Nursery Medium Term Plan	Spring 1	Theme: Buildings and Structures	Stepping Stones to Reception Maths No Problem	Week 1 Counting

Vocabulary	Zero, empty, none, nothing, fewer than, more than

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	**Numerical Patterns**
Zero Book (whole class) Read the story and discuss the concept of none. **Learning Time** How do we show nothing? Do you know the symbol? Explain that when we have nothing to count then zero is the amount. Zero is the name of the symbol 0. **Practice Time** What other words can we use when there is nothing? Encourage children to describe nothing using vocabulary such as none, empty, 'There are no bears,' etc.	**Visualising Zero (small groups)** Lay out six hoops in a row. Leave the first hoop empty and then place the digit cards in order in the remaining hoops. Ask children to place the correct number of family bears (or cubes) in each hoop. **Learning Time** Can you show me the hoop with 2 bears? Can you show me the hoop with 4 bears? Which hoop has the most bears? Now draw their attention to the empty hoop. How many bears are in here? Is there a digit that we can use to show nothing? Do you remember what it is? Now show the digit 0 and ask children to write it in the air. They can also practise tracing the shape in sand or foam, saying the word zero as they do this. **Practice Time** Can you show me 5 fingers? Can you show me 3 fingers? Can you show me 0 fingers? Can you clap 2 times? Can you clap 4 times? Can you clap 0 times?	**Zero Game (small groups, outdoors)** Lay the cards to 5 face down on the ground. Ask a child to select a card and then to carry out an action that number of times. It could be jumping on the spot, hopping, running around a track or anything you like! What happens when a child selects zero? How many times do they carry out the action now? **Learning Time** What did you do when you selected the zero? How many times did you carry out the action? **Practice Time** Repeat this game but use sounds instead of actions. What do you hear when you select the zero card? **Early stages** Can you trace zero? Say the word zero out loud as you trace. Count items one by one to match the sets.	**1 Fewer Than (small groups)** Ask children to make a tower of five cubes and to match it to the correct numeral. Then ask them to take one of the cubes away. **Learning Time** How many cubes did you have? How many did you take away? How many are left? Can you match a numeral to this new tower? Repeat until there is only one cube left. How many cubes are there now? Take one away. How many cubes do you have now? What do we call this amount? What is the numeral for this amount? Can you draw it in the air? **Practice Time** Ask children to turn to their partners and to describe zero. How many different ways can you think of to show zero? How many different ways can you think of to describe zero?	**Adding and Subtracting Zero (small groups, indoors or outdoors)** Place a small number of items (fewer than five) in a bowl. **Learning Time** How many pebbles are there in the bowl? Let's add one more. How many are there now? Let's take one away. How many are there now? What happens if we add zero pebbles to the bowl? How many are there now? Has the amount changed? What happens if we take zero pebbles away? Has the amount changed? **Practice Time** Now, give children a bowl with 5 items. In pairs, ask children to roll a 0–5 dice. Each time they roll the dice, they can take that number of pebbles out of the bowl. The first person to have an empty bowl is the winner. How many pebbles do you each have? How many have you each taken away? What number do you need to roll to win? **Early stages** How many are there? How can we find 1 fewer? How many are there now?	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Nursery	Spring 1	Theme: Buildings and Structures	Stepping Stones to Reception Maths No Problem	Week 2 Counting and Ordering

Vocabulary	First, second, third, fourth, fifth, last, in between, before, after, in front, behind

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	**Numerical Patterns**
Counting Forwards (small groups, outdoors) Children start at zero and then chant the numbers as they step one by one along the track. When they get to 5, ask them to run back to zero and start again.

Learning Time Ask children to each say a number in the correct order. Start them off by saying 0 and then ask each child in turn to give the next number.

