St. Nicholas School Mathematics Scheme of Work

Number EYFS Milestones – M4

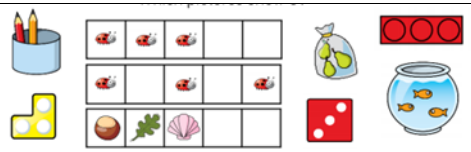
About this unit: This unit has been divided into six areas. These include; Number, Place Value, Addition and Subtraction, Multiplication and Division, Statistics and Fractions. Each area shows mathematical development and the way mathematical skills may progress in the early stages (EYFS milestones) and latter stages (Bridging level 1– M4). It is important to focus on relating taught skills to the context of real-life situations (developing the pupils' using and applying skills) and to support problem solving skills.

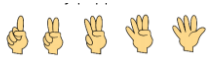
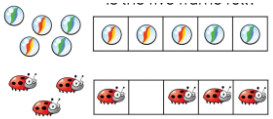
Each area gives ideas for possible cross-curricular links as well as a list of vocabulary. This list is presented in order so that pupils can develop their knowledge and use of language to support their understanding of mathematics. It is important that the children understand the concept of negation before they will be able to fully comprehend the objectives.

Resources:

Some resources have been highlighted within the Scheme of Work, but many more can be used, as the possibilities are infinite. Using the pupils' interests is a useful resource as long as they do not become a distraction. Use imaginative resources that will attract the pupils' attention and engage them. It is also important to use maths during practical and real-life situations, such as providing the correct number of cups at drink time. Other equipment includes; Numicon (develop a Numicon enriched environment), Dienes and counting tools such as Counting Bears, Unifix cubes and Multi-Link. It is also particularly important to use concrete manipulatives alongside any written method taught.

Area	Objectives	Suggested Activities	Cross-curricular links	Vocab/ Resources
Sequencing numbers for counting *(Prerequisite for counting)*				
0 – 3 years (8–20 months)	To respond to familiar number rhymes, songs/raps, stories, games and turn-taking.	• Rote count to three in anticipation activities and encourage children to participate vocally or through the use of objects or Lycra (stretch out on a slow count of 1, 2, 3 and let go on 'Pizza'). • Children join in turn taking by pointing (eye and finger) or using signs/symbols or voice. • Children choose/indicate a favourite number rhyme, song, story, game or rap. • Use IPAD 'Baby Games' – adult to count the number of taps children do to break the eggs.	**PE** – *Counting round circles, when passing balls, kicking balls or hitting balls or throwing, catching and bouncing activities. Turn-taking in hockey or tennis etc. Steps along gym apparatus. Counting jumps, steps or rungs. Count the number of children in teams. Compare scores e.g. balls in hoops. In dance, use action songs that involve numbers. Children count the number of movements or body parts using e.g. 1 foot or 2 feet for jumps. Count pulse rate. Use Numicon Shapes in activities – run to given number. Hand out equipment – 1:1 correspondence. Estimate how many balls they can throw in a hoop or jumps in a minute etc.* **Art** – ***Foundation Stage:*** *count marks made. Count number of colours they are mixing or scoops of paint added. Count pieces stuck onto collage/prints made. Build towers and count.* ***Year 1:*** *On shape/patterns walks children count number they can see. Count items on textural collage. Make counting puppets.* ***Year 2:*** *count number of features on faces.*	words related to number names (one, two, three, four, and five). count count up to forwards back ones more now first next last again order Five Frame: 
0 – 3 years (16–26 months)	To join in by copying and indicating numbers (including Numicon) in familiar number rhymes, songs/raps, stories, games, registration, social routines.	• Sing counting songs, supported by props or visual cues, such as a presentation on the IWB. Children place objects or move items on the IWB each time they hear a number in the count. • Rote count along to a drum beat or claps – ask the children to do one drum beat (or clap) for each number. Encourage them to coordinate their drum beat with their or the adults count. • Rote count along with a pendulum or another moving object. • Play turn-taking games such as pass the parcel or passing the ball in PE. • Count number of children or cups for drink time. • Sing number rhymes during care routines (Foundation – Year 2). • Use rhythms for children to join in with during social contexts (Year 3-4). • Use raps and songs in social and leisure contexts (Year 5 and 6). See lgfl website, Sing Up, Education City and Songs for teaching website. • Sing songs using real life objects e.g. water tray and ducks and encourage pupils to remove corresponding prop at the correct time. Count number of props that are left. **<u>White Rose Maths: Reception Autumn Term</u>** **One, Two, Three** • Read books such as 'The Three Bears', The three Billy Goats Gruff', 'The Three Little Pigs', 'Three Blind Mice'. • Ask children to count up to three identical objects. Can you count the objects? Can you in the objects up? Can you touch each object as you count? How many objects are there altogether? Can you put the objects on a five frame? • Ask children to count up to three items for a larger group. Can you get me two pencils? I think there are two left in the pot. Am I correct? Can you check? Do you know how many pencils there are without counting? Does it matter if the pencils are different colours? Which pictures show 3?		

