

Inspiring

Mathematics

2020-21

**EYFS - Nursery
to Reception**

Early Years Autumn Mathematics

	Week 1	Week 2
Mathematical Learning	Concept: The oneness of oneness Meet One - Counting to 1	Concept: The structure of 2 as one and another one Meet Two 2 is one more than 1 Counting to 2 The 'twoness' of 2
Mathematical Story	A little block falls out of the sky, meets her numberling and discovers one wonderful world, singing and counting to one.	One discovers it's tricky to play tennis when you're the only block in the world. She bumps into a magic mirror and meets Another One – and they join forces to make Two.
The Five Rules of Number Stable order	Begin counting Rhymes to show order.	Show the counting sequence 1,2. Show that it's 2 ones. Use a tens frame.
The Five Rules of Number 1-1 Correspondence	Count one item, touching it as you count.	Count one item at a time by touching as you count. Place into a tens frame.
The Five Rules of Number Cardinality	State one. This is one. There is one altogether. The total is one. Find it on a number track...on a clock.	State 2. This is 2. There are two altogether. The total is 2. One and one more are two. Show that two is always 2. Find it on a number track and on a clock.
The Five Rules of Number Abstraction	Count one of a range of different things: shape, hops etc	Count two of a range of different things: shape, hops etc Show that if we are counting cubes then the colour is not important. Count into sets of two.
The Five Rules of Number Order Irrelevance	Move the objects and show they are still a count of one.	Move the objects and show they are still a count of two.
Playing and Exploring	Children gather things to create the Wonderful World of One display	Noah's Ark Pairs of socks, wellies and shoes
Active Learning	Sing: 'One finger One Thumb Keep Moving' suggest other body parts to add. Share out one item each.	Sing: The animals went into the Ark...and use animal pair masks Games involving two...kick a ball/ catch a ball etc
Creating and Thinking Critically	Create printing patterns with each stamp showing one. Record 1s correctly beneath.	Be detective pairs and gather evidence of two in the setting...pairs of handprints, two of each thing. Create snacks in twos on plates.
Language Stem Sentences and Questions	I see one ball I see one car etc One is the amount One is the quantity First means position one...Who is first? Once means one time...I did this once.	I see two balls I see two ones. Two ones make two Two is the amount. Two is the quantity Second means position two Twice means two times...I did this twice.
IT Links	https://www.youtube.com/watch?v=Zjan6evga7q PPT1: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=thS8hjX-10Y PPT2: https://www.ncetm.org.uk/resources/52060

Early Years Autumn Mathematics

	Week 3	Week 4
Mathematical Learning	<p>Concept: The 'twoness' of 2 Counting to 2 Know the order of the number names and assign a number tag to the object or event. Distinguish what two is and what it is not through examples provided.</p>	<p>Concept: 3 is one more than 2 Meet Three: Part-Part-Whole structure of 3 (1 and 2 and 2 and 1) Its representation can change but it's still three eg: staircase, vertical, horizontal. The staircase helps us see that the difference between adjacent counting numbers is one. Assigning number tags</p>
The story:	Two finds a pair of magic dancing shoes and shows One that everything is better with 2, singing and counting things that belong in pairs.	Three arrives with a bang – and a song and-dance about her favourite number: 1, 2, 3, Everybody Look at Me!
The Five Rules of Number Stable order	Show the counting sequence 1,2. Show that it's 2 ones. Use a tens frame.	Show the counting sequence 1,2,3 Show that it's 3 ones. Use a tens frame to show three in a line only.
The Five Rules of Number 1-1 Correspondence	Count one item at a time by touching as you count. Place into a tens frame.	Count one item at a time by touching as you count. Place into a tens frame. Use a number track of 3 and place objects in and count by touching.
The Five Rules of Number Cardinality	State 2. This is 2. There are two altogether. The total is 2. One and one more are two. Show that two is always 2. Find it on a number track and on a clock.	State 3. This is 3. There are three altogether. The total is 3. One and one and one more are three. Show that three is always 3. Find it on a number track and on a clock. Find it in a book of page numbers.
The Five Rules of Number Abstraction	Count two of a range of different things: shape, hops etc Show that if we are counting cubes then the colour is not important. Count into sets of two.	Count three of a range of different things: shape, hops etc Show that if we are counting cubes then the colour is not important. Count into sets of three. Show that this is three ones or a two and a one or a one and a two.
The Five Rules of Number Order Irrelevance	Move the objects and show they are still a count of two.	Move the objects and show they are still a count of three
Playing and Exploring	Explore multiples of two in different contexts including counting objects, sounds and movements. Encourage children to make print patterns of twos eg: two hands, two thumbs etc	Goldilocks and the three bears. Tell the story and use the puppets to act out. Have threes of everything in the setting
Active Learning	Notice and encourage the counting of twos as they play.	Where are children counting to three in their play and can you create more opportunities for this to develop fluency? How frequently do they check by recounting sets and when the sets are moved? (conservation)
Creating and Thinking Critically	Notice that their body is made of lots of twos. Imagine how hard life would be with only one arm/ leg/ hand/ eye etc. Encourage children to count the twos in a different arrangement...move the objects...is it still 2?	Sing the song: Goldilocks went to the house of the bears...look at the relative sizes of things. Provide box full of sets of three objects to order smallest to largest etc
Language Stem Sentences and Questions	I have two... I have one... Two ones make two Two is the amount. Two is the quantity Second means position two Twice means two times...I did this twice.	I can see three/ I can see two x and 1 x which together are three x. One cat and two cats together make three cats Two cats and one cat together make three cats One cat and one cat and one cat together make three cats Three cats is one more than two cats Two cats is one less than three cats.
IT Links	https://www.bbc.co.uk/cbeebies/watch/numberblocks-the-two-song PPT3: https://www.ncetm.org.uk/resources/52060	https://www.bbc.co.uk/cbeebies/watch/numberblocks-the-three-song PPT4: https://www.ncetm.org.uk/resources/52060

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	Week 5	Week 6
Mathematical Learning	<p>Concept: Counting to 3 Embeds two is one more than one and three is one more than two. Comparing numbers 1,2 and 3 – 'bigger' and 'smaller' Ordering numbers 1 to 3 3 is made of 2 and 1</p>	<p>Concept: Counting to 4 Meet Four 4 is one more than 3 The structure of 4 as a square number Recognition of 4 items without counting (subitising)</p>
The story:	Three does magic tricks with apples to show the others who goes first, who's biggest and how to surprise your number friends.	Four is the new block on the block and he can't wait to share how much he loves to be square!
The Five Rules of Number Stable order	Order the blocks in size order and count one, two, three.	Use a number track to jump along and say the numbers: 1, 2, 3, 4 and There are 4 jumps.
The Five Rules of Number 1-1 Correspondence	Count sets of three objects of different types onto plates. Count three into the tens frame.	Count four into the tens frame. Make sets of 4 different coloured cubes and place in bags.
The Five Rules of Number Cardinality	Count sets of objects showing 1,2 or three and state: There are '3' cars.	Count sets of objects showing 1,2, 3 or four and state: There are '4' cars.
The Five Rules of Number Abstraction	Count in a hoop game 1 jump then 2 jumps then three jumps. Or throw one ball into a pot, two in the next and three in the last.	Match the domino 1-4 dot patterns
The Five Rules of Number Order Irrelevance	Select 1,2 or three items from a group eg: pick me 3 red cubes from the tray.	Select 1,2 or three items from a group eg: pick me 4 red cubes from the tray.
Playing and Exploring	Create a magic maths area for children to explore and create games with buckets and cups with the numbers 1-3 on. Give them sets of three objects to place inside.	Collect sets of 4 objects. Be a detective and find sets of four in the setting. Show some photos of sets of 4 things and not four things...can they group them and explain why?
Active Learning	Observe how children are selecting the correct size of block for a tower or they are beginning to compare. Put items in the environment for them to compare in different ways: scales/ height/ foot length etc.	Begin subitising cards with 1 – 4 red dots on. Check by matching objects over the top and 1-1 count. Can children begin to naturally do this if given three or four cars etc?
Creating and Thinking Critically	Hang objects out of reach...which can you stretch for and which can you reach. Leave a large and a small footprint in the setting...ask what size they think the person was....do same with capacity or weight. Why are triangles in the 3s group? Which shapes in the box are also in the threes group and which are not. Why?	Why are squares and oblongs in the 4s group? Which shapes in the box are also in the fours group and which are not. Why? Print using square and oblong sponges.
Language Stem Sentences and Questions	<p>The apple is under the first cup. (second/ third) Three is more than two Two is less than three Three is bigger/taller than two Two is smaller/shorter than three</p>	<p>Four is made of 4 ones/ Four is made of two twos/ Four is made of one group of 3 and one group of one Four is bigger/taller than 3 Three is smaller/ shorter than four. Four take away one is three and three add one more is four. (no written abstract)</p>
IT Links	<p>https://www.youtube.com/watch?v=-6Mg4tP0huM&list=PLgdVMbnqLpHQ7bfSLHdTkKq2-RaAzfdsW&index=5 PPT5: https://www.ncetm.org.uk/resources/52060</p>	<p>https://www.youtube.com/watch?v=cNZI-5A3G5s&list=PLgdVMbnqLpHQ7bfSLHdTkKq2-RaAzfdsW&index=6 PPT6: https://www.ncetm.org.uk/resources/52060</p>