Practice Time Now tell children that you are Practice of a number. You are going to give them some clues. For example: My number comes after 2 and before 4. Can you tell me my number? It is the number between 2 and 4. Can you tell me my number? Repeat and then encourage children to come up with their own clues and see if you can guess the number that they are Practice of. | **Counting Backwards (small groups, outdoors)** As with Activity 1, children chant as they step one by one along the track. This time, when they get to 5, ask them to turn around and count backwards as they step back to 0.

Learning Time Ask children to each say a number in the correct order. Start them off by saying 0 and then ask each child in turn to give the next number. Go forwards to 5 and then backwards from 5.

Practice Time What happens to the numbers when we count forwards? Are they getting bigger or smaller? What happens when we count backwards? Are they getting bigger or smaller? Ask children to model this using building blocks or cubes. Have they had to use more or fewer blocks to complete their towers? | **Ordering Numbers (small groups)** Ask children to make towers of cubes from 1–5. Can they order the towers from 1–5? Can they place the correct digit cards next to the towers? Can they order them from 5–0?

Learning Time Can you match the digit cards to the towers? What goes with the 0 card? Reinforce the language of one more and one fewer as you go up and down the staircase pattern of towers. Reinforce the concept of zero by asking them to place the 0 card where there are no cubes.

Practice Time Provide children another set of towers but with one tower missing or a set of 0–5 digit cards with one card missing. Can you identify what is missing?
Early stages Can you count forwards to 5? Can you count backwards from 5? Don't forget to include zero. Can you trace the numerals / draw them in foam / match to quantities? | **Position in a Queue (groups of 5)** Read the story Loo Queue. Encourage children to count along and predict by looking at the numbers on the animals. Split children into groups of 5 and allocate them an animal and a number. Can they arrange themselves in the correct order?

Learning Time Who is 1st in the queue? Who is next? Who is last in the queue?

Practice Time What animal is in front of you? What animal is behind you? Can you describe your place in the line? Can you describe the positions of other children? | **Running Races Outdoors (maximum group of 10)** Give each child a tabard labelled 1st–5th. Ask children to run around the playground. When you blow the whistle, they have to run to the finishing line and stand in the correct order. Have position labels on the ground if necessary.

Learning Time Who is first? Who is last? Who is second? Third? Fourth? Fifth?

Practice Time Are you all in order? Who is in front of you? Who is behind you? Who is in between/before/after you?

Early stages Can you name each position? Can you use the position names not the number names? | Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'. | Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…' |