		 • Make playdough – work with a small group of children to make playdough. Use a recipe that involves measuring in cups. Ask children to measure out the ingredients and count the cups. • Read the story of the 3 bears to the children and explain that we need to set the table n the home corner ready for breakfast. Children can count out 3 of each item they choose. • Making rockets. Encourage the children to count forwards and backwards to 3. Provide photos and pictures of rockets. Once children have them, you can count 3, 2, 1, blast off! Rocket can also have 1 door, 2 wings, 3 windows etc. • Linking to the story of the three bears, encourage children to make the doll's house into the house of the three bears. They can count out three of each item that they need for the house.	**Year 3:** *Make compositional drawings, counting the number of objects. Make tints/tones counting the amount of black/white paint they are adding.* ***Year 4:*** *count the number of different colours they can make e.g. green.* ***Year 5:*** *Count different shades of 'Earth' colours. Make paper reliefs by matching numbers.* ***Year 6:*** *count features when doing observational drawings e.g. how many petals on flowers. Count natural materials collected for sculptures.* **DT** – ***Foundation Stage:*** *counting transport.* ***Year 1:*** *count windows on homes or doors on street.* ***Year 2:*** *use puppets to count or make counting puppets.* ***Year 3:*** *count objects put on what they are making.* ***Year 4/5:*** *Estimate and check number of objects their bag/packaging holds.* ***Year 6:*** *count the flashes of light made by their torches or ingredients added for making yoghurts.*	
0 – 3 years (22-36 months)	To follow a sequence of numbers through movement. WRM 4	• Children make pictures or patterns using a variety of objects (control the number given). Together count the number of items used (Use unifix cubes, blocks, large lego, bears or Numicon pegs, Numicon shapes, medium Lego or geobands, objects of interest, Numicon shapes, geoboards, little Lego) • Children move different parts of their body along with the count e.g. stamping feet, clapping hands, nodding or patting their head. • Count and Turn – children stamp their feet as they count with an adult, throwing their arms up in the air to emphasise the last number in the count. The children change directions without losing the beat, counting 'one' as they turn. • Children hop forward as they count with an adult, changing directions at the end of the sequence. • Play instruments when counting with adults (differentiate instruments according to Year group and what they are currently learning). • Count during activities with adults such as bouncing a ball, rope skipping or kicking a football (differentiate activities according to Year group and what they are currently learning in PE). • Children join in action rhymes. **<u>White Rose Maths Reception Autumn Term</u>** **Four – All the prompts for counting to 3 can be applied to counting to four, plus these extra ideas** • Read books such as 'Washing Line – Jez Alborough (Four animals take their items of clothing off a washing line in this lift the flap book) and 'Anno's Counting Book – Mitsumasa Anno (with no words, this book shows the differences between the numbers by adding one more. Each number has its own page to count the items. • Have four baskets of different items e.g. shells, cubes, marbles etc. Take four items out of one of the baskets and arrange them on a whiteboard. How many are there altogether? Can you make the same as me? Hide the whiteboard from the children and rearrange the items. How many are there now? Can you make the same as me? Do you need to get more items from the		

		baskets? Children can then make a number and ask others to match. What other items from the outside can you use to show me 4? E.g. leaves, conkers, flowers etc • Washing line – linking to the book suggested, provide children with items to hang on the washing line. Can they count as they hang the items? How many items do they have altogether? Can we count then back into the basket? • Small world – In the small world area, create two areas (barns, fields) with signs that say 'two legs' and 'four legs. Can children sort the animals into the correct areas by counting their legs? • In the outside area, place signs for 2 wheels, 3 wheels and 4 wheels. When children park their bikes or toy cars, can they match the vehicle to the correct sign? • Create signs for each area to show how many children can play there. Work with the children to make the signs and get the equipment you need e.g. four people can paint, how many aprons od we need?		
***3- 4 years* (30-50 months)**	To understand numbers in the number system are always in the same order. To rote count to 5 and then 10 with increasing confidence and independence.	• Join in counting songs, rhymes or raps (age dependent). Miss out numbers or get them in the wrong order. See if children indicate the mistake. • Count along numbers on the IWB supported by Numicon shapes – see if children indicate mistake in the count. • Ask children to count to 5 and then 10 using objects e.g. spinning light stick. • Repeat previous number activities but with increasing independence. **<u>White Rose Maths Reception Autumn term</u>** **Five - All the prompts for counting to 3 can be applied to counting to four, plus these extra ideas** • Books/Songs – Five Little speckled frogs, five little ducks, five currant buns, Five Men in a Flying Saucer – Dan Crisp. • Can we count to five on our fingers? Can we count back from 5? Use puppets on each finger to count to five on one hand. Cab children look at your hand and subitise how many puppets there are?  • Show children a 5th birthday card. What number is on the front? Let's put the correct number of candles on the cake. Can we count them one by one? How many are there altogether? What else could we count out for the birthday party? • Use a five frame to count out five objects from a larger groups. How do we know there are five? IS the five frame full?  • Hoe corner- provide children with party hats, plates, cups etc. to set the home corner ready for a birthday party. How many guests can come to the party? What number shall we put on the banner?		