Early Years Autumn Mathematics

	Week 7	Week 8
Mathematical Learning	Concept: Five 5 is one more than 4 Counting to 5 Line up 1 to 5 in order	Concept of Counting to 4 using cardinal principal – as long as stable order and 1-1 principles are applied. Partitioning to 1s and combining to 4
The story:	Five arrives to get the band together – and gets the party started – with a big high five!	The Numberblocks present their very own, very numbery version of the classic tale: The Three Little Pigs and the Big Bad Square.
The Five Rules of Number Stable order	Using sets of five, count to five and miss one out...can they tell which you missed? Place ten cubes correctly in a tens frame. Ask if it's a full 10s frame? Show how to fill another five and say there are 2 lots of 5.	Create the number blocks and place in order. Each time separate and rebuild whilst counting to match the symbolic number next to them and the fingers picture.
The Five Rules of Number 1-1 Correspondence	Using groups from 1 – 5, can they count accurately using 1-1 correspondence? Put things in different arrangements eg; around a circle, in middle and four corners of a square etc.	Create plates of the numbers deconstructed. Children rebuild to match their different images of the number block patterns.
The Five Rules of Number Cardinality	Try to trick them...count five objects aloud and then say: 'There are 4 objects...'	Prove why the number blocks have been put on the wrong plates by counting the ones. Repeat for money in purses to 4p.
The Five Rules of Number Abstraction	Subitise to five. Run around five times. Do five laps on the trike. Pour five water cups into a jug.	Subitise using Numberblocks that have been decomposed to ones that are far apart. Check by placing counters on top.
The Five Rules of Number Order Irrelevance	Select five from a tray of objects. Pentagonal shapes...explore and count sides in any order.	Partition the Numberblocks in different ways but recognise that three is always three even when it's 3 x 1s etc and 4 is always 4 etc Create some part-part-whole pictures to represent the numbers to 4 using blocks. Repeat with 1p coins.
Playing and Exploring	Provide opportunities for the partitioning of five using objects, cups of water eg: 1 cup and 5 cups, sand scoops, recipes in mud kitchen. Throwing a five on a dice to win etc.	Look for number 4s and groups of 4s in the setting. Have pictures of the number block arrangements for four, the number four and the finger pictures to match in the setting.
Active Learning	Sing five little ducks went swimming one day etc Count four and add one more. Practise this so that they do not start the count all over again by conserving four and then say five. Print with pentagons.	Notice how children use their fingers to keep track of the count. Model different ways with your fingers. Children to give you a number of fingers to represent the number you say. 5 current buns etc. The three little pigs story.
Creating and Thinking Critically	Feely bag with number blocks of 1,2,3,4 and 5. Identify with your hands and say the number. Take out the blocks and order in size. Why are pentagons five?	Build the blocks to build: use 1 of one item, 2 of another, 3 of another and 4 of the final item.
Language Stem Sentences and Questions	One and four make five Two and three make five One cupful and 4 cupfuls make five cupfuls etc	I can see 1,2,3,4...4 windows 3 is the same as 1 and 1 and 1 etc 3 is equal to 1 add 1 add 1. 4 is 2 equal parts of 2 and 2.
IT Links	https://www.youtube.com/watch?v=fo10C5Bh7XM&list=PLgdVMBnqLpHQ7bfSLHdTkKq2-RaAzfdsW&index=7 PPT7: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=11XKIWE8zTo&list=PLgdVMBnqLpHQ7bfSLHdTkKq2-RaAzfdsW&index=8 PPT8: https://www.ncetm.org.uk/resources/52060

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	Week 9	Week 10
Mathematical Learning	<ul style="list-style-type: none"> Counting to 5 Line up 1 to 5 in order Identify missing numbers within a 1 to 5 line-up 	<ul style="list-style-type: none"> One-to-one correspondence –match one number name to each item to be counted Cardinality – the last number in the count is the total size of the group Stable order- say the number names in the correct order
The story:	Five and friends set off on a rhyming romp through field and forest but they keep getting mixed up!	It's a lovely day for a picnic but one of the flapjacks is missing! Is there a flapjack-snaffler on the loose or has Three forgotten what Numberblocks do best?
The Five Rules of Number Stable order	Rote counting of 5 objects onto the number 5 and word five plates. Balancing 5 objects of the same type on each side of the balance scales. Pouring five beakers into the bottle. Creating mud recipes by counting five scoops into the saucepan etc. Count each to see the sequence. Missing number sequences.	Find the numbers outside and build the number blocks to match and then order them in the correct order. Talk about what came before. Repeat...but miss a number and children have to spot what's missing when they make the numbers...then create a card and Numberblock to show it.
The Five Rules of Number 1-1 Correspondence	Match the objects to their shadows on a sheet and one to one correspondence count.	Place the incorrect Numberblocks with the card numeral Children check them and correct.
The Five Rules of Number Cardinality	Give the children sets of objects to five to count. Ask how many in the set? Create some bags with label stickers to match.	Using the number block five...make him in as many ways as you can eg: vertical, horizontal 4 and a one stuck on side etc. Prove that they still have five when you count by matching to some 2cm sq designs of the blocks with the 1-5 inside.
The Five Rules of Number Abstraction	Match the 1p coins to the coin values 2p and 5p. Have a shop which operates with 1p to 5p. Forest walk count...puddles, leaves, birds etc to five.	Using cubes of 1 red, 2 orange, 3 yellow, 4 green, 5 blue mixed in a tray....build the Numberblocks and state 'This is Numberblock 5...it has 5 cubes' etc
The Five Rules of Number Order Irrelevance	Collect sets of five in the environment and make a collage to represent 1,2,3,4, and 5 eg: 5 sticks, 4 leaves, 3 daisies, 2 shells, 1 feather. Fish five pingpong balls from the water tray.	Show that 5 leaves or sticks or anything do not have to be the same size...it's just the count that is. So five big jumps and 5 hops are not the same action but the same count.
Playing and Exploring	Feely bag number blocks with five boxes for them to stand on. Children mark make to record the Numberblock for the correct box. Feel in the bag...can you identify the Numberblock? Were you correct? Now stand it on the correct box.	Use the ones blocks (red) to construct all of the Numberblock pictures. Ask them if they could have created the numbers using other Numberblock partitions or arrangements.
Active Learning	Place objects in a line (schema) and describe what's before and what's after. Do this with coins, objects, weights.	Count moveable objects or activities. Play a game by throwing a dice and moving that number on the board. U. There were five in the bed...se problems where children have to use numbers to count
Creating and Thinking Critically	Retell the Numberblock story using the puppet theatre and Numberblocks. Retell using different characters and how they get back into the correct order. Sing: 5 cheeky monkeys etc	Have card labels in the setting and ask children to label sets. Have some pictures of sets and ask children to label with the word. Count the shape sides or angles and label with the shape number.
Language Stem Sentences and Questions	How many? There arecars One comes before two Two comes before three etc Two comes after one, three comes after two etc	One, two, three, four: there are 4 flapjacks Four is missing. (count and miss a number) You counted three twice. (count and say three twice) I know there are five because I counted them each once. I know there are three because I said the numbers in the correct order.
IT Links	https://www.youtube.com/watch?v=fo10C5Bh7XM&list=PLgdVMbnqLpHQ7bfSLHdTkKq2-RaAzfdsW&index=7 PPT9: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=11XKIWF8zTo&list=PLadVMbnqLpHQ7bfSLHdTkKq2-RaAzfdsW&index=8 PPT10: https://www.ncetm.org.uk/resources/52060

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	Week 11	Week 12
Mathematical Learning	<ul style="list-style-type: none"> • Subitising numbers 1 to 5 • Different ways of arranging blocks to 5 • Conservation of number – different arrangement of blocks but the number remains the same 	<ul style="list-style-type: none"> • Composition of numbers 1 to 5 • Introduction to the 'part-part-whole' structure of number • Partitioning a whole number into parts • Conservation of number – a number can be partitioned but the whole (total) remains the same
The story:	Three opens a stampoline park, where her friends have splatty fun making inky prints of all the shapes they can make.	The Numberblocks show us what they are made of in a song and dance all about the parts that make a whole.
The Five Rules of Number Stable order	Use the number block mats to build the arrangements and check by numbering each one of the blocks on the mat to show the stable order in sequence.	Show using the part-part whole how the number can be partitioned in different ways but still remains as the total as proved in the count order once the parts are recombined to give the whole.
The Five Rules of Number 1-1 Correspondence	As above but evidence the practical count by placing the cubes on top of the Numberblock mat designs and counting to check.	Begin to count numbers and objects into a counting tens frame in the correct order. Show how one count is more or less or the same as another using two frames.
The Five Rules of Number Cardinality	Build all possible Numberblocks for 4 and show how it's always four regardless of arrangement. Look at the special square 2 x 2...make pictures using square stamps.	Break the number blocks into parts and place in the PPW model. Regroup and count to show the final count number names the Numberblock.
The Five Rules of Number Abstraction	Show different dot patterns of 1,2,3,4 and 5...can they flash card subitise? Practise.	Continue to subitise using the Blocks in different arrangements.
The Five Rules of Number Order Irrelevance	Use the Numberblock arrangements for four and create a Numberblock printing design using all possible arrangements.	Introduce a part-part whole model by showing two as one and one. Repeat for the other arrangements for the rest of the Numberblocks eg: 5 is 1 and 4. Do not write the addition sentence. You can extend by asking how 4 can turn into five and how 5 can turn into 4 etc and observing what happens in the PPW model and the Block.
Playing and Exploring	Place card on a washing line with a Numberblock image. Hide a number of cards with numerals 1-5 on them and Numberblock pictures of 1-5 in different arrangements. As they find the cards, they add to the correct point on the line.	Set some arrangement challenges eg: 5 seeds in each pot, three books in each bag etc. Explain how they are doing this eg: 3 seeds in and another 2.
Active Learning	Give children bowls with numbers in to collect sets of these from the setting.	Show partitioning and recombining in play. 4 cars is two cars and two cars etc
Creating and Thinking Critically	Use a tray of coloured cubes and build sets of Numberblocks using the correct colours. Label them.	Place five fish in the water tray and give two nets. Can they have the same in each net to collect five? Why not...what are the possible partitions?
Language Stem Sentences and Questions	<p>This is five. I can see 2 and three. etc</p> <p>This is four. I can see two and two. Etc</p> <p>I know this is 4 because there are 4 blocks</p> <p>Four is more than three because it has more blocks</p> <p>Four is less than five because it has fewer blocks etc</p>	<p>If the whole is 4 then one is a part and three is a part.</p> <p>The whole is 4. 2 is a part and 2 is a part.</p> <p>The parts are 1 and 3 so the whole is four.</p>
IT Links	<p>https://www.youtube.com/watch?v=to10C5Bh7XM&list=PLgdVMbnqLpHQ7bfSLHdTKq2-RaAzfdsW&index=7</p> <p>PPT1 1: https://www.ncetm.org.uk/resources/52060</p>	<p>https://www.youtube.com/watch?v=11XKIWE8zTo&list=PLadVMbnaLpHQ7bfSLHdTKq2-RaAzfdsW&index=8</p> <p>PPT12: https://www.ncetm.org.uk/resources/52060</p>