Vocabulary	Five frame, ten frame, same, different, how many, more, fewer

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	Numerical Patterns
Counting Actions (whole class, outdoors) Scatter plastic circles or hoops around the playground. Ask children to run around until you shake a tambourine or something similar. Then they have to find a circle or hoop to stand in. Now hold up a digit card and ask children to clap that number of times. Repeat with children jumping, hopping, doing star jumps, making different animal noises, etc. **Learning Time** How did you count? In your head? With your fingers? **Practice Time** Now that they can count to five forwards and backwards, can they spot a mistake? Start by using a puppet to count correctly to five, forwards and backwards. Then ask them to listen carefully as the puppet doesn't always get the numbers in the right order. Can you count with the puppet? Can you help him if he makes a mistake? Make a variety of mistakes, such as omitting a number, repeating a number or getting the order wrong.	**Counting in Five Frames** Choose a dot card from 1–5. Hold up that card. Can the children select that number of items and place them on a five frame? Model this for them to begin with. Show the objects in different arrangements on the five frame. **Learning Time** How many objects are there? How do you know? Now change the position of the objects in the five frame. How many are there now? Are there still three? Four? **Practice Time** Make a set of five frames showing all the numbers from one to five, then show them to the children. Can you place them in order? Can you count forwards and backwards along the sequence of five frames? **Early stages** Can you match the numeral to the five frame?	**Introduce the Five Frame Subitising (groups of five)** Give each child a counter, cube. Ask one child to place their counter in the square to the left of the five frame. Ask children how many counters they can see. How do we write this number? Ask them to write it in the air. Now ask the next child to place their counter in the next space in the five frame. Repeat the questions, air writing and placement of the counters until all five counters have been placed. **Learning Time** How many counters were in the frame to begin with? Can you remember the sequence of the numbers of counters? What happened to the number of spaces as we added more counters? **Practice Time** Can you say how many counters there are without counting them? Ask children to shut their eyes while you place a number of counters in the frame. When they open their eyes, can they instantly tell you how many counters there are? This needs to be an instant response so that they are subitising rather than counting.	**Making 5 in a Five Frame (groups of five)** Show children a frame with 3 counters in (arranged from left to right). Challenge children to change this to 5. Give each child a set of five frames and 2 colour counters. Model the questioning to use when children show each other their five frames: How many counters are there? How many spaces are there? How many more counters would it take to fill the five frame? Show the five frame with 2 counters in it. Model the language to use when describing the arrangement. There are 2 counters. We need 3 more counters to make 5 counters. 2 and 3 make 5. **Learning Time** How many counters did we add to 2 counters to make 5 counters? Repeat this type of questioning and support it with modelling on the five frame. **Practice Time** Children work in pairs making 5 on a Five Frame. Ensure they find all pairs to 5, including 0+5=5.	**Conservation of Number** Choose the five frame cards. See if children can match the cards by the number of counters. **Learning Time** How did you know that these cards were a pair? Did you have to count? How else could you know without counting? Are there any other ways that we could arrange the counters? **Practice Time** Show children a five frame with 3 counters arranged in three different ways. Show all the counters placed to the left (the standard way), evenly spaced and finally 2 on the left and 1 on the far right. What number do these cards show? Do they all show the same number? How do you know? Point to the card with the evenly spaced counters. What does this tell us about 3? How can we make 3? (From a 1, plus a 1 plus a 1 — physically do this to show them.) Point to the card with a 2 and a 1. What does this tell us about 3? How can we make 3? (From a 2 plus a 1 — physically do this to show them.) Repeat for other numbers and other arrangements to help develop the idea of composition of number.	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Nursery	Spring 1	Theme: Buildings and Structures	Stepping Stones to Reception Maths No Problem	Week 4 Adding

Vocabulary	Sets, how many, altogether, counting, total

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	**Numerical Patterns**
Adding to 5 (small groups) Have 5 biscuits split into 2 groups on plates. **Learning Time** How many biscuits are there on each plate? How can we find out? How many biscuits are there altogether? Discuss the term altogether. How can we find out? Put all the biscuits on a third plate counting as you do. **Practice Time** How can we record what we have done? Model a pictorial representation of adding these 2 sets together and write the symbols underneath. Discuss the addition sign and get children to physically make the addition sign using their arms to form a cross. Model writing the equation while being very deliberate about the language used. **Practice Time** Work with the children on other real-life additions within 5, e.g. I have 2 apples and Mrs Hussain has 2 apples. How many apples are there altogether? Use real life objects to show this.	**Adding to 5 (small groups, outdoors)** Place 2 hoops on the ground and hold up a 1–5 digit card. Ask children to throw that number of bean bags into the first hoop. Repeat for the second hoop. **Learning Time** Point to the first hoop. How many bean bags are in this hoop? How can we be sure? Point to the second hoop. How many are in this hoop? How many are there in total? How many are there altogether? **Practice Time** Repeat this but now introduce the 0 digit card. What is the effect of adding 0? Make sure that children understand that adding 0 will not change the total. Depending on the developmental stage of children, you could also explore how many more bean bags are needed to make 5.	**Part Part Whole and Comparison** Ask one of the children to grab a small handful of counters up to 5 and drop them onto the table. **Learning Time** How many blue ones are there? How many green ones are there? How many counters are there altogether? Are there more blue counters than green counters? How can we be sure? How many more? How many fewer? Encourage children to match the different colour counters one-to-one to find the difference or to determine if there are exactly the same number. **Practice Time** Repeat with the same number of counters each time and explore the different combinations. For example, with 5 counters we may have the following combinations: and 0, 5 and 1, 4 and 2, 3. Encourage children to record this pictorially. Emphasise the fact that there are the same total number of counters each time. **Early stages** Can you count all the counters? Can you draw the total number?	**Adding by Counting On (small group)** Show children a tower of 3 cubes. Now add 1 more. How many are there now? In place of cubes—or in addition to them—this activity could be modelled and continued with children counting objects on a plate / in a basket. **Learning Time** Do we need to count them all? Can we start at 3 and count on? Have 3 or less in the first tower so that children can subitise the first tower and then count on. **Practice Time** Can you start with 2 and count on 1? Then 2, 3, then 4. Can you start with 3 then count on 1? Then 2, and finally 3. **Early stages** Do we need to count from the start? Can we count on? How many have you added? How many are there now in total?	**Adding by Counting On (small group)** Using fruit, biscuits, stickers etc, with a group of 5 children. Give out 3 items, e.g. apples. I have given 3 apples to these children, now I need to give apples to these children. I have started with 3 and now I'm giving out 1, 2. Can we count on to find the total? 3,4,5, so 3 and 2 make 5. **Learning Time** What happens if I start with 2 apples? How many more apples will I give out? How can we show this as a picture? Model drawing 2 apples add 3 apples equals 5 apples. Can children draw a pictorial representation of the problem? **Practice Time** Children explore making 5 in different ways with objects, counters etc. **Early stages** Do we need to count from the start? Can we count on? How many have you added? How many are there now in total?	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Nursery	Spring 1	Theme: Buildings and Structures	Stepping Stones to Reception Maths No Problem	Week 5 Comparing and Ordering

Vocabulary	More than, fewer than, greater, smaller, fewer, same as, groups, sets

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	Numerical Patterns
More or Less (small groups) Show children 2 sets of similar items. Make the difference in quantity very apparent, for example 10 small family bears in 1 group and 3 in the other. Repeat several times, making the difference between the 2 groups less and less each time until there is only a 1 item difference 5 and 4. **Learning Time** Which group has more? Which is the larger group? Is this set the smallest? Which group has fewer items? Vary the language you use in your questioning to broaden children's mathematical vocabulary. How do you know which has more? How can we be sure? Children may say there are more in 1 set because they take up more space. **Practice Time** As the groups get closer together in quantity, explore the different ways that we can compare the items. Can we line them up and match them one-to-one? Can we count each item in each group? Does it matter if we are comparing sets of different items?	**Comparing Quantities of Different Sized Items (small groups, indoors or outdoors)** This time we are going to have 2 groups where there are more smaller items than large items, but the large items will take up more physical space. **Learning Time** Which group has more? Which is the larger group? Is this set the smallest? Which group has fewer items? Vary the language you use in your questioning to broaden children's mathematical vocabulary. How do you know which has more? How can we be sure? Does it matter what size the items are when we want to know how many? **Practice Time** As the groups get closer together in quantity, explore the different ways that we can compare the items. Can we line them up and match them one to one? Can we count each item in each group?	**Subitising to 5 (small groups)** Use a plate or tray with a cover. Place 2 toys, biscuits etc. on the tray or plate and cover. Challenge the children to 'subitise' the number of objects and show that many fingers or corresponding digit card (depending on development) as you briefly reveal the contents of the tray. Count the objects to check if children were correct. **Learning Time** How many toys / biscuits were there? Were we close? Did you think there were more or less? **Practice Time** In small groups, children take turns to place items on a plate or tray and reveal for their friends to subitise. For each correct go, the children take a counter. **Early stages** How many objects on the plate? Are there more or less than you thought?	**One More than a number to 5 (small group)** Show children a tower of 3 cubes. Now add 1 more. How many are there now? In place of cubes—or in addition to them—this activity could be modelled and continued with children counting objects on a plate / in a basket. **Learning Time** Do we need to count them all? Can we start at 3 and count on? Have 3 or less in the first tower so that children can subitise the first tower and then count on 1 more. **Practice Time** Can you start with 2 and count on 1? Then 2, 3, then 4. Can you start with 3 then count on 1? Then 2, and finally 3. **Early stages** Do we need to count from the start? Can we count on? How many have you added? How many are there now in total?	**One Less than a number to 5 (small group)** Show children a tower of 3 cubes. What will happen if I take one a way? Now take away 1 cube. How many are there now? In place of cubes—or in addition to them—this activity could be modelled and continued with children counting objects on a plate / in a basket. Real life contexts e.g. I have four apples and I eat one, how many apples will I have now? **Learning Time** What happens to the number when we take one away? Does the number get larger or smaller? Can you count back from five to zero? **Practice Time** Can you start with 2 and count on 1? Then 2, 3, then 4. Can you start with 3 then count on 1? Then 2, and finally 3. **Early stages** Do we need to count from the start? Can we count on? How many have you added? How many are there now in total?	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Nursery	Spring 1	Theme: Buildings and Structures	Stepping Stones to Reception Maths No Problem	Week 6 Patterns

Vocabulary	Repeat, pattern, same, different, unit

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	**Numerical Patterns**
Spotting Patterns Around Us (small groups, outdoors) Arrange a variety of outdoor resources into AB patterns around the playground using a mixture of natural and man-made objects. Peg CDs and/or 2D shapes onto a washing line, have plastic hoops alternating in two colours arranged in a trail around the playground. Line up sticks and leaves, or shells and stones on the tables outdoors. Arrange these patterns horizontally, vertically and in a circle. Give each child a clipboard and a pencil. Can they find and record their patterns? What patterns did you find? Can you describe the pattern? What do you think might come next in the pattern? Now see if children can identify some more abstract patterns. Clap out a pattern, for example, one beat then two half beats. Can you hear the pattern? Stand children in a line and tap every other child on the shoulder to indicate that they should sit down. If another child were to join the line, would they be standing or sitting?	**Finding the Unit of Repeat (small groups, outdoors)** For this activity ask children to make a pattern using sticks and stones. Say that they are going to make a 'stick stone' pattern. The objective here is to name the patterns by the core element so that children can focus on the unit of repeat. When they have all made a 'stick stone' pattern, can they make a 'shell leaf' pattern or a 'bean bag ball' pattern too? **Learning Time** Can you show me which part of your pattern repeats? Which part have we copied each time? If children struggle with this, you can move the AB parts closer together and have a bigger gap between each AB section. **Practice Time** Give children the opportunity to practice AB patterns with different objects, e.g. colours, bears, sticks and stones etc. Can you make a pattern now?	**Recognise and Describe Patterns (whole class and small groups)** Show children an AB pattern then add in 1 more thing to make an ABC pattern. For example, show an AB pattern, such as blue bear, red bear. Then add in a third bear to create an ABC pattern—e.g. blue bear, red bear, green bear. Keep the bears of equal size, so as not to include an additional variable as this may confuse. Show the unit of repeat 3 times. **Learning Time** Can you see a pattern here? Which part of this pattern repeats? How many repeats can you see? How many bears make up the pattern? What is the same? What is different? Bear and size are the same. Colour is the different variable. **Practice Time** Give the children their own set of bears and ask them to make a different pattern with three pieces in the repeating pattern. Can you describe your pattern? Can you record your patterns through pictorial representations?	**Extend a Pattern (small groups)** **Activity Approach** Show children an ABC pattern of 2D shapes. Make sure that there are 3 repeats. Use 3 different shapes in different colours. For example, blue circle, green triangle, red square. **Learning Time** Can you see the repeating pattern? What can you see that is the same? What can you see that is different? How many things are different? Shapes and colours. **Practice Time** Ask children to now make their own pattern using 3 different shapes. What pattern will you make? How will you arrange your pattern?	**Abstract Patterns (whole class, outdoors)** This time we are going to make patterns using sound and movement. Adapt this activity as necessary if there are children in the class with hearing loss or will have difficulty doing the movements suggested. Introduce the activity by getting children to jump, sit down and stand on 1 leg. Use this as the repeating pattern. Repeat 3 times. **Learning Time** What action comes next? Now vary the pattern by jumping twice, then sitting down, then standing on 1 leg. What has changed? What is the unit of pattern now? Repeat with different actions. Can the children suggest different actions? **Practice Time** Now give 3 children 3 different instruments. Ask them to make a repeating pattern with their instruments. Can you describe the pattern? Can you vary the pattern? Keep repeating with various actions and instruments. Workbook Journal support Ask children to complete Workbook Week 8 Journal 2. Children have the opportunity here to create their own patterns from a selection of shapes. **Early stages** Can you create your own pattern? What shapes are repeated? Can you continue the pattern?	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Nursery	Spring 1	Theme: Buildings and Structures	Stepping Stones to Reception Maths No Problem	Week 7 Measuring Lengths and Height

Vocabulary	More than, less than, the same as, shorter, taller, longer, shortest, tallest, longest, height, length

Day 1	Day 2	Day 3	Day 4	Day 5	Development Matters - Nursery 3 to 4 years	
					Number	Numerical Patterns
Comparing Height (whole class, indoors or outdoors) Have a box of items of different heights. Pull 2 items out of the box—for example, a toy soldier and a teddy bear. Explore how we can find out which toy is taller. **Learning Time** Which toy is taller? How can we compare them? Stand the toys on the table next to each other. Which toy is taller? Which toy is shorter? Can we find a toy that is in between these toys? **Practice Time** Give children assorted items / toys to compare and identify which is taller and which is shorter.	**Comparing Length (whole class, indoors or outdoors)** Have a box of items of different lengths, e.g. sticks, ribbons, feathers, strips of paper, snakes, string etc. Pull 2 items out of the box—for example, ribbon and a snake. Have them deliberately coiled or wound up. How can we find out which is longer and which is shorter? Children should identify that the items need to be stretched out flat and not coiled for us to compare their length. Explore how we can find out which item is longer. **Learning Time** Which object is longer? Which object is shorter? If you stretch each item does it make a difference? Can we find an object that is in between these two? **Practice Time** Give children assorted items / toys to compare and identify which is taller and which is shorter.	**Ordering by length or height (small groups, indoors or outdoors)** Show children 3 different toys of varying lengths or heights. How can we find out which is the longest and which is the shortest? Can we put them in order from shortest to longest? From Longest to shortest? **Learning Time** Can we put them in order from shortest to longest? From Longest to shortest? **Practice Time** Give children access to objects and resources of different lengths and heights. Challenge them to work together to put them in order.	**Body Parts (small groups, outdoors)** Children are going to use their paper feet to measure the length of things in the playground. Give each child 10 cut-out paper feet and ask them to go around the playground finding things to measure. **Learning Time** What did you find? How did you measure it? Show me how you placed your paper feet. Were there any gaps? Was it an exact number of feet? **Practice Time** Give children some of your paper feet. Are they longer or shorter than yours? Can you measure the items you found again using my feet? What do you think the measurement will be? Will you need more feet or fewer feet than before? Why?	**Comparing Heights (indoors)** Discuss how we can measure our own heights. Ask children if their parents measure their heights at home. How much do they think they will grow in a year? Tape a wide strip of paper at the children's height on the classroom wall. Make a mark on the paper to show each child's height and label with their name. **Learning Time** How are we going to measure our heights? Can we use our paper feet? Explore measuring children's heights with the paper feet. Ask the children what they think would be best to use and why. Measure the heights of the children. **Practice Time** Can we order the heights? Who is the tallest? Who is the shortest? Now add your own height and that of any other adults in the classroom. Can the children predict the adults' heights based on their own heights?	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. ==Make comparisons between objects relating to size, length,== weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'