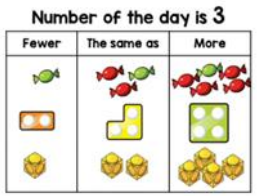
		• Writing area – Provide children with card t make birthday cards for the birthday party. Can they copy the numeral 5 on to the front of the card? What else cold we draw to show 5? • Outdoor – Provide children with a tray that has a range of natural items in – leaves, conkers etc. Set out the buckets that have the numbers 1- 5 on the front. Can we put the right number of items in each buckets? Can we take a bucket and go and find up to 5 items? • Water – Act out the different songs we have been singing this week. Provide children with 5 ducks or 5 frogs. Can the children sing the song and act out the movements to count backwards from 5? • Build and count – Provide children with 5 separate connecting blocks e.g. lego, Duplo, cubes. Encourage them to build a tower and then to explore other shapes they could build with 5 blocks. How many different ways can they find? *NB This task will reinforce the counting principles and allow you to assess the children's confidence in stable order, one to one, cardinality, and especially order irrelevance. The children may build the same shape in different orientations so encourage them to turn the shapes around .* 		
***Reception* (40-60 months)**	To indicate the next number in a familiar sequence (one, two…) using signs/symbols/words/pictures	• Touch numbers on a number track (including Numicon number lines) as it is counted showing what comes next (numeral recognition is not important). • Children count on fingers. • Children count round a circle. One child starts the count; the other children count in sequence. When they reach the last child in the count they sit down. The next child starts again from the first number with the last sitting down each time (skip over the sitting children). Count until only one child is left. • Thread beads or make patterns using pegs encouraging child to indicate the following number through signs or symbols or pictures or vocally. • Use computer activities such as Percy Keeps Counting and Percy Teaches Maths and Mathletics.		
Early Counting Skills *Finding quantities*				
0 – 3 years (8–20 months)	To participate in social counting. To know objects are permanent. To show an awareness of varying quantities such as 'one', 'few', 'lots', 'more' and 'less'	• Children count out how many items are needed for a range of social situations e.g. fruit and drink, book bags, number of scissors needed for children to complete work at different tables. • During morning registrations count the number of pupils in class or away. • Play simple games such as throwing balls into a basket and relate to the numeral 1 and symbol lots to show how many there are. Repeat later for 'more' and 'less' and 'few'. • Show two bowls. One containing one object, the other containing lots. Encourage the child to label the bowls using symbols/signs/verbally. Repeat for few, more and less. • Have groups of lots of objects – get the child to give you one and label the new sets. • Encourage children to choose 1 or lots of things needed to complete an activity e.g. Art materials.	**Science** – ***Year 1/2:*** *Count number of pushes and pulls. Count water added to plants, number of parts of the human body, number of sounds they hear, number of sources of light. Children order quantities of each material they have.* ***Year 2:*** *count in ordinal numbers when pushing cars in races.* ***Year***	*Develop understanding of negation* words related to number names (one, two, three, four, and

	using signs/symbols/pictures /words/ objects/Numicon. To indicate one or two using signs/symbols/pictures /words/ objects/Numicon.	• Using hand, show 1 finger and then show lots of fingers. • Use 'Numicon' shapes to show which is more and less. • Children use their body e.g. fingers, arms, legs, feet, to show one and two. • Use instruments or clapping beats to indicate one or two. • Make one or two prints in paint or wet sand. • Giving out one or two items to peers with adult support. • Counting one or two steps, jumps, bounces, throws, hits or kicks in PE. • Give pictures containing one or two objects and encourage children to indicate how many using signs or words. • Encourage children to line up in ones or twos. • Hide and find Numicon Shapes, encouraging children to sign/say what shape they have. • When using role play areas such as shops encourage children to show one or two items including coins or pennies. • Play games where points are given in ones or twos – children record points using tally marks or pictures or objects etc. • When offering things such as food ask how many the children would like, one or two? • On visits look at the number of things the children can see e.g. can you see one bus or two buses? • Use computer activities such as Number Run.	***3:*** *sort rocks and count them. Count the number teeth or seeds.* ***Year 4:*** *count the number of bones in the body, steps in food chains.* ***Year 5:*** *count steps in the life cycles. Use ordinal numbers for life cycles. Count heart beats or number of exercise done in minutes. Count the number of planets.* ***Year 6:*** *count equipment or things added during experiments.* **PSHE –** ***Foundation Stage:*** *number of children/adults in the class or their family.* ***Year 1:*** *Number of body parts or class numbers.* ***Year 2/3:*** *count jobs – role play jobs (shops).* ***Year 4 - 6:*** *role plays a variety of jobs involving number.* **Literacy –** ***KS1:*** *count characters in stories, number of pages in books. Use number stories. Look at numbers on instructions. Use poems involving numbers. Children write captions for photos of numbers and quantities ('There are 3 bears'). Count the number of letters in the alphabet.* ***KS2:*** *Count the number of letters in the alphabet. Count the number of scenes, acts, characters in plays. Look at time connectives and ordinal numbers for recounts and instructions. Use number stories and poems.* **History –** ***Foundation Stage:*** *look at numbers linked to daily routines.* ***KS1/2:*** *look at numbers*	five and extend to 10). count count up to lots (a lot) some small all many no more as much as forwards back ones more next few most enough again less equal how many difference quantity estimate unequal several
0 – 3 years (16–26 months)	To understand 1:1 correspondence in a range of contexts. To touch and move objects as they are counted. To line up and point to objects as they are counted. To point or mark pictures as they are counted.	• Use containers to support 1:1 placing, for example, children place monsters on each bed or cups on each saucer and older children put things in particular places or match each CD to its on case. • Give daily experiences of 1:1 matching, for example, pass out snacks, put pegs in holes or inset puzzle pieces in holes, give out bags or pencils. Increase the number of factors to see if the children have awareness that there is too much or too little. • Make ice for cooking getting the children to put water in 1 section of the ice tray at a time. • Add ingredients 1 at a time to things e.g. putting cake mixture in the paper cases. • Use Numicon shapes, baseboards and pegs. Children match them to the shapes. • Glue or create a sheet on the computer with a specific number of squares or beds on each. Children match bears or other objects of interest to them counting them as they match and move them. • With the child, cut up fruit. Child places fruit on a plate for snack time counting each piece as it is put on. Repeat for other items in cooking. • Children count coats or bags as they give them out. • Children post letters, counting them as they put them in the post box (use at Christmas for Christmas cards). • Roll a large die. Children place objects on each dot counting them. • Match Numicon pegs to shapes.		

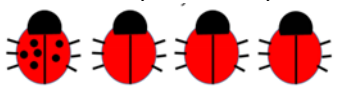
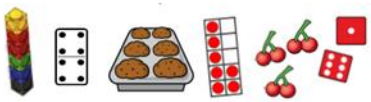
		• Use 'Baby Games' on the IPAD counting the number of times they touch the egg before it breaks. • Use computer activities such as Percy Keeps or Number Run Counting. • Line up objects of interest and point to them and count. • Line up ingredients for cooking and count them by pointing. • Line up spots in PE for children to sit on and count them by pointing. • Line up children in the class for assembly or play and count them by pointing. • Park cars into numbered parking spaces that are in a line (in a toy garage). • Use motivating resources to practice the skill of pointing such as a magic wand or torch or puppet, pointing hand stick etc.	*involved in past societies – number of oars on Viking ships, number of rations during the war, reconstructing Victorian school counting systems.* **Geography –** ***KS1:*** *counted things related to topics during local walks. Collect, estimate and count litter. Count places on maps.* ***KS2:*** *count places on maps. Make and count tallies during field trips. Count items related to topic e.g. number of animals in the rainforest (use books). Compare the quantities.* **ICT –** ***Foundation/Year 1:*** *count the number of objects on the screen or that they move. Count sounds they make or hear (digital).* ***Year 2:*** *Present work linked to number and quantities. Look at number of steps they give a floor robot.* ***Year 3:*** *Search for counting games. Count the steps added to Floor Robots. Present text and images to do with number or counting books.* ***Year 4:*** *counting linked to graphs.* ***Year 5:*** *counting sounds made using the computer. Counting linked to graphs. Count steps added to roamers.* ***Year 6:*** *counting linked to graphs. Take photos of number. Count steps added to Floor Robots.* *Link counting to adding steps when completing work on programming.* **Music –** *Use number songs and actions (age appropriate). Count the number of beats in music.*	
0 – 3 years (22-36 months)	To count reliably up to 5 and then extend to 10 objects (30 – 50 months) To compare the difference in quantities.	• Use 'Where's Wally' pictures for older children. Children point and count certain people/objects or mark them off. • Use simple storybooks from topic work for lower years. Children point to characters or other items and count them. Copy pages for the children to mark off. • Use Percy's Maths to count objects on the screen. • Children use Smartboard pens to mark off object of interest or topic related objects on the board. • Play games such as snap encouraging children to count the number of cards each player has or to give out cards to each player. • During fruit ask them to count how much fruit each person has or give a particular number of pieces to each person. • In cooking, ask them to add particular number of ingredients or count how many ingredients there are. • Ask children to count the number of children in groups for different activities or put children into groups of a particular number. • Have quizzes and score boards. Children record or count the number of tokens or tallies each child/team has. • Count coins when using shop role play. • Children count objects as they are hidden (support remembering skills). • Hide objects (related to topic) in sensory materials such as sand. Children scoop up some sand and count how many objects they have found. • Use sieve to fish items out of water and count how many – possible link to science and materials. • Using picture cards children find all the cards with 2 or 4 objects on etc. • Play dice games e.g. children throw a die and add that many cups of water or sand to a container. Who can fill the container up the quickest? • Play 'Hide and Seek' with objects. Hide certain themed objects around the classroom or an outside area. Children find the objects and count how many. • Children make sets of objects.		

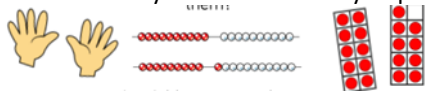
		• Use beads to make bracelets or necklaces – children use a certain number of different coloured beads. • Make pictures of coloured shapes. Children count how many of each shape or colour they have stuck on. • Use a circular track divided into different coloured squares. Children roll a dice and count round the track. They take a cube to match the colour. Children use the cubes to build towers of matching colours. Look at who has the tallest tower at the end. Children count the number of cubes. • Put objects/spots on paper – count how many. Use a mirror and encourage children to count how many now. Change the position of the mirror and repeat. • Give each child 5 or 10 objects on a plate. Roll an appropriate numbered die. That child gives that many objects to the person on their right. Continue until each person has had a turn. Talk about how many objects they have now and who has the most or least.	*Children compare the number of drum beats to the number of bell rings.* **Cooking** – *Counting number of ingredients being added or number of stirs.* **RE** – *Look at numbers linked to different religions e.g. days of advent.*	
	To compare an identical set of objects	**<u>White Rose Maths Reception Autumn Term</u>** **Compare identical objects.** ***It is important to teach children the correct vocabulary for comparison: more than, fewer than, equal to, the same as. Remember that children are currently working with numbers to 5.*** • Dot paper plates or cards. Hold up 2 dot plates. Encourage children to count and compare the dots. Which plate has more dots? Fewer dots? Can they find 2 plates with the same number of dots?  • Encourage the children to line up their groups to make direct comparisons:  • Provide many opportunities for children to count two sets of identical objects and compare them. How many _____ are there in this group? Which group has more? Which group has fewer? Are the groups equal? How do you know? • Provide children with an amount and challenge them to find a quantity that is fewer than, more than or equal to the amount e.g.: • Here are _____. • Can you show me more than _____? • Can you show me fewer than _____? • Can you show me fewer than _____? • Can you show me an amount equal to _____? How do you know?		

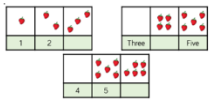
	To compare a non-identical set of objects	• Sand- Make towers of peppers. Who can make the tallest tower. How many pebbles are in each tower? Does your tower have more or less pebbles than your friend's tower? Can you each make a tower using the same number of pebbles? • Small world – Provide children with the numbers 1-5 on cards and various small similar items such as people, toy cars, plastic animals, etc. Ask them to show you fewer, the same or more than the number they choose. • Maths Area – Children use the number shapes, linking cubes, dot plates and numeral cards to match and compare. Show the children a domino, ask them to compare the number of spots on each side of the domino. Are there the same, more or fewer dots? • Outdoor – Ask them to find items outdoors (i.e. conkers, leaves, sticks, stones) and compare the amounts. Provide children with the numbers 1 – 5 on laminated cards. Ask them to show you fewer, the same or more than they number they choose. **Compare non-identical items.** ***Ensure that you continue to model and encourage the children to use the correct vocabulary: more than, fewer than, equal to, the same as. Remember that children are currently working with numbers to 5.*** • Read stories such as 'The Gingerbread Man', 'The Enormous Turnip' or 'Mr Grumpy's Outing'. Select images from different points in the stories and ask children to compare the number of people involved in each picture. • Provide children with pictures of dots, fingers, objects on five frames, number shapes etc. Ask children to match and compare the amounts from the various visual images.  • Provide lots of opportunities for children to count two sets of different objects and compare them using correct vocabulary: How many ____are ther ein this groups? How many ____are there in this groups? Which groups has more? Which groups has fewer? Are the groups equal? How do you know? • Provide opportunities to compare smaller quantities of large items with larger quantity of small items to help children make the distinctions between size and quantity. E.g. 2 bowls are larger than 5 spoons and take up more space. • Teddy Bear Picnic – The 3 bears are invited to lunch! Ask the children to provide chairs, plates, cups and spoons for each bear. DO they have enough of everything? What if another baby bear invites 2 of his friends? • Maths Area – Provide children with a new numbers each day. Ask them to arrange or draw objects o show the same as, fewer than or more than this number.		

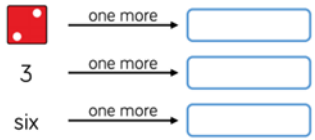
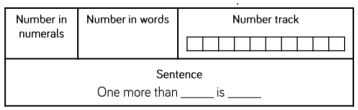
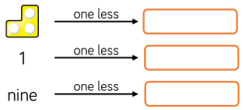
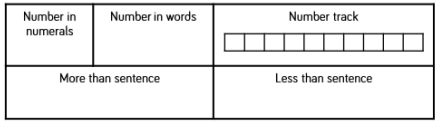
		 • Finger gym – Work in pairs. Grab a handful f objects such as pebbles or conkers. Does your partner have more than you, fewer than you or do you have an equal amount? Providing children with five frames will help them compare more easily.  • Outside – Build a tower using large outdoor blocks, cushions or crates. Challenge the children to make a shorter tower, a taller tower. How many crates or blocks did they use? What is the tallest/shortest tower ty can build? • Washing Line – Provide children with pictures of objects to arrange on the washing line in order. Begin with 2 pictures and add more as the children gain confidence. As the children work encourage them to sue language of more than and fewer than to compare and order the pictures. Encourage them to adjust their placing of the pictures as they work for example they might initially place 4 next to 2 saying 4 is more but then need to move it along in order to put 3 into the correct place. They will see that 3 is more than 2 but less than 4. 		
***3- 4 years* (30-50 months)**	To understand the last number in the count is how many. To recognise how many objects there are without counting. To understand the order of objects does not affect the cardinal numbers.	• Develop understanding of more by encouraging pupils to ask for more during a variety of activities such as fruit and drink, art, cooking or during experiments in science. Highlight that what they have is getting bigger. Repeat for less by removing objects and highlighting that what they have is getting smaller. Use signs and symbols. • Have plates/boxes/containers of motivating items. Discuss which has more or which has less. Children choose the one they want. • In games, compare the score/tokens/cards. Who has more or less? Or who won the most or least games for shorter activities. • Build towers comparing the number of cubes/height. • Look at children's art work, in particular, collage. Who has more or less of different materials stuck on? • In shops, who has more or less coins? • Things in the room – children compare objects in the room and decide what there is more or less of. Place 'Things in the Room' cards face down. Children turn two over and compare e.g. the number of windows and pencils.		

		• Comparing names – have rows of squares. Children write their names putting each letter in its own square. In the row underneath they write a friends/peers name. Compare which name has more or less letters.
		• Measure height or body parts using strips of paper and compare them.
		• During a range of counting activities and games emphasise the last number in the count. Always repeat the last number in the count and encourage the children to do so too. Change the intonation of your voice for the last number. See counting games and activities suggested above.
		• Use computer activities such as Percy's World of Numbers.
		• Use the Numicon shapes and pegs to develop the children's understanding of the cardinal number.
		• Play 'Grab a Handful' – place objects in a bag (vary the size depending on the age and motor skills of the child). Children grab a handful and say how many there are without counting. Check by counting. Begin by letting the children feel what 1 or 2 of the objects is like in their hands.
		• Play a range of games with dice gradually building up the children's confidence to say the number without counting the dots.
		• During games keep score with tokens or something similar. Emphasise the number and encourage children to repeat it. Gradually see if they can say how many tokens they have each time without counting.
		• Ask how many during a number of activities such as fruit and drink time encouraging children to say without counting. Always check afterward to increase confidence.
		• Give children a given number of objects to order or make different patterns with. Highlight that each different order/pattern does not change the number of objects there are (count each time and emphasise 'Same'). Possible activities include:
		  • Ordering beads on necklaces.
		  • Cubes/blocks when building towers.
		  • Arranging toothpicks in different shapes/patterns.
		  • Making patterns with coloured tiles or magnetic shapes.
		  • Patterns on pegboards.
		  • Decorations on cakes.
		  • Using the same number of printing blocks in art but making and counting different patterns.
		  • Putting different coloured cars in different orders.
		  • Arranging pieces of work for display.
		  • Putting up decorations.
		  • Candles on a cake.
		
		<u>White Rose Maths Reception Spring Term</u>
		NB All prompts for counting to 5 can be applied to counting to 6, 7 and 8 in addition to these ideas.		

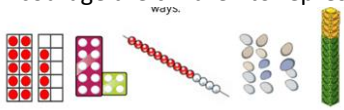
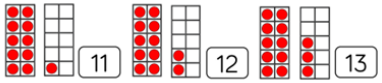
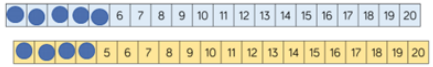
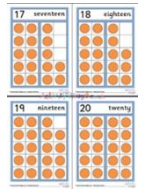
		• Songs and Books: Days of the week counting songs, 1, 2 buckle my shoe, Little Miss Muffet, 'The Bad Tempered Ladybird – Eric Carle, 'The Very Busy Spider – Eric Carle • Encourage the children to think about where we see 6, 7 and 8 in everyday life and to make collections of 6, 7 and 8 objects in the classroom. • How many legs does the ladybird have? How many spots? Use the counters to add 6 spots to the other ladybirds. Can you find more than one way to do it?  • How many colours of you see in the rainbow? Can you paint a rainbow with 7 colours? Can you make rainbows using objects around the classroom? How many colours did you use? • Sort items into 6, 7 and 8. How else cold you show 6, 7 and 8?  • Modelling – Make springy-leg spiders. Provide card circles for children to collage and strips of black paper. Show them how to fold each strip into zigzags o make 8 springy legs. They could also stick on 8 eyes. • Outdoors – Go on a minibeast hunt. Use magnifying pots to observe the creatures carefully. How many legs can they see? Provide pictures to help them identify what they find. • Loose Parts – Provide the children with a range of loose parts such as buttons, beads, pebbles, shells, seeds and some ten frames. Ask them to count 6, 7 and 8 items onto the 10 frames. Which 10 frames show 6? Which show 8? Can they see without counting? The children may also enjoy making large 10 frames outside using rules/metre sticks. • Weather Chart – Provide simple templates to show the 7 days of the week. With the children, record the weather daily. Discuss what the weather is like today, wat it was like yesterday. Count how many sunny days, windy days, rainy days there have been? Could we have 8 cloudy days in one week?		
Reception **(40-60 months)**	To estimate and check by counting a small quantity to 10 and then 20.	• Use a variety of containers and encourage the children to estimate the number of objects of interest in them. Children check their estimates by counting. • Children estimate how many children in their Year group that day. They count how many and compare to their estimate. • Children estimate how many cups or pieces fruit needs to be cut into. • Children estimate how many peers had breakfast. • Children estimate how many balls they can get or a peer can get in a net or in goal. They check. • In shops, they estimate the number of coins in a purse. • On local walks or trips, they estimate the number of different shops or transport they might see and check by counting.		

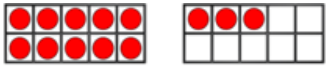
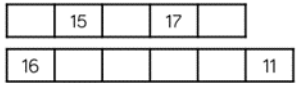
		• Create a board with a shape in the middle and ask 'how many (motivating objects) do you think will fit in the rectangle?' Pupils estimate and check by counting. Discuss their findings. Try different shapes and sizes of shapes. **White Rose Maths Reception Spring Term** **NB: All the prompts for counting to earlier numbers can be applied to counting to 9 and 10, in addition to these ideas.** • How do Dinosaurs count to 10? Yolen and Teague, Ten Terrible Dinosaurs – Paul Stickland, Feast for 10 – Cathryn Falwell. • Draw a large hopscotch grid for the children to jump along and show them how to play. • Show me 10 fingers. Now show me 9 fingers. Did you need to count? Can we count back from 10? Show me 10 beads on the bead string. Sow me 9. Shoe me 10 cubes on the 10 frame. What do you notice? Could you put 9 or 10 buttons on the 10 frame without counting them?  • Give the children a set of dominoes. What do they notice about the dominoes? Can they sort the dominoes? How many can they find with 9 spots? With 10 spots? • Ask the children to count out 9 or 10 small objects. Can they find different ways to arrange their items? What do they notice? • Outdoors – Provide a starting line. Ask the children to take 9 giant steps, 9 tiny steos,9 jumps, 9 tiptoes etc. How far do they travel each time? Who can travel the furthest in 9 giant steps? Who can travel the shortest distance with 9 tiny steps? • Sand – Make the sand tray into a mini beach by adding pebbles and shells etc. Set out buckets that have the numbs 6-10 on the front. Can we put the right number of items in each buckets? Can we take a bucket and go and find up to 10 items? • Class book – Make a class counting book with a double page spread for each number 1 -10. Stick on drawing or photographs of objects the children have collected. Discuss the different ways the children have represented each number.  • Construction – Provide a selection of bricks in different sizes and shapes. Ask the children to make the tallest possible tower using 10 bricks. Which bricks will they choose? How will they place their bricks to make the tower as tall as possible?		
Area	**Objectives**	**Suggested Activities** For all counting activities use: • A variety of songs/chants (some can be found on Education City). • Counting sticks. • Beats of drums or claps • Number tracks/lines – large for children to walk along, display lines and table lines. • Numicon Tens number line.	**Cross-curricular links**	**Vocab**

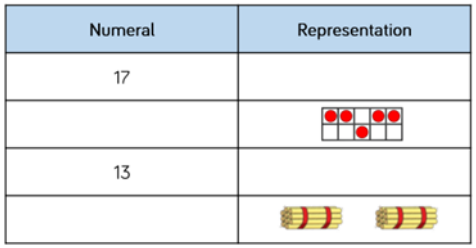
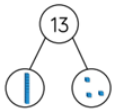
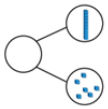
		• Hundred squares. • Multiplication squares. • Counting pupils in Year groups or Key Stages. • Helping collect and sort equipment such as pencils by grouping them in 2s or 4s and counting. • Use a trundle wheel to count the number of metres across various parts of the School or count the number of steps. • Count sequences of numbers on house doors – odd and even.		
Bridging 1	To count onwards from a small given number.	• During number songs/raps/rhymes, stop counting at a particular number and encourage the children to continue counting. • Make a balloon rocket and inflate it. Start counting but pause. Encourage the children to carry on counting. When they reach 10 (or another agreed number), let the rocket go. • Involve children in counts for the next activity. • On school trips or walks around the School, count the number of steps. Start count or give a small number for the children to count on from when taking each step. • Cover up – children work on whatever number they have mastered in counting. They lay their hand over part of the objects, saying the number they have covered, and then add on the remaining ones by counting from there. Use objects of interest or objects related to topics. • Keep Silent Game – ask the children to bend to one side two times, counting silently, then bend to the other side, counting aloud from three to six. This cycle is repeated over and over again with the children being silent for the first two counts. Change the number of times the children do the first motion. Play several times keeping the total the same. Extend to different totals and vary the number of silent counts. This activity can be done using movement or equipment such as bouncing a ball or to clapping rhythms (find an activity the children will enjoy and is age appropriate). If the children are confident with counting on and to different totals look at counting on from a given number. • Use computer games such as Percy Keeps Counting and Percy's World of Numbers. **<u>White Rose Maths Year 1 Autumn Term</u>** **Count Forwards** • Children develop counting to continue a number sequence forwards using numerals, words and images. Children should be able to find consecutive and non-consecutive missing number in sequences. Children should also be aware of the numbers 0. • Complete the number tracks   • Fill in the missing numbers: ____, 1, 2, 3 3, 4, _____, 6 1, ____, 3 _____, six, _____,_____, nine	**Science –** counting results in investigations e.g. how much more a plant has grown or collections of materials. Putting results in order e.g. which material melted first, second, third etc. **PSHE –** counting during role play jobs. **Literacy –** Use number stories and poems. Look at numbers on instructions (including ordinal numbers) e.g. recipes – amounts, how much more or less (counting on). Look at recounts and ordering (ordinal numbers). **History –** numbers in previous points in history (Victorian number systems, Roman numerals). Dates and periods of times. **Geography –***count things related to topics during local walks. Collect, estimate and count litter – children count objects in groups (use different multiples). Count tallies of items during trips and school learning walks (multiples of 5).* **ICT –** Use computer activities on Purple Mash and Education City. Look at counting on and counting in multiples when	numerals to 10 ordinal numbers to 10 count on numerals to 20, then 50 and then 100 steps multiples Cockatoos by Quentin Blake Mr Magnolia by Quentin Balke

	To count one more and one less to numbers 10 10 and then 20	**White Rose Maths** **Count One More** • When children are confident with numbers to 10 (and then 20), the language of one more can be introduced. Children know that one more is the number after and they should use their counting skills or a number track to help them. The use of dice or dominoes should be sued to reinforce subitising skills. • Complete each box using a picture, a numeral and a word  • Roll a dice (this can be a 12 sided dice or twenty sided dice when working with numbers to 20). Represent the number using counters on a track, and add 1 more. The complete the sentence: 1 more than ____ is _____. _____ is one more than _____. • Choose a number card from 0-9 (10-20 when working with bigger numbers) then complete the table.  **Count one less** • Children should relate one less to one more and understand that it is the opposite. Make clear to the children that 1 less is the numbers before the starting number. The use of dice and dominoes should be used to reinforce the subitising skills. • Complete each box using a picture, a numeral and a word.  • Roll a sic, represent the numbers suing counters on a track, and find 1 less. The complete the sentences: 1 less than ____ is _____. _____ is one less than _____ • Choose a number card from 1-10 (10-20 when working with bigger numbers) and complete the table 	making graphs on the computer. Write instructions for 'Beebot' Robots using ordinal numbers. *Link counting to adding steps when completing work on programming.* **Music –** *Use number songs and actions (age appropriate). Count the number of beats in music including counting in multiples.* **Cooking** – *counting on when adding ingredients. Looking at ordinal numbers in recipes.* **RE** – *Look at numbers linked to different religions e.g. days of advent.*	

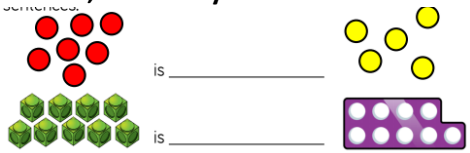
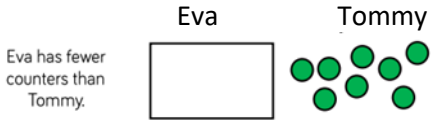
	Compare up to 10 To count and use ordinal numbers to 10.	**White Rose Maths Reception Spring Term** • Ask questions to make comparisons for a real purpose. Are there more children having sandwiches for dinner or school dinners? Are there more at home or at school? Standing up or sitting down? Which book shall we read at the end of the day? Use cubes to vote for your favourite. • Dominoes – Ask the children to find all the dominos with 7 spots. Can they make sets with more than and fewer than 7spots.? Use the dominoes to play 'Who has more' in pairs. With the dominoes face down, choose one domino each. How many spots does each domino have? The player with the most spots can collect a point. Can you record your points? NB you can also play with the Ladybird game  • Provide a feely bag filled with different numicon shapes. Ask the children to work in groups of 3. Each child takes a number shape from the bag. Can they identify which number they have? Work together to compare and order the shapes. Who has the largest number? Who has the smallest number? Does anyone have the same? • Loose Parts – Provide the children with a collection of items to sort. Encourage the children to sort the items into sets and then compare the quantity in each set. Can you find a set with more than this one? Can you find 2 sets with the same quantity. • Finger gym – Make a caterpillar by threading 5 beads onto a pipe cleaner. Ask the children to make caterpillars with more beads and fewer beads than you. Which caterpillar is the longest? Which is the shortest? Can we arrange the caterpillars in order? NB you can also use threading beads to make necklaces. • Outdoors – Play skittles. Ask the children to record how many skittles they know down each time. Did they knock more down this time or last time? Did they know more or fewer skittles than their friend? Are the more skittles still standing or more knocked over • Make race tracks for toy cars/animals – children race them and discuss places. Ask them questions about who came first, second, last? Introduce labels. • When the children are lining up – ask questions about where different children are positioned. Use symbols. Ask children to line up in different places e.g. you are first; you are last and so on. • Children keep track of places during sports day. • Plan a party or write a recipe and discuss what the children will need to do or put in first, second or last. Children follow their list or recipe. • During PE lessons, look at the position of children or teams during different activities and games.		

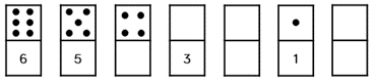
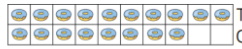
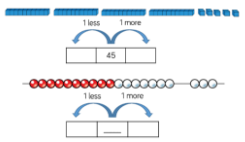
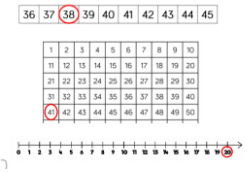
		• When rehearsing and doing assemblies talk about who will go on first or speak first and third and last. • Use ordinal number story problems e.g. John has 6 dustbins lined up for collection. The Dustman comes and he picks up the fourth dustbin first. Or, Merlin the magician put out 10 blocks in a row. Abracadabