using the terminology part-part-whole

Identify one more and one less than a given number

Identify two more and two less than a given number

Add two single-digit numbers totalling up to 10, using practical equipment

Subtract a single-digit number from a number up to 10, using practical equipment

**The planning below is an example of how the programme could be introduced and the types of activities, questions and ways of exploring the numbers across the week. The other numbers 1 to 4 are planned for explicitly. The other numbers to 10 can be introduced and explored in similar ways, however, there will be greater opportunities to generate different part-whole models as each number can be partitioned into more combinations.**



Other learning related to time, position and direction and sorting should be experienced and understood through daily routines.

### Week 1 Focus – Number 1

Lesson	Suggested modelling and questioning
1	<p>Numeral 1 – show the number 1. Draw it in the air.</p> <p>Can you do one clap? Hop? If I do one clap = thumbs up. If not = thumbs down.</p> <p>Small group in circle - use box of random countable items – ask children to get 1 item. Explain why it is 1. On its own etc.</p> <p>Practise touch counting – 1.</p> <p>Same or different – two children: one with 1 car and the other with 2 cars, have they both got one car? Are they the same? Discuss properties, similarities and difference, how can the child with 2 cars change their amount so they have only one car?</p>
2	<p>Introduce Numberland. Have gardens for circle, semi-circle and triangle available. Ask children which one to use for Number 1 and why?</p> <p>Have little circles for children to run finger around one side.</p> <p>House – Number 1 is only allowed 1 window on the house. Can you find a spotted dice? How do you know it is a dice? Where is the one? Use a counter to show the number 1 on the house in the same way it is shown on the dice. Tower – Have tower of 1, 2 and 3. Which one can go in the garden? Why?</p> <p>What other things can we have in our garden? Number 1 would like a number one. Model putting something and explain why... children go and find something that could go in Number 1's garden.</p>
3	<p>Can you find me one? (recap Monday)</p> <p>Put objects into dishes. Can you tell me which dish has 1 in? Why doesn't this dish have one? Pick up different sized objects and ask are they both one? But this one is much bigger?</p> <p>Children pick one from a wider group e.g. find me 1 compare bear, 1 milk carton, 1 ball etc.</p> <p>Tell me something you have one of. Could you draw me a picture? Possibly scribe what it is.</p> <p>Add more items into the garden of Number 1 in Numberland. Children justify why they put it in the garden.</p>
4	<p>Dice – 3 sides blank, 3 with a 1. Find a side with a 1. Find a side without a 1.</p> <p>Show children 1p and explain what it is.</p> <p>Roll dice, if you land on a 1 you take a 1p and put it in the pot.</p> <p>Count in 1s out of the pot, e.g. take out 1, hold it up, put it down. Take out 1, hold it up. Who has an empty pot?</p> <p>Add more items into the garden of Number 1 in Numberland. Children justify why they put it in the garden.</p>
5	<p>Get one object. Have I got one? Add another one – have I got one now? Take one away – have I got one? Hide it, have I got one? Turn upside down – have I got one? Change position and ask the same questions.</p> <p>Ask children to show one, then something that is not one.</p> <p>'My friend says if I turn it upside down it is not one. Is she right? Explain.'</p> <p>Children create their own representations for the number 1 using Numberland as a stimulus.</p>



## Week 2 Focus – Number 2 (and 1)

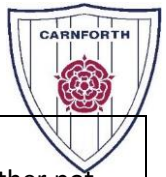
Lesson	Suggested modelling and questioning
1	<p>Numeral 2 – show the number 2. Draw it in the air.</p> <p>Small group in circle - use box of random countable items – ask children to get 2 items. Explain why it is 2 – it has a partner.</p> <p>Practise touch counting – 2. Model counting incorrectly, e.g. counting the same item twice. Why? Get children to explain what they should do. Put them somewhere else. Discuss why there is not more than one tap for one number – because we are trying to see how many are there.</p> <p>Same or different – Ask children to get 2 objects e.g. cars that look different, is that still 2? Although they are different? Do they have to be the same? Can you do two claps? Hops? If I do two claps = thumbs up. If not = thumbs down.</p>
2	<p>Develop Numberland further. Have gardens semi-circle and triangle grass. Ask children which one for Number 2 and why?</p> <p>Have little semi-circles for children to run finger around each side. Discuss sides – curved and straight, the circle was curved is this the same? Will Number 2 have the same garden? Why/why not?</p> <p>House – Number 2 is only allowed 2 windows. Can you find a spotted dice? How do you know it is a dice? Where is the two? Do the windows in the same place on the house?</p> <p>Tower – Can you remember the tower in Number 1's garden? What should we have in Number 2's garden? Can you make it? Look at all of the children's towers. Which one is right? Why did you do yours like that? Have 2 colours available. Discuss part-part-whole. Can you make a tower with 2 that looks different? (2 is made up of 1 and another 1 – compare to the tower from Number 1)</p> <p>What other things can we have in our garden? Number 2 would like a number two. Model putting something and explain why... children go and find something that could go in Number 2's garden, and justify why it can go in there.</p>
3	<p>Can you find me two? (recap Monday)</p> <p>Put objects into dishes. Can you tell me which dish has 2 in it? Why doesn't this dish have two? Show children 2 pots – a pot with 1 large object and another pot with 2 small objects in. Which pot has two items in it? But this pot (with the single larger item) is more full? How can it only be one?</p> <p>Children pick two from a wider group e.g. find me 2 compare bears, 2 milk cartons, 2 pencils etc.</p> <p>Tell me something you have two of. Could you draw me a picture? Possibly scribe what it is.</p> <p>Add more items into the garden of Number 2 in Numberland. Children justify why they put it in the garden.</p>
4	<p>Dice – two sides blank, two with a 1 and two with a 2. Find a side with a 1. Find a side without a 2.</p> <p>Show children 1p and explain what it is.</p> <p>Roll dice, if you land on a 1 you take a 1p and put it in the pot. If you land on a 2 you take two 1p coins and put them in the pot.</p> <p>Count in 1s out of the pot, e.g. take out 1, hold it up, put it down. Take out 1, hold it up. Model counting out two as counting out one and counting out one again.</p> <p>Add more items into the garden of Number 2 in Numberland. Children justify why they put it in the garden.</p>



5	<p>Have 2 plates. One biscuit on each, how many if we put them on one plate?</p> <p>Jen has 2 green counters and I have 2 red counters. Have we got the same number? Watch what I do.... Show moving your red counters further apart. I think I have more now. What do you think?</p> <p>Ask children to find two of different things/items in the classroom. Check by counting and explain how they know there are two.</p> <p>Add more items into the garden of Number 2 in Numberland. Children justify why they put it in the garden.</p> <p>Compare similar items from the gardens of Number 1 and Number 2. What do you notice? 2 is 1 and another 1, or 2 is 1 more than 1, or 2 is more than 1 etc.</p> <p>Children create their own representations for the number 2 using Numberland as a stimulus.</p>
---	---

**Week 3 Focus – Number 3 (and 2 and 1)**

Lesson	Suggested modelling and questioning
1	<p>Numeral 3 – show the number 3. Draw it in the air.</p> <p>Find the number 3 on the number track. Count up to 3, touching each number as it is said – “<i>One, two, three</i>”.</p> <p>Small group in circle - use box of random countable items – ask children to get 3 items. Explain why it is 3 – it is the next number after 2. Refer back to the number track.</p> <p>Practise touch counting – 3. Model counting incorrectly, e.g. counting the same item twice. Why? Get children to explain what they should do. Move the items as they are counted. Discuss why there is one number word for each item moved – because we are trying to see how many are there.</p> <p>Same or different – Ask children to get 3 objects e.g. compare bears that look different, is that still 3? Although they are different? Do they have to be the same?</p> <p>Can you do three claps? Hops? If I do three claps = thumbs up. If not = thumbs down. When clapping start with an even rhythm for the counting, then try putting a larger gap between two of the numbers e.g. clap, clap pause clap.</p>
2	<p>Develop Numberland further. Have gardens triangle and square rectangle grass. Ask children which one for Number 3 and why?</p> <p>Have little triangles for children to run finger around each side. Discuss sides – straight, the semi-circle had a curved side is this the same? Will Number 3 have the same garden? Why/why not?</p> <p>House – Number 3 is only allowed 3 windows. Can you find a spotted dice? Where is the three? Do the windows in the same place on the house? Tower – Can you remember the tower in Number 2’s garden? What should we have in Number 3’s garden? Can you make it? Look at all of the children’s towers. Which one is right? Why did you do yours like that? Have 2 colours available. Discuss part-part-whole. Can you make a tower with 3 that looks different? (3 is made up of 1 and another 1 and another one; or two and another 1 – compare to the tower from Number 2; what happens when you put the towers from Number 1 and Number 2 together?)</p> <p>What other things can we have in our garden? Number 3 would like a number three. Model putting something and explain why... children go and find something that could go in Number 3’s garden, and justify why it can go in there.</p>



3	<p>Can you find me three? (recap Monday)</p> <p>Put objects into dishes. Can you tell me which dish has 3 in it? Why doesn't this dish have three? Show children 3 pots – a pot with 1 large object, another pot with 2 medium sized objects in and another pot with 3 small objects in. Which pot has three items in it? But this pot (with the single larger item) is more full? How can it only be one? Get the items out of each pot and line the three sets up alongside each other. Notice that each item is worth one, regardless of how large or small they are.</p> <p>Children pick three from a wider group e.g. find me 3 compare bears, 3 milk cartons, 3 pencils etc.</p> <p>Add more items into the garden of Number 3 in Numberland. Children justify why they put it in the garden.</p> <p>What does the arrangement of the item(s) tell you about the number 3? For example, an arrangement of 3 children may show 2 girls and 1 boy so 3 is made up of a 2 and a 1.</p>
4	<p>Dice – two sides with a 1, two with a 2 and two with a 3. Find a side with a 3. Find a side without a 3. Dice could show numeral as well as spot formation.</p> <p>Show children 1p. Roll dice, if you land on a 1 you take a 1p and put it in the pot. If you land on a 2 you take two 1p coins and put them in the pot. If you land on a 3 you take three 1p coins and put them in the pot.</p> <p>Count in 1s out of the pot, e.g. take out 1, hold it up, put it down. Take out 1, hold it up. And so on. Model counting out three as counting out one three times.</p> <p>Add more items into the garden of Number 3 in Numberland. Children justify why they put it in the garden.</p>
5	<p>Have 2 plates. Two biscuits on one plate and one biscuit on the other. How many if we put them all on one plate? What is three made from? Two and one or one and two.</p> <p>Kim has 3 big compare bears and I have 3 small compare bears. Have we got the same number? Line the two sets of compare bears up. Watch what I do....</p> <p>Show moving your small compare bears further apart. I think I have more now. What do you think?</p> <p>Ask children to find three of different things/items in the classroom. Check by counting and explain how they know there are three.</p> <p>Add more items into the garden of Number 3 in Numberland. Children justify why they put it in the garden.</p> <p>Compare similar items from the gardens of Number 1, Number 2 and Number 3. What do you notice? The towers are getting one more each time, so 1 and another 1 is 2; 2 and another 1 is 3.</p> <p>Children create their own representations for the number 3 using Numberland as a stimulus.</p>



**Week 4 Focus – Number 4 (and 3 and 2 and 1)**

Lesson	Suggested modelling and questioning
1	<p>Numerals 4 – show the number 4. Draw it in the air.</p> <p>Find the number 4 on the number track. Count up to 4, touching each number as it is said – “One, two, three, four”.</p> <p>Small group in circle - use box of random countable items – ask children to get 4 items. Explain why it is 4 – it is the next number after 3. Refer back to the number track.</p> <p>Practise touch counting – 4. Model counting incorrectly, e.g. counting the same item twice. Why? Get children to explain what they should do. Move the items as they are counted. Discuss why there is one number word for each item moved – because we are trying to see how many are there.</p> <p>Recount the set, starting with a different item. Does it change how many are in the set?</p> <p>Same or different – Ask children to get 4 objects e.g. beads that look different, is that still 4? Although they are different? Do they have to be the same?</p> <p>Can you do four claps? Hops? If I do four claps = thumbs up. If not = thumbs down. When clapping start with an even rhythm for the counting, then try putting a larger gap between two of the numbers e.g. clap, clap pause clap pause clap.</p>
2	<p>Develop Numberland further. Have gardens square rectangle, pentagon and hexagon grass. Ask children which one for Number 4 and why?</p> <p>Have little square rectangles for children to run finger around each side. Discuss sides – straight, the triangle had how many sides? Will Number 4 have the same garden? Why/why not?</p> <p>House – Number 4 is only allowed 4 windows. Can you find a spotted dice? Where is the four? Place counters on the house so the windows are in the same arrangement as on the dice?</p> <p>Tower – Can you remember the towers in Number 1’s, 2’s and 3’s gardens? What will the tower look like in Number 4’s garden? Explain why you think this. Can you make it using two colours of cubes only? Look at all of the children’s towers. What does each tower tell us about the number 4? Discuss part-part-whole.</p> <p>What other things can we have in our garden? Number 4 would like a number four. Model putting something and explain why... children go and find something that could go in Number 4’s garden, and justify why it can go in there.</p>
3	<p>Can you find me four? (recap Monday)</p> <p>Put objects into dishes. Can you tell me which dish has 4 in it? Why doesn’t this dish have four? How many does it have? How do you know? Show children two pots – a pot with 3 large objects and another pot with 4 small objects in. Which pot has four items in it? But this pot (with the larger items) is more full? How can it only be only three and the other four?</p> <p>Children pick four from a wider group e.g. find me 4 beads, 4 pieces of fruit, 4 paintbrushes etc.</p> <p>Could you find four in the environment? Could you draw me a picture to show four?</p> <p>Add more items into the garden of Number 4 in Numberland. Children justify why they put it in the garden.</p>



4	<p>Dice – one side with a 1, one with a 2, one with a 3 and three with a 4. Find a side with a 4. Find a side without a 4. Show children 1p and explain what it is. Roll dice, the number you roll dictates the number of pennies that need to be taken from the pot. Count in 1s out of the pot, e.g. take out 1, hold it up, put it down and say ‘one’ , take another hold it up, put it down and say ‘two’ etc. Children to join in with the count. Add more items into the garden of Number 4 in Numberland. Children justify why they put it in the garden.</p>
5	<p>Have 2 plates. Two biscuits on each, how many if we put them on one plate? How else could the biscuits have been put onto two plates? Is there another way? Could you represent this... with pictures? ...with numbers? Sam has 4 green counters in a line and I have 4 red counters in a square. Have we got the same number? Watch what I do.... move the green counters into a square and the red counters into a line. Are they both the same now? What do you think? Ask children to find four of different things/items in the classroom. Check by counting and explain how they know there are four. Add more items into the garden of Number 4 in Numberland. Children justify why they put it in the garden. Compare similar items from the gardens of Numbers 1, 2 and 3. What do you notice? 4 is 3 and 1, or 4 is 1 and 3, or 4 is 1 more than 3 etc. Children create their own representations for the number 4 using Numberland as a stimulus.</p>

Example enhancements within continuous provision:

- Overwriting the numeral on paper using different media: pencils, crayons, felt tips, paint.
- Create own number track showing numeral and amount.
- Match picture amounts to the correct numeral.
- Match pictures that show the same amount.
- Draw a representation for given numerals.
- Break a tower of cubes into two parts. Do it different ways. Represent what has been done in child’s own way.
- Partition whole into two parts using part-whole diagram.
- Partition whole into two parts (in different ways) in different contexts: jewels in two treasure chests; group of people on two rafts in the water; petals on a flower painted using only two colours; biscuits from tray placed on to two plates; amount on ten frame using two different coloured counters.
- Put numerals in order. Identify missing number from set.
- Subitise amount shown on a card (in dice / domino arrangement) when briefly turned over.
- Simple games where children use dice and count moves along a track / items collected.
- Find out which container contains the most items. Containers holding items of different size.
- Action game: roll number dice and action dice (dice labelled: clap, hop, blink, jump, turn, sit). Do the action the correct number of times.



- Match correct number of 1p coins for given prices.
- Find all 1p coins in a selection of coins.