Early Years Autumn Mathematics

	Week 13	Week 14
Mathematical Learning	4 can be partitioned into 2 and 2; and, 1 and 1 and 1 and 1.	The number of a group can be changed by adding to it or taking from it. Addition and subtraction of 1. Number bonds to 5
The story:	Double trouble as Four splits and a pair of tricky twins turn up: The Terrible Twos, who decide it's time to tickle their friends to pieces.	Five and friends discover a hole that makes their heads fall off!
The Five Rules of Number Stable order	Make groups of 4 using a variety of objects. Place them over the numbers on a Number Track. Place them into a tens frame with the numbers to 10 inside it. Show that the count sequence is 4.	Use a number track that has been cut up. Can you reconstruct it in the correct order. Repeat for number tracks with missing numbers and record what's missing. Create their own number tracks.
The Five Rules of Number 1-1 Correspondence	Make own Number track and show how you place the counters or objects. Touch each to count to make the count.	Using the created number tracks, place objects along and where you stop, build the Numberblock to match.
The Five Rules of Number Cardinality	Give all a number track to jump along. Ask how many jumps to reach the end...then do, count aloud and check.	Using the bean bags, throw five into the containers to add up scores in 1s. Repeat for 5 hoops into a bucket. Repeat for recipes of 1-5 cups of sand, water, salt, flour and mud.
The Five Rules of Number Abstraction	Make a tune with two beat taps of the triangle of sticks.	Show two purses. Have 1-4 in one purse and show what happens when an extra one arrives. Use the number track to place the pennies on and count.
The Five Rules of Number Order Irrelevance	Use the part, part whole model to explore the component parts for number 4. Look at the 2 2s in particular. Look at swapping one of the ones to the twos to show 1 and 3. Show how the PPW model can change orientation and still be the same.	Show two number tracks with different amounts on to 3. Put the tracks together and ask how many objects there are in all. Place all objects on one track and then in a tens frame to check.
Playing and Exploring	Leave out pairs of identical containers – transparent and opaque eg: two Oxo boxes etc. Ask the children to fill with identical number of things.	Create all Numberblocks to 5 several times using the correct colours and place in a bag. Take out two Numberblocks. If they make five keep them. If not, put back in the bag. First to make three fives wins.
Active Learning	Focus on mark making of the numerals to match containers etc	Partitions to 5. Using the number blocks, and a part part whole model, explore the different partitions. Use pictorials of the parts in a part part whole model and ask which Numberblock it represents. (additive reasoning) eg: two groups of 2 make Numberblock 4.
Creating and Thinking Critically	Make a dance where you do two jumps, two hops etc two bangs on the drum. Make double repeat patterns eg: 2 blue, 2 red, 2 blue, 2 red. Use the stamps and paints. Or the number stamps... Use the two twos game on the ppt.	Place the Numberblock into the part whole model in different orientations. Ask the children to find different objects in the setting that would show how this Numberblock could have been made. Repeat by showing the whole and a part. This is an adding on. Reframe into a subtraction...one less than and what could I do to five to turn it into 4? etc
Language Stem Sentences and Questions	I see two groups of two I see two pairs of... I see 2 lots of.... I see two twos Two is 2 ones Four is 2 twos.	First there was...Then....Now.... Five is made of four and one Four and one is five Five subtract one is four
IT Links	https://www.youtube.com/watch?v=kWYQifnJof8 Ppt: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=4EvAga-fvBk&t=39s Ppt: https://www.ncetm.org.uk/resources/52060

Early Years Autumn Mathematics

	Week 15	
Mathematical Learning	Addition and subtraction of numbers to 5 • Number bonds to 5	
The story:	Five is so good at hide and seek, she can find the others without looking up from her book – but how?	
The Five Rules of Number Stable order	Count out five Numberblock cubes onto a track for five. Practice taking some off...roll a dice showing 1-4 and take that number off. Count to show what the number of the new count is and describe the actions.	
The Five Rules of Number 1-1 Correspondence	Give the children a set of the Numberblocks and state that they all lost one one. Take off the one one from each and count one to one C to find the total left. Match this to the correct number.	
The Five Rules of Number Cardinality	If I take one away, why do I not have the same quality? Repeat above on a 2cm squared number track to five. Count the effect of the subtraction and match the number card to the answer.	
The Five Rules of Number Abstraction	Use a jug with cup markers to 5 up the side. Pour in two plain cups and two coloured cups of water. How much is in the jug...read the side. Pour out a cup ...how many now? Etc etc. Repeat for spoons of rice on the balance scales...How are you making it balance?	
The Five Rules of Number Order Irrelevance	Use pairs of subitising cards and ask how many altogether eg: 2 and 3 make 5.	
Playing and Exploring	In the sand, mud or water, explore plastic litre containers that hold 5 cups of Do this by cutting the container to the correct size or using litre bottles and 200ml containers. Explore and talk about different ways to fill the containers.	
Active Learning	Develop all strategy for counting all one to one...counting by counting on eg: 3,4 ,5 and finally subitising.	
Creating and Thinking Critically	Play hide and seek for five. Use the sand tray to hide Numberblocks that will add to make 5. Find and build. Repeat for coloured bags of objects or number cards or subitising dots in the setting.	
Language Stem Sentences and Questions	One and four together make 5 so one add four makes five. Five is made of two and three so five subtract two is three, This is five. It is made of 3 and 2 ones.	
IT Links	https://www.youtube.com/watch?v=CpigNf3ZJHE Ppt: https://www.nceim.org.uk/resources/52060	

Early Years Spring Mathematics

	Week 16	Week 17
Mathematical Learning	Counting to six Subitising to 6 initially using a dice pattern.	Counting to seven. Meet Seven 7 is one more than 6 Counting (1 to 7) and ordinal numbers
The story:	The Numberblocks make a new friend who likes to roll the dice and with Six in the mix, everything's a game.	It's a rainy day for a picnic, but when lucky number Seven appears, everything comes up rainbows.
The Five Rules of Number Stable order	Using a variety of horizontal and vertical number tracks, recognise the position of 6. Roll the dice and build the number block for each until you have them all. Play a game eg: snakes and ladders by counting the number of spots and moving the number of spaces. Use a number track to explore what's before and what's after.	Hide pictures of the Numberblocks with their numeral outside. Gather them and put in order to create a Numberblock picture.
The Five Rules of Number 1-1 Correspondence	Using the dots on 6 different dice, match the blocks to the dice patterns. Count by 1-1 correspondence to check.	Count out the objects to 7 and place within the tens frames. Each time state the number count as an object is placed in the frame. Make the 7 Numberblock by counting out 7 cubes 1 by 1.
The Five Rules of Number Cardinality	Use a number track to explore what's before and what's after...roll the dice and say what comes before / after.	Create a number track vertically and horizontally with the numbers 1-7 by recording the sequence accurately and in order. Identify incorrect tracks where the number order has been changed.
The Five Rules of Number Abstraction	Use pairs of subitising cards and ask how many altogether eg: 3 and 3 make 6.	Make a song for 7 using 7 beats on a bar or 7 chimes on a bell etc. Use this as a concept for making a bell chime pattern for each Numberblock and asking a partner to guess the Numberblock it relates to. Using the 7 rainbow colours, show that we can count colours. Create own 7 part rainbow picture.
The Five Rules of Number Order Irrelevance	Find different representations of 6 within the room eg: linear, 2 x 3 arrangements (Numicon) and making other layouts of 6 using cubes to match irregular patterns	Hide the parts for the Numberblock 7 in a builders tray...check that they have 7 by counting as they find and recounting once they have all of them lined up.
Playing and Exploring	Leave out a Loto game. Roll the dice and pick up the corresponding Number Block and place on the board. Take turns until the board is filled. Then, continue to play but take off the corresponding Number Block. The first with an empty board wins.	Leave out a plate next to each of the NumberBlocks to 7 on a picnic mat. Encourage them to set a space for each with plate etc. Give each number block the correct amount of raisins or other on the plates.
Active Learning	Provide dice to support different games in the setting so that you can see who is beginning to subitise rather than count.	Encourage children to estimate a quantity when they take them from a pile. Line them up to check the count.
Creating and Thinking Critically	Make their own dice from cardboard cubes already folded and stuck, using sticky dots to create the same patterns as on a normal 6 dice.	Sort a variety of objects into sets of 7 and groups of not 7. Use tens frames to check the count and compare sets with and without 7.
Language Stem Sentences and Questions	I can see three dots etc Six is made of three and three Six is one more than five	I have counted seven ducks Seven is taller/ longer than six. Seven is one more than six First, second, third etc
IT Links	https://www.youtube.com/watch?v=q6oeLjnM8Cw Pot: https://www.ncetm.org.uk/resources/52060	https://www.bbc.co.uk/cbeebies/watch/playlist-numberblocks-songs#playlist Pot: https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 18	Week 19
Mathematical Learning	Saying the counting numbers accurately to 8. Count using the cardinal principle Explore all different partitioning for 8.	Numbers to 9 are accurately said and formed. Explore all different partitioning for 8. Nine and 4 are square numbers and identify the structure within each...this could lead to building other square numbers.
The story:	Seven meets one and asks her to show him how high she can hop. She hops and lands on seven to make 8. He has 8 arms and 8 legs and is called Octoblock. Octoblock has superpowers.	4 is sad because he thinks he's the only square. 8 tries to make a square but he has a hole in the middle. Then one arrives and hops into the hole making 9. The properties of the square are explored as well as the partition of 8 and 1.
The Five Rules of Number Stable order	Hide a seek the Numberblocks from 1 -8. Match them to the correct pictures and numbers and then put them in order. Make sure each card has the numeral and the word.	Start counting from one of the known subitised amounts eg: 2,3,4,5,6,7,8,9 with cubes. Multilink is good...if you have sets of nine in rows using two different colours where one is subitised.
The Five Rules of Number 1-1 Correspondence	Check pairs of Numberblock arrangements by placing cubes on top and checking by one to one correspondence counting, which are equal to 8.	Check the disbanded sets of nine to find the one that isn't.
The Five Rules of Number Cardinality	Identify which pairs of number block cards match to make 8 by placing cubes on top, combining and counting cubes to see which number is the final count.	Place the cubes on top of the various 9 arrangements of cubes, patterns coloured on large square paper etc. Count and state the final number as the amount. Move to a box which says 9 and those that are not to a box that says not 9.
The Five Rules of Number Abstraction	Using the bean bag throws outside or a hopscotch to 8 count the throws or hops etc.	Create a trail using chalk on the playground with 9 parts. Place a small item in each eg: shell, stone etc and then throw a dice (0-9) to collect in a basket. Continue until all items are in the basket.
The Five Rules of Number Order Irrelevance	Using the bonds for eight shown in the pairs of domino style blocks, count each to check and know that the order is irrelevant.	Hunt for 9 items to place on a picture mat of 3 x 3 squares. eg: 1 stone, 1 shell, 1 car, 1 paperclip etc. Then note that it didn't matter what order they were found, they still made 9 items.
Playing and Exploring	Make octopus, spiders, etc using socks and dried rice or peas. www.bbc.co.uk/cbeebies/makes/octonauts-socktonaut	Leave out 3 x 3 grids large....with dice and counters. Let the children invent games like three counters in a row. Go on a square hunt around the school....and a non square hunt. Take clipboards and pens and record drawings etc.
Active Learning	Develop confidence in the accuracy of the count in the environment. Build using their cubes to represent the partitions and describe them.	Show how 1 1 makes a square, 2 rows of 2 make a square and 3 rows of 3 make a square. Note that is you put the 3 rows of three in a line they do not make a square etc. Give the children lots of items to place into square grids eg: 3 rows of three people.
Creating and Thinking Critically	Design obstacle courses and throwing games where children count to 8 eg: 8 beanbags into 8 buckets.	Make squares from squares using gummed squares and mosaic tiles. They could even explore in 3D format using square bricks and Lego.
Language Stem Sentences and Questions	I can see...all numbers to 8. Use stem sentences to describe partitioning eg: 8 is 4 and 4 etc Use stem sentences to compare: 7 is one less than 8. One less than eight is 7. 8 is one more than 7. One more than 7 is 8.	I can see 1,29 8 and one more is 9. 8 is one less than 9. 1 and 8 make 9. When 1 and 8 combine in any order they make 9. 9 is 3 groups of three. Make it explicit the structure that reveals 9 as a square number.
IT Links	https://www.youtube.com/watch?v=QA7iJSixQZk Pot: https://www.ncetm.org.uk/resources/52060	https://www.bbc.co.uk/cbeebies/watch/numberblocks-the-nine-song Pot https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 20	Week 21
Mathematical Learning	Saying and recognising all counting numbers to 10 and ensuring all are correctly formed. Fundamental principle of base 10. Unitising concept of one group of ten. Ten is both ten units of one and one unit of ten....they are equivalent. Notice that the gridlines marking ten disappear to mark the fact that this is one ten.	Counting numbers to ten and formation. Adding one to any number to ten. Understanding of how each number is related to its adjacent number. How the counting numbers increase by 1. You can make any number by adding 1 to the previous number.
The story:	Nine wants to get bigger...but he gets one smaller when he sneezes. One hops on top of nine to make ten. I asks 10 why she has a 1 and a 0. and ten explains through her song and partitioning.	One drops out of the sky and sings about adding one. Then another one appears to make one and another one which combine to make two. This continues to ten. Note the reference to key relationships: 4 = 4 corners of a square, six is the dice, 7 is the rainbow.
The Five Rules of Number Stable order	Hand prints with numbers formed accurately against each number in sequence.	Look at the bond pairs built for ten in two colours. Recognise
The Five Rules of Number 1-1 Correspondence	Use the tens frames to build tens using different objects. Each time count using 1-1 correspondence. Create their own pictorials in tens frames and number. Or stick a sticker into each part of a number frame or a finger print.	Build each Numberblock and add one more. Recount to check the total and describe the new Numberblock.
The Five Rules of Number Cardinality	Compare some tens frames and count by using cubes or counters over the top of the tens frame items. Know how many are in each and record correctly. Order the frames from least to most.	Build the staircase sequence of one more each time for sets of cards showing 1 – 10 objects, Describe each card by comparing with the one before or after.
The Five Rules of Number Abstraction	Use a chalk drawn large tens frame outside for representing different objects to ten. Use the water to pour ten small 'red' cups into a large container. Then pour from the large container into 10 different 'green' cups.	Using a number equation card showing + 1 to numbers to 9, represent it using concrete in some form. Children should not be writing the sentence but can be introduced to what the signs are and their meaning.
The Five Rules of Number Order Irrelevance	Sit the teddies down for a picnic and place 10 raisins on each plate. Count them to ensure they make ten and then work out which teddy has eaten a raisin when you were not looking!	Count a set of objects on a plate and hold the number and add another one from a different plate. Say the new number and then recheck through 1-1 correspondence counting.
Playing and Exploring	Use bundles of ten straws or plastic spoons, or coins. Describe each bundle as one group of ten. Leave out some tens frames so that children can explore their sets of ten...small ones and large chalk ones outside.	Leave out a large tray of the Numberblocks. Children lay out in increasing order by comparing the blocks. Place next to the number sequence of 1 -10. Build own stair case of numbers to ten using blocks or Lego or use pegboards and create a pegboard staircase.
Active Learning	Set baskets around the setting for collections of numbers recorded in the baskets to ten. Consider a forest walk for collecting ten leaves/ sticks etc	Compare a pair of different Numberblock towers.. Subitise by placing them next to each other and counting on from the smaller to find the larger quantity.
Creating and Thinking Critically	Using the drawing round of hands and feet or mindfulness hand pictures, colour each finger or toe in the Numberblock colour. Make two giant hands and write the numbers inside the fingers or pain them in.	Provide bags (10) with different collections of things inside from 1 -10. Peg the bags onto a washine line in order by counting the contents and ordering the bags.
Language Stem Sentences and Questions	I can see 1,2,310 I can see ten ones I can see one ten. Ten ones is the same as one ten. One ten is the same as ten ones. Ten is the same as two fives.	I can see 1,2,3 etc to ten. Nine is one more than 8 etc etc When you add 1 to a number the number gets one bigger. Add one turns 5 into 6 etc etc.
IT Links	https://www.bbc.co.uk/cbeebies/watch/numberblocks-the-ten-song Ppt: https://www.ncetm.org.uk/resources/52060	https://www.bbc.co.uk/iplayer/episode/b08q39b4/numberblocks-series-2-just-add-one Ppt https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 22	Week 23
Mathematical Learning	Count forwards and backwards from 0 to 10. Subtracting 1 from a number. The subtraction sign. Notice the triangular number pattern in the initial picture of the ten bottles.	The concept of equal groupings (precursor to factors) Equivalence: 6 references quantities that are the same eg: $6 = 3 + 3$. This is really important to the understanding of the equals sign. Repeated addition. This lays the foundation for multiplication eg: $6 = 2 + 2 + 2$ Factors of 6: Lays foundation for partitioning into equal groups.
The story:	Ten green bottles. Ten counts ten green bottles...then as the story progresses, the bottles fall off and turn into different things/ individual stories of First, next and now/finally eg: first there were ten bottles, then one fell off and now there are nine bottles.	Counting sheep. 6 sheep who do not want to go to sleep. 6 plays a game with them by rolling a dice and getting them to rearrange themselves into different patterns. Each time she counts and falls asleep they run off in factor groups.
The Five Rules of Number Stable order	Give some sets of disbanding number blocks. Can the children order them by rebuilding?	Using white beanbags or balls, scatter them outside and ask the children to regroup them onto green mats and check they still have 6 even if the groups are $2 + 2 + 2$.
The Five Rules of Number 1-1 Correspondence	Build a decreasing staircase and observe the $1 - 1$ counting principle before placing them onto a squared paper staircase with the numbers shown.	As the children are making their sheep, they will need to keep checking that their total is 6 by counting.
The Five Rules of Number Cardinality	Rebuild the ten different Numberblocks given as towers and count each staircase number and write a label for each.	Use a variety of Number blocks and investigate ways to create equal groups with them...noting that regardless of the groups the whole never changes.
The Five Rules of Number Abstraction	Using the number equation cards, match to their pictures to show the subtraction of 1.	Write the numbers accurately for pictures of the sheep in a given number sentence eg: $2 + 2 + 2 =$ build with the cotton wool balls and then move to the end of the sentence to check the amount by counting the whole group. Record answer.
The Five Rules of Number Order Irrelevance	Try some inverting: Here is a Numberblock but is all broken up and he has one part missing. What was he before? Count the blocks and then find another one to solve the problem.	Round up the sheep in the sand tray and place them in a pen...how many are there? Repeat for other animals in the sand tray...or fish in the water tray.
Playing and Exploring	Hit plastic cups or something off a shelf one at a time by throwing a beanbag. Say the sentence: First there were 8, then one fell off and now there are 7.	Craft table for making sheep with cotton wool and googly eyes etc. Stick onto green paper sets to show equal groups eg: 6 sets of 1, 1 set of 6, 3 sets of 2 and 2 sets of 3.
Active Learning	Count back in is on a hopscotch or other. Sing counting back rhymes eg: 5 naughty monkeys/ 10 currant buns.... etc	Set out numbers of pegs on pegboards into arrays...turn the pegboards and notice the array language change eg: I have 2 equal groups of 4 / I have 4 equal groups of 2.
Creating and Thinking Critically	Fill ten plastic bottles (green label) with water in the water tray outside or sand in the sand tray outside and put the lids on. Sing the song of the ten green bottles and act out pushing them over one at a time. Change the rhyme to eg: ten green apples or ten sandy castles and adapt the song to match the objects.	Invest their own groupings game using large piece of green paper, fencing pieces from small world farm, a large dice and some cotton wool balls or white tissue paper balls.
Language Stem Sentences and Questions	10 take away 1 is equal to 9. Eight is one less than 9. One less than 9 is 8. When you subtract from a number it gets one smaller. First there were 6, then one is taken away and now there are 5.	There are 3 equal groups of 2 sheep. 6 sheep is the same as 2 and 2 and 2 sheep. 6 sheep is the same as 2 add 2 add 2 sheep. 6 groups of 1 sheep is equal to 3 groups of 2 sheep. 6 groups of 1 sheep is the same as 3 groups of 2 sheep.
IT Links	https://www.youtube.com/watch?v=mZ7ifiuQpQo Ppt: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=f8aqFaptyvg Ppt https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 24	Week 25
Mathematical Learning	Doubling of 1,2,4 to make 2,4 and 8 and then halving of the doubles to give the factors 1,2,4 and 8. Combining to double Partitioning to halve	Inverse relationships. Nine is partitioned into three threes and then recombines. Doing and undoing Because 9 can be partitioned into 3 threes, he is a square number.
The story:	One goes into the jungle and finds a stone temple...Indiana Jones style including the famous hat and quotes. In order to progress on a quest, she has to double to make two and so on. Then the reverse happens and we see the halving process where each Numberblock is split into two equal parts.	The three threes. 4s kite gets stuck in a tree and 9 isn't tall enough to get it down. 9 splits into 3 threes and a circus act begins. 9 continues to group and partition throughout the story.
The Five Rules of Number Stable order	Using the Numberblock for 2,4 and 8, show how it partitions to equal or unequal parts using half to describe only the 2 equal parts. Eg: Why is 4 partitioned to 1+1+1+1 not halves but $4 = 2+2$ is? Recognise the conservation of the amount every time despite the partitions.	Draw the ten balloons for Numberblock ten and write the numbers correctly in them from 1 – 10. Repeat using paint and stamp pads using a paint brush to write 1 – 10 in each. Repeat using black wax paper (magic paper) to inscribe the balloons with their numbers.
The Five Rules of Number 1-1 Correspondence	Complete a simple dot to dot using numbers to ten, counting each as they meet the dot with the pencil and anticipating, finding and connecting to the next.	Take sets of three cubes and construct a square pattern. State 3 and 3 and another 3 equal 9. Count to check each part of the sentence.
The Five Rules of Number Cardinality	Create a simple bar model with the number at the top to partition. Children build this number and then show how it splits into the two lower bars to create equal parts. Note that this is still regrouped to make the number at the top of the bar. State: Half of 4 is equal to 2 twos. Double two is equal to 4.	Use a part part part whole model to represent 9 in 3 equal parts of three. Accompany with the equation: $9 = 3+3+3$. Notice that other arrays can be made which do not make the square and are not equal groups...but they all make 9 on the final count of all of the arts. Explore other PPPW and PPW etc.
The Five Rules of Number Abstraction	Show the bars again with the number equation as an addition for doubles eg: $4 = 2 + 2$. Using the correct Numberblock for the sentence, show how it works on the bar model.	Give children squares of 9 squares coloured in three different colours but where the threes are in rows of three (horizontal) columns of three (vertical) and random threes. Each time get the children to count and check that there are 3 three and that makes 9.
The Five Rules of Number Order Irrelevance	Match various dot patterns to their double or halve. Consider doing this in a sensory tray eg: pingpong balls with black dots on to fish for and put in pairs to show double and halve.	Colour parts of a 3 x 3 square grid with a PPPW model with it showing 9 3 3 3 And the sentence with parts missing : $9 = 3 + ? + 3$ etc. Children colour the grids showing three threes in different ways and complete the PPPW and equations.
Playing and Exploring	Make hats for the explorers using craft pompoms or sequins etc in patterns of 2s, 4s or 8s. Think about symmetry as you do this. You could extend to jungle butterfly or humming bird with identical wings.	Tell the story of the three bears. Provide each bear with three different items eg: a bowl, a cup and a spoon.
Active Learning	Play double up when the music stops....dance and when the music stops, find a partner...then another pair and if possible...repeat to 8. Then do the opposite.	Using beanbags, and PE hoops, throw three bean bags into three hoops and then regroup them. Collect sets of three threes in three equal circles etc. Give pictures of tricycles and get three spokes using straws to stick into each.
Creating and Thinking Critically	Provide game boards, Number tracks, tens frames and various counters + dice with only the numbers 1,2,4. Ask the children to create a game involving doubles.	Decorate a biscuit with three of each type of decoration eg: three stars, three choc drops and three flowers.
Language Stem Sentences and Questions	Double and Halve and half. Two doubled is four Double two is four. One half of 2 is 1 2 halved is one.	I see three threes. 3 and another 3 and another 3 are equal to 9. Three 3s are nine. Nine is made from 3 equal groups of 3.
IT Links	https://www.youtube.com/watch?v=6ZnNfVZda6Y Ppt: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=7Hd7ieePOpc Ppt https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 26	Week 27
Mathematical Learning	Odds and Evens: Recognition of odds and evens by exposing children to the 'twowise'. Recognition that each set increases or decreases by two compared with adjacent number. Equal groups when partitioning.	Fluffies One to one correspondence explored Bonds for 7 PPW relationships for bonds for 7.
The story:	Odds and Evens: A game of bounceball splits the group into two teams: Even Tops and Odd Blocks. Wearing helmets they face off across a net and try to bounce balls on their heads in order to score. During the game they split into twos.	Fluffies: A small fur ball falls from the sky and befriends 1. When 1 counts it it tickles her. This continues. 1 by 1 everyone arrives and is rolling on the floor covered in tickly fluffies. 7 arrives but he is not ticklish. So...they combine to make 7 so they can escape...but then Octoblock arrives and tickles the fluffies away.
The Five Rules of Number Stable order	Using sets of off odd Numberblock formations, turn them into evens using the two+two + 1 +1 principal to make 2 + 2 + 2. Count to check before and after the + 1.	Collect 7 items from a forest walk around the school grounds and place on a large tens frame to check the count. Notice that it doesn't matter where you start the count the sequence end in 7.
The Five Rules of Number 1-1 Correspondence	Match blocks over the top of the odd formation patterns of 2s + 1 all coloured and then add an extra block outlined but not coloured on the pattern to create the even. Repeat for creation of odds.	Use pairs of number blocks to explore bonds for 7 and check that if you use fluffies (pom-poms) the same result is achieved. Extend to other objects.
The Five Rules of Number Cardinality	Use squared paper to represent the abstraction equation eg: $5 = 2 + 2 + 1$. Count all the parts as a whole to check that they are equal to the whole.	Represent in different arrangements but still count in same order to 7 and see that the different patterns are still 7 as this is the final number of the count.
The Five Rules of Number Abstraction	Use the number equations to show the evens or the odds to build the patterns eg: $3 = 2 + 1$. When built, represent in a PPW model.	Using a sentence to show the bonds for 7 with a Bar beneath...colour in two colours to show the bond or stick on fluffies. Eg: $7 = 2 + 5$ 7 2 5 Build into a PPW model.
The Five Rules of Number Order Irrelevance	Give children a number card and a tens frame. Ask them to gather counters, cubes shells, stones etc to create the number to prove it is odd or even on the tens frame.	Hide and seek amounts in see-through bags outside and pair the ones to make 7. Notice that it doesn't matter how you count them, they always make 7.
Playing and Exploring	Provide all of the Numberblocks and two sorting trays. Examine each one for twos or twos with one on top and place on the odd or even tray. Make some blocks of your own using Lego.	Bags of pom-poms from 1 – 8 and number blocks made from linked cubes 1-8. Match Numberblocks to the pom-pom bags. Then give all a pile of pom-poms and empty bags with a Numberblock in....count the right number of pom-poms into the bag.
Active Learning	Construct towers with identical heights and consider if they are odd or even and if combined...odd or even and why. Repeat for a ramp where the two heights are different. Repeat for balance scales...one on each side creates two.	Practise subitising to turn a Numberblock into a 7 block. Eg: using a block of three...hold three in head and count on the extras to make 7.
Creating and Thinking Critically	Give some sets of small world animals /people or just counters and ask if they are odd or even by placing in twos on a tens frame to see.	Show the Numberblock but only some of the pom-poms. Match to the blocks and decide how many more would be needed to make the 7 Numberblock. Repeat for different amounts of pom-poms but still with 7.
Language Stem Sentences and Questionsis even because it is made of twos.is odd because it is made of twos with one on top. An even number comes after an odd number. An odd number comes after an even number. An even number comes before an odd number. An odd number comes before an even number.	One to one mapping: One fluffy for each block. Two has two fluffies because it is made of two blocks. 7 is the whole. 5 is a part and 2 is a part and 7 is the whole....use fingers to model the numbers at they speak.
IT Links	https://www.youtube.com/watch?v=KEw2E1qG8Ak Ppt: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=BqJ62VZH6e4 Ppt https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 28	Week 29
Mathematical Learning	Blast off: Count backwards in 1s from 10 to 1 and then blast off. Partitions to 10 and note how they recombine to make 10. Use of bars and PPW.	The Two Tree Subtraction of two. Partitioning in a sequence. Starting with ten spitting into 2 and 8. Show the subtraction of two from each even block.
The story:	One wishes to go to the moon and ten promises to take her. They all count down from 10 -1 and she takes off leaving them behind. Once there, she splits into pairs (no bonds) of Numberblocks. The bonds meet some aliens and which turn into sprites which are zapped with lasers. Finally five and five give the saucers a push and send the aliens on their way! They recombine and make ten who takes off for home.	Nine and ten meet a special tree and agree to play Throwing Twos. They take turns splitting to make two. The sports continue with penalties and intercepts. The ball Twos stack up on either side of the tree. Eventually, 9 and ten reform and agree to play again tomorrow.
The Five Rules of Number Stable order	Using 1p coins in a tens frame, match the coins on the top of the pictorial and complete it by adding the coins to build to 10p.	Use the tens frame vertically and horizontally to count in 2 and then the rest...always completing a rows of 5.
The Five Rules of Number 1-1 Correspondence	Using a tens frame picture of two colours showing the bond for ten, build the parts using corresponding colour counters or cubes and show the PPW model by counting each part and the whole.	Use the tens frames of bonds as 2 and another number build using cubes to find the total.
The Five Rules of Number Cardinality	Show the different bonds for ten using two colours on tens frames (and some other bonds) and ask the children to check that each frame shows ten and which do not and how they know.	Use some patterns of the number blocks in two colours to show two and the other number from 2 onwards. Build using the same colours and write the numbers in the PPW model next to the pattern. Take out the two in one colour from your model and notice what is left. Say this as a sentence: 2 less than 5 is equal to 3. 2 is a part, 3 is a part and 5 is the whole.
The Five Rules of Number Abstraction	Learn the number bond rhyme and apply to different activities eg: 7 and three...look at me whilst showing 7 hops and 3 hops. etc	Use a number sentence showing -2 eg: $10 - 2 =$ and a tens frame to represent and a PPW, solve the problem and complete the PPW model.
The Five Rules of Number Order Irrelevance	Outside, search for the number cards and pair them to make ten by counting the parts into a tens frame.	Using the fishing game or pingpong balls with numbers of fish out a number use a tens frame to find two less and fish out the answer.
Playing and Exploring	Have a picture of each Numberblock as a descending tower staircase with children building and matching to the patterns and describing the relationship. They could also colour their own and number the towers.	Draw a large PPW model and provide sets of things for children to explore through partitioning. Compare their partitions when using the same whole. Say the sentence.
Active Learning	Have a space centre on a table with rockets with a number of Aliens in and numbers on. Practise count downs from the numbers on the rockets by subitising these. Create some rocket pictures of their own with glitter trails on black paper and chalk the numbers $10 - 1$ as their countdown.	Using PPW models with two on one part...explore what the other part could be and therefore the whole. Record this in your models. Try where 2 is a part and the whole is given to find the missing part using concrete.
Creating and Thinking Critically	Use countdown timers to ten to practise activities. Using tens frame rockets, place green pom-pom aliens in the missing spaces to make the ten. Stick onto black paper and record the two numbers as a PPW model bond eg: 10 1 9	Set the limit in two play areas as two until the timer goes. Children have to work out how to organise and whose turn is next. Pay in 2s for items in the shop. Make bonds for numbers on scales by putting two one one side and another number on the other. Count to find the whole.
Language Stem Sentences and Questions	Count back in 1s from 10. Describe relationship with adjacent numbers eg: Nine is one less than 10 and 10 is one more than 9. 10 is the whole 9 is a part and 1 is a part and 10 is the whole. Children should be showing this on their fingers as they say the sentences.	Partition to 2 and another quantity...amounts, money, weight, cm lengths etc. 8 is the whole. 2 is a part and 6 is a part. The whole is 8. Use fingers to show the numbers as they say.
IT Links	https://www.youtube.com/watch?v=zPsr_FD2KAq Ppt: https://www.ncetm.org.uk/resources/52060	https://www.youtube.com/watch?v=y-2vJad-VAQ Ppt https://www.ncetm.org.uk/resources/52060

Early Years Spring Mathematics

	Week 30	
Mathematical Learning	The Numberblock Castle: Developing the concept of addition through combining two or more numbers to make a new quantity. PPW structure exposed fully through addition.	
The story:	Making ten by finding their way through the Numberblock castle and recombining parts in a PPW.	
The Five Rules of Number Stable order	Take out a PPW model with the w missing from the many given on cards. Build the parts onto the tens frame and count in order to find the total recording the whole on the card accurately.	
The Five Rules of Number 1-1 Correspondence	Match the counters to the ones shown in two colours on the tens frame and create into a PPW model. Count 1-1 to identify the whole and the parts.	
The Five Rules of Number Cardinality	Using a PPW model where a part is missing, build the whole and separate the parts to find the missing part. Know the final number counted is the amount.	
The Five Rules of Number Abstraction	Given an equation for addition eg: $5 = 4 + 1$. Show how this looks in a PPW model and how the 5 must be used to find the parts. Repeat outside using cups with numbers on into a larger bucket and find the equation to match it.	
The Five Rules of Number Order Irrelevance	Take a feely bag with numbers in. Draw a number out and place on a tens frame. Repeat and place on the same frame. Record it as a PPW by counting on from one subitised number to find the total.	
Playing and Exploring	Use a PPW model drawn outside in chalk. Partition your group and recombine to find your total. Sat the whole PPW sentence. Repeat with throwing bean bags. Repeat with bottles of water labelled $2 + 4 = 6$ for example and the PPW model and children pour in two cups and 4 cups.	
Active Learning	Using a sentence card with an equation and a PPW model, create the PPW model and build it into a Numberblock saying the W PPW sentence. Repeat for PPW models and their equation but place the parts into a tens frame to check the whole.	
Creating and Thinking Critically	Give a bag of Numberblocks and some pictures of pairs combined to show the whole pattern. Match the two you take from the bag to the pattern showing the whole. Extend by thinking about the whole and considering what the two parts might be by creating the whole and partitioning into a PPW model.	
Language Stem Sentences and Questions	1 and 4 together make 5. Five is made from one and four. 7 is the whole. 4 is a part and 3 is a part and 7 is the whole. Use fingers to demonstrate the parts and combining.	
IT Links	https://www.youtube.com/watch?v=7gwFAXL9TkA Ppt: https://www.ncetm.org.uk/resources/52060	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 31 Numberblocks lesson 8	Week 31 White Rose
Mathematical Learning	Creating a simple and a complex pattern.	Creating a simple pattern
The story:	The Building Blocks: The Numberblocks rescue a friendly Alien who helps them build a tower to the stars.	
Stable order	The sequence continuation...extend the pattern in all forms.	
1-1 Correspondence	Count the sequence parts as a continuum and as sets of three.	
Number Cardinality	Consider how the pattern is repeating by examining the first item in every first set of three.	
Number Abstraction	Using different items to construct the pattern including hops and sounds.	
Order Irrelevance	No matter where you start in the pattern the order remains constant eg: the square is always before the triangle.	
COEL Playing and Exploring	Create patterns with three repeats ABC,ABC etc using different objects and items including movements. Use tens frames, dominoes and numicubes as well as cubes, counters etc and abstract number if appropriate eg: 2,3,4,2,3,4,2,3,4. Apply to phonics too eg: sh, ch, oo etc.. Say the pattern aloud and in a circle.	
COEL Active Learning	Use rhymes like : The Bear Hunt by incorporating sounds eg: Stumble, trip, slip, stumble, trip, trip etc Sing: 'In and Out the Dusty Bluebells.' Tongue twister patterns: red lorry, yellow lorry, green lorry...	
COEL Creating and Thinking Critically	Predicting the next in the sequence Creating your own words in the tongue twister pattern Create your own repeat using shape, sound, number etc or things gathered from outside twigs, stones leaves etc.	
Stem Sentences and Questions	What other patterns could you make using only three colours used once each in a set of three? Describe your sequence and pattern. Ask a friend to continue your pattern. Can you create the same pattern idea using shapes instead of counters?	
Going Deeper	Use musical instruments to devise and copy a pattern of three parts. Face a partner and create the musical pattern.	
IT links	Youtube : AAB pattern on Musical Math https://www.bbc.co.uk/iplayer/episode/b0bmkj57/numberblocks-series-3-building-blocks	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 32 Numberblocks lesson 17	Week 32 White Rose
Mathematical Learning	Creating a simple and a complex pattern.	Creating a simple and a complex pattern.
The story:	Pattern Palace: One and Chums carefully cross the precarious pattern puzzle paths over many magic moats to get to the Pattern Palace.	
Stable order	Consider how the pattern is repeating by examining the first item in every first set of three.	
1-1 Correspondence	In a pattern of abb, identify what number of items you would need to create two sets.	
Number Cardinality	Create the pattern sequence on a spiral or a zigzag where the 1,2,3 are always in the same order regardless of the framework applied in.	
Number Abstraction	Using different items to construct the pattern including hops and sounds.	
Order Irrelevance	No matter where you start in the pattern the order remains constant eg: the square is always before the triangle.	
COEL Playing and Exploring	Create patterns with three repeats ABC,ABC etc using different objects and items including movements. Use tens frames, dominoes and numicubes as well as cubes, counters etc and abstract number if appropriate eg: 2,3,4,2,3,4,2,3,4. Apply to phonics too eg: sh, ch, oo etc.. Say the pattern aloud and in a circle.	
COEL Active Learning	Use rhymes like : The Bear Hunt by incorporating sounds eg: Stumble, trip, slip, stumble, trip, trip etc Clap to 'We will we will rock you.' Duck duck goose game.	
COEL Creating and Thinking Critically	Explore patterns using aab,aab and abb,abb etc Creating your own words in the tongue twister pattern Create your own repeat using shape, sound, number etc or things gathered from outside twigs, stones leaves etc.	
Stem Sentences and Questions	What other patterns could you make using only two colours and abb arrangement etc. Describe your sequence and pattern. Ask a friend to continue your pattern. Can you create the same pattern idea using shapes instead of counters?	
Going Deeper	Use musical instruments to devise and copy a pattern. Face a partner and create the musical pattern. Create the pattern using loose pats around a hoop.	
IT links	Youtube : AAB pattern on Musical Math https://www.bbc.co.uk/iplayer/episode/b0bp2t8d/numberblocks-series-3-pattern-palace	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 33 Numberblocks lesson 3 and 4	Week 33 White Rose
Mathematical Learning	Partition and recombine in different ways.	Use the language of first, then and now.
The story:	All aboard a riotous railway ride as the Numberblocks try to stop a runaway train. Welcome to the fabulous fun fruit factory. Threes superfruit sorting machine is not giving her any fruit.	
Stable order	Count on from a number (conservation) when rolling a dice (1-3) and moving up a number track.	
1-1 Correspondence	Move an identified dice roll on a track through one to one counting.	
Number Cardinality	The final number represents the total.	
Number Abstraction	Roll a dice (1-3) to jump and hop on the hopscotch constructed outside.	
Order Irrelevance	Begin to realise that in the PPW model, that 2 and 3 make 5 as does 3 and 2.	
COEL Playing and Exploring	Two sets to construct a tower of five cubes: 1 and 4, 4 and 1, 2 and 3 and 3 and 2.	
COEL Active Learning	Create a PPW model outside and throw the bean bags to make five from the parts.	
COEL Creating and Thinking Critically	Using a PPW model, the total 5 and one part...count on to find the missing part. Transfer to cube tower building.	
Stem Sentences and Questions	How many did I add to make 5? What pairs make 5? Does the order matter? Why? Show using two different coloured counters to make 5 on a tens frame.	
Going Deeper	PPPW model...explore...build and draw different models.	
IT links	Mr Gumpy's Outing – Youtube https://www.youtube.com/watch?v=at_QKC0d8A https://www.youtube.com/watch?v=V3VFeGggb0o	

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Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 34 Numberblocks lesson 10	Week 34 White Rose
Mathematical Learning	Partition and recombine in different ways.	Use the language of first, then and now.
The story:	Hiccups: Every time nine hiccups he falls into pieces until he finds an unexpected clue.	
Stable order	Use a 1-3 dice and a vertical number track.	
1-1 Correspondence	Show that however we partition the number the total is always the same. Reveal through partitioning and 1-1 correspondence count of each to find the whole using cubes and a PPW mat. Give each number block and partition in different ways recording the parts using formation. NB: NO ABSTRACT CALCULATION	
Number Cardinality	Identify that whichever way they are counted eg: 2 and 3 or 3 and 2 the whole is the total and never changes.	
Number Abstraction	Create a set of a given number using loose parts. Regardless of what they are, they make the number. Repeat for hops and jumps...repeat for musical beats eg: 4 and 2 make 6...consider pairing children to show what makes 9 using two drums.	
Order Irrelevance	Using the PPW and a Numberblock...split it into the parts and know that regardless of the add the total will be the whole. Use a PPW where the whole is drawn in as a block...build it and then create their own parts.	
COEL Playing and Exploring	Create a Numberblocks story using the small world...first there were, then there were...now there are... Consider inverting: Now there are, before there were and first there were.	
COEL Active Learning	Collect the Numberblock parts using a Beetle drive principle. What can you make in two rolls of a dice? Use a 0-5 dice.	
COEL Creating and Thinking Critically	Given the Numberblock and 1 part...consider how to find the other part and how to check the answer. Record in their own PPW model using accurate number formation.	
Stem Sentences and Questions	6 is made of 1 and 5 or 5 and 1 etc	
Going Deeper	Can they deconstruct a numberblock into more than two parts? Would it matter now how they are recombined? Imagine sneezing three times and each time part of ten is blown away...what would the sequence look like?	
IT links	https://www.bbc.co.uk/iplayer/episode/b0bmkmb3/numberblocks-series-3-hiccups	

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Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 35 Numberblocks lesson 12	Week 34 White Rose						
Mathematical Learning	Subtraction	Use the language of first, then and now.						
The story:	Numberblock Rally: Ten riders and ten pedal powered cars, but only one can lift the trophy.							
Stable order	Use a 1-3 dice and a vertical number track.							
1-1 Correspondence	Count the total, count the items to take away and then recount the answer using 1-1 correspondence counting.							
Number Cardinality	Use a Numberblock to identify the number. Count back to zero from any conserved numberblock recognising that if you continue zero will inevitably be reached.							
Number Abstraction	Use a hopscotch in reverse...throw a 1-6 dice and count back from 10. Can you reach 0 in two jumps? Ensure that 0-10 are on the hopscotch. Empty a 1 litre bottle (10 cl) by filling 10 100ml (10cl) beakers...notice how it is reducing by 1 cl each time and count back.							
Order Irrelevance	Use a PPW model to show that the part taken away reveals the other part. Sometimes the parts are the same and sometimes they are not.							
COEL Playing and Exploring	Play games where you have a tens frame as a bus. Show the people on the bus using counters and solve problems where people get off the bus. Repeat using the pictures of the Numberblocks from the race. Counting circles on and back and choral count some for some back and see where you meet. Play last man standing...counting round the circle backwards from 10 and when you reach 0 the zero sits down. Continue. Or do in reverse by all sitting and zero stands up.							
COEL Active Learning	Bring in some measures. Cut off amounts from a 10 unit track to show decreasing lengths. Start by cutting off 1 unit each time and stating the new amount. Then 2 units etc Record the PPW each time: <table style="margin-left: auto; margin-right: auto; border: none;"> <tr> <td style="padding: 0 20px;">10</td> <td style="padding: 0 20px;">9</td> <td style="padding: 0 20px;">8</td> </tr> <tr> <td style="padding: 0 20px;">1 9</td> <td style="padding: 0 20px;">1 8</td> <td style="padding: 0 20px;">1 7</td> </tr> </table>		10	9	8	1 9	1 8	1 7
10	9	8						
1 9	1 8	1 7						
COEL Creating and Thinking Critically	Given the whole and a part...find the part that was subtracted eg: Numberblock 10 becomes the Octoblock....what was taken away? Use the Numberblock pictures to cut and stick to show the subtraction.							
Stem Sentences and Questions	First, then, now. 6 take away 1 is equal to 5 1 less than 6 equals 5 5 is one less than 6							
Going Deeper	Use PPW models in different orientations. Show the whole and a part children determine the missing part....or show the whole and ask children to create the parts and the story to match. Hide 5 cubes under a cloth and show the children. Now secretly take some and show. What was taken away and how do you know?							
IT links	NRICH: Incy Wincy Stories: Kippers Toybox – Mick Inkpen Mouse Count – Ellen Walsh https://www.youtube.com/watch?v=LFKMq1USDFg							

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Numberblocks series 5 Episode: 2	Week 36 White Rose
Mathematical Learning	Recognising the teens are 10 and something.	Counting to 20
The story:	On Your Head:	Show a staircase pattern of numbers to 20 by having the numbers to ten in one colour and then adding the extra parts from 11 onwards in another so that children understand that eg: 11 is 10 and another one, 12 is ten and another two etc.
Stable order	Colour on squared paper their own representation of number to twenty using two colours and count them. Vertical.	
1-1 Correspondence	Count each square for each pattern showing 1-1 to 20.	
Number Cardinality	Recognise that the final count number is the amount...show this by overlaying cubes or counters.	
Number Abstraction	Extend the hopscotch to 20 and count to twenty forwards by jumping etc. Ball bounces to 20 Fill two frames of ten with items. Count in ones to twenty using musical instrument taps etc.	
Order Irrelevance	Does it matter is eleven is counted 1 and then 10 or ten and then one? Recognise the most efficient way.	
COEL Playing and Exploring	Build increasing staircases using Lego or cubes or counter towers. Match the number abstraction to the tower. Play race to 20 on a number track by rolling dice and colouring or building as you go.	
COEL Active Learning	Find the picture models of the Numberblocks and order. Can they match to the numeral? Is there a pattern to notice? Play last man standing. Use different items to construct and represent through colouring given number eg: 15 using a pair of tens frames, bead string, number track and cubes.	
COEL Creating and Thinking Critically	Use the tens frame pairs to colour in sequence all numbers to 20 and record the number they represent.	
Stem Sentences and Questions	Twelve is ten and two more etc Ten and three more is thirteen. Eleven is before twelve.	
Going Deeper	Build a number and state what one more and less would be using a number machine. Spot mistakes in written counting sequences eg: 10,11,12,13,14,51,16,17	
IT links	https://www.dailymotion.com/video/x7c5vj	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 36 Numberblocks series 5 Episode: 14	Week 36 White Rose
Mathematical Learning	Recognising the teens are 10 and something.	Counting to 20
The story:	Can count to 20.	Show a staircase pattern of numbers to 20 by having the numbers to ten in one colour and then adding the extra parts from 11 onwards in another so that children understand that eg: 11 is 10 and another one, 12 is ten and another two etc.
Stable order	Colour on squared paper their own representation of number to twenty using two colours and count them. Match the number cards to the stairs...horizontal.	
1-1 Correspondence	Count each square for each pattern showing 1-1 to 20.	
Number Cardinality	Recognise that the final count number is the amount...show this by overlaying cubes or counters and recording the number accurately.	
Number Abstraction	Select a number card to construct a sand wall of turrets. Knock each one down to count down to zero. Select a number card and fill a bottle with the required number of cups of water. Repeat and say which is more / less.	
Order Irrelevance	Continued: Does it matter is eleven is counted 1 and then 10 or ten and then one? Recognise the most efficient way.	
COEL Playing and Exploring	Build increasing staircases using Lego or cubes or counter towers. Match the number abstraction to the tower using cards. Play race to 20 on a number track by rolling dice and colouring or building as you go. Play Bingo with number cards to 20.	
COEL Active Learning	Find the picture models of the Numberblocks and order. Can they match to the numeral? Is there a pattern to notice? Play last man standing. Use different items to construct and represent through colouring given number eg: 15 using a pair of tens frames, bead string, number track and cubes, PPW showing ten and five.	
COEL Creating and Thinking Critically	Use the tens frame pairs to colour in sequence all numbers to 20 and record the number they represent. Using a PPW with a teen number written and represented as a tens frame, show it as ten in one part and the the other part to make the teen number eg: $\begin{array}{ c c } \hline 1 & 6 \\ \hline \end{array}$ $\begin{array}{ c c } \hline 10 & 6 \\ \hline \end{array}$	
Stem Sentences and Questions	Twelve is ten and two more etc Ten and three more is thirteen. Eleven is before twelve.	
Going Deeper	Build a number and state what one more and less would be using a number machine. Spot mistakes in written counting sequences eg: 10,11,12,13,14,51,16,17	
IT links	Series 5 episode 14 Can count to 20.	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 37 and 38	Week 37 and 38 White Rose
Mathematical Learning	Repeat series 2 episode 9: Double Trouble and Series 3 episode 19 Mirror mirror	Double means twice as many
The story:	One makes a wish in the mirror to make lots of friends at one...creating pandemonium!	
Stable order	Show tens frame doubles and match them using a snap game. Count to check each part and then count the total.	
1-1 Correspondence	Match cubes over the top of some doubles tens frames and recreate as a one digit or ten or ten and the rest on a new single or pair by counting into the frames. Count each as they match and count the newly formed total to check that they are the same.	
Number Cardinality	Match the triples: snap cards on tens frames and domino and their double total. Recognise the final count in each case.	
Number Abstraction	With a partner, copy the actions eg: 2 hops, 4 jumps etc.	
Order Irrelevance	Notice that the PPW model has parts that are the same...adding will give the same sentence in both orders.	
COEL Playing and Exploring	Using sets of cards, find the doubles to match the singles and the odd ones out. Explain why they are the odd ones out. Use different pairs of resources to make a double and state the total in a PPW. Eg: 5 sticks and 5 leaves makes 10 items. Match the doubles dominoes.	
COEL Active Learning	Make pompom or sequin spots on the butterflies so that the two sides match. Fold paper where dots are shown in sets of 1 – 10 and fold it to double.	
COEL Creating and Thinking Critically	Using Numicube and Numberblocks find different ways to make a double for a given number eg: 4 doubled is 5 and 3	
Stem Sentences and Questions	Double 2 is 4 Double 2 is 3 and 1 8 is double 4 5 and 3 is double 4.	
Going Deeper	If the double is 12 what are the parts? If the double is 10 what could the parts be made of eg: 1 and 4 and 1 and 4.	
IT links	https://www.bbc.co.uk/iplayer/episode/b0bp2xdl/numberblocks-series-3-mirror-mirror NRICH: Double Trouble 'This is the story of Alison Hubble': Allan Ahlberg	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 39	Week 39 White Rose
Mathematical Learning	Halving and sharing evens. Recognise 1 left over in odds.	Halving and sharing
The story:	Repeat Counting sheep series 2 And Numberjacks fair sharing + Odds and Evens and The Wrong number	
Stable order	Identify matching cards representing a number in two different ways or arrangements. Note that they go together to double and half to show halves.	
1-1 Correspondence	Using a tens frame, count the counters into the frame. Share them between a pair of tens frames and check the count on each and the total by 1-1 correspondence.	
Number Cardinality	Identify which dominoes show unfair and which are fair by counting and comparing the final number of each side count.	
Number Abstraction	In pairs, pick an even number and jump/ hit a triangle/ spin / clap the number. Using concrete see if they can work out what half of this would be and then show it in the same way.	
Order Irrelevance	When sharing into equal groups, does it matter where we start the share and why is it important to be systematic?	
COEL Playing and Exploring	Small world groupings ...farm animals into two field etc Water into two containers of equal size. Balance two sides of the scales.	
COEL Active Learning	Teddy Bear Picnic – set out the plates and share out the items. Start with two bears and even amounts. Move to three bears and multiples of three etc.	
COEL Creating and Thinking Critically	Using a staircase of numbers to ten using bricks, think about which can be divided into two equal parts and which can't. Sort them into two groups and explain as odd and even. Create a PPW to show the whole of evens to 20 and their halves as two equal parts.	
Stem Sentences and Questions	Half of 6 is 3 3 is half of 6 3 is half of 6 because 3 and 3 make 6 Two halves make a whole. A whole is made of two equal halves.	
Going Deeper	Explain the difference between equal and unequal. Which numbers would halve and give 1 left over? Share twelve cubes between 2 teddies, among 3 teddies, among 4 teddies and 6 teddies and note the different answers.	
IT links	https://www.bbc.co.uk/iplayer/episode/b08q4g7y/numberblocks-series-2-counting-sheep https://www.youtube.com/watch?v=WeXTDYS3E-4&t=132s https://www.bbc.co.uk/iplayer/episode/b0bp2yc2/numberblocks-series-3-the-wrong-number NRICH Maths Story Time. 'The doorbell rang': Pat Hutchins 'Bean Thirteen' Matthew McElliogott	

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 40 White Rose
Mathematical Learning	Length : Use the correct language of: tall short, narrow, wide, long, height, length, width.
Stable order	Build towers with bricks and count the number of bricks tall.
1-1 Correspondence	Match bricks over numbertracks of different lengths (in 2cm squares) counting each and writing the length unit.
Number Cardinality	Number each square in the track from 1 – 20 . Establish that 10 long is the same in each length when comparing with a partner.
Number Abstraction	Using a number track, measure different items in the room and say as longer or shorter than the 20 unit measure. Compare height of towers in the sandpit.
Order relevance	If we count the units of measure note that they need to be ordered to count efficiently in a line.
COEL Playing and Exploring	Explore using a Venn which items are longer or shorter than your track.
COEL Active Learning	Create an obstacle course on the field by using measures in foot lengths or other between two parts.
COEL Creating and Thinking Critically	Build a clock on the field using 12 cones and 1 in the centre with a given radius eg: 12 footsteps.
Stem Sentences and Questions	Use the correct language of: tall short, narrow, wide, long, height, length The longest is..The shorest is... X is shorter than Y etc
Going Deeper	Make sets of things that fit criteria eg: 12 hands or less. Consider why your items may not be the same as the adult set.
IT links	https://www.bbc.co.uk/iplayer/episode/b0bp2vc2/numberblocks-series-3-the-wrong-number Books: Titch Pat Hutchins Tall Jez Alborough Where's my teddy Jez Alborough

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Week 41 White Rose

Mathematical Learning	Weight : Use the correct language of comparison: light, lighter, lightest, heavy, heavier, heaviest.
Stable order	Using sets of the same thing count how many and state which set would be heavier eg: 2 books and 3 books of same type.
1-1 Correspondence	Using a balance scale, count the same number of cubes into each bucket and note they are equal and why. State they each weigh 10 cubes.
Number Cardinality	Using pictures of balance scales with the same objects on each side but differing amounts...count and say which they think would be lighter and which heavier.
Number Abstraction	Consider what it is possible to weigh and which you can't eg: Can you weigh eggs, cubes, sugar, a cough, a hop and a step?
Order relevance	When adding to the scales, does the order matter? Check by placing 10 cubes on one side and 10 on the other in differing order.
COEL Playing and Exploring	Give some hidden weights for one side of the scales and playdough for the other, Can they make the weight to balance using the dough?
COEL Active Learning	Place elastic on the handle of a bucket. Ask a partner to begin filling with water or sand...what do they notice?
COEL Creating and Thinking Critically	Provide a selection of wrapped parcels and ask the children to determine the order of weight from lightest to heaviest. Check the numbers underneath to see if they ordered correctly.
Stem Sentences and Questions	Use the correct language of comparison: light, lighter, lightest, heavy, heavier, heaviest. X is lighter than Y X is the lightest The lightest is X because...
Going Deeper	Does the size of the item determine it's weigh eg: a cushion and a bag of potatoes. A feather and a pencil.
IT links	Books: Who sank the ladybird Pamela Alllen How much does a ladybird weigh Alison Limentani Balancing Act Ellen Stoll Walsh

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Week 42 White Rose

Mathematical Learning

Capacity : Use the correct language of comparison: full fuller, empty, half full, nearly full, tall, thin, narrow, wide, shallow.

Stable order

Notice how the measure on the side of a container increases as it goes up. (Record numerical numbers using markers for them 1-20)

1-1 Correspondence

Using pictures of same cups with markers on a scale, state by counting up the height of the liquid.

Number Cardinality

Recognise that the cups are the same and the height markers are the same but the amount is the final number marked by the height of the water.

Number Abstraction

Fill cups to show full empty and half full. Consider some between and place in order of capacity.

Order relevance

Using a set of spoons...order in capacity and check by filling with sand or rice.

**COEL
Playing and Exploring**

Use the mud kitchen and recipe cards eg: 2 cups of water, 1 cup of sand and 1 spoon of salt.

**COEL
Active Learning**

Provide each child with a tiny box eg: Matchbox...collect three items that will fit inside and 1 that will not when on a forest walk.

**COEL Creating and
Thinking Critically**

Using a filling station of a variety of jugs and containers, order what they think and then check by filling and counting content eg: cubes and an egg cup, a teaspoon, a small cup.

**Stem Sentences and
Questions**

Use the correct language of comparison: full fuller, empty, half full, nearly full, tall, thin, narrow, wide, shallow.

Going Deeper

Using the book: How much does a ladybird weigh, and some items eg: a grain of rice a ribbon, a stone ...which could/ could not weigh the same as a ladybird.
Repeat for other objects eg: How much does my stone weigh?

IT links and books

Books:
Goldilocks and the Three Bears
There's a hole in my bucket...

Early Years Summer Mathematics –

Using two elements as Mathematics...the Numberblocks to engage and the White Rose to secure ELG and transition to Year 1.

	Week 43 Numberblocks
Mathematical Learning	Missing Numbers : Counting and adding on to find what's missing.
Story:	The legend of Big Tum Series 3 Episode 17. The Numberblocks go mountaineering. Big Tum eats some of the numberblocks and they have to work out who has been eaten.
Stable order	Using a Number track with missing parts from 1-20, count and write in the missing numbers with accurate formation.
1-1 Correspondence	Using a 3 part staircase pattern, identify the missing staircase in the picture by 1-1 counting of the one before and after.
Number Cardinality	Find the missing number at the end of a sequence by recognising it as the total of all parts.
Number Abstraction	Missing pattern in counting refrains for children to fill in gaps.
Order irrelevance	Count three groups of randomly places items on three plates/ sets and use to predict the pattern number on the next set and the one at the start by careful, organised counting.
COEL Playing and Exploring	Build there own natural number pattern using a 20 track and sticks, leaves, shells, flowers etc.
COEL Active Learning	Find the pictures outside that represent numbers 1-20 in varying ways. Order them and find which three are mssing explaining how you know.
COEL Creating and Thinking Critically	Using a variety of sequences in order, with differing start points and in ascending order, determine the missing numbers and the start and end numbers. Use a PPW model with varied parts missing and identify them explaining how you know.
Stem Sentences and Questions	X is missing because The missing number is Y because The number at the end isbecause it is 1 more than Y The number at the start is A because it is 1 less than Y
Going Deeper	What is the numbers are counting in 2s from any start and there are missing numbers? What if every number that's missing is odd....can they tell?...multiples of 10....evens.... Can they extend the sequence?
IT links	https://www.bbc.co.uk/iplayer/episode/b0bp2v6x/numberblocks-series-3-the-legend-of-big-tum

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Week 44 Numberblocks

Mathematical Learning

The Wrong Number: Series 3 Episode 20:

Mathematical Story

It was a grey day in the big city. One was wondering where her next case would come from when a square silhouette appeared at the door.

Stable order

Use a number track to identify a number eg: It is more than 2 but less than 4.

1-1 Correspondence

Create all the Numberblocks with flat tops and note they are even.

Number Cardinality

Rearrange the blocks for 6 and notice their different patterns...match to the puzzle pieces showing the arrangements.

Number Abstraction

Use the puzzle pieces to build the Numberblock in disguise ...then reconstruct to identify it.

Order irrelevance

Evidence how all different puzzle pieces representing ten are ten, by counting them in different orders.

**COEL
Playing and Exploring**

Create their own Numberblock puzzle to represent a number...can someone guess your Numberblock.

**COEL
Active Learning**

Create an unusual hopscotch game using the pattern for a mystery Numberblock

**COEL Creating and
Thinking Critically**

Use sets of clues to identify the Numberblock eg: I am even (flat top) I make a square.
I am odd (1 on top) and can be rearranged to make a square.

**Stem Sentences and
Questions**

Odd
Even
Flat tops are even

Going Deeper

Create clues for someone else to guess your Numberblock.

IT links

<https://www.bbc.co.uk/iplayer/episode/b0bp2yc2/numberblocks-series-3-the-wrong-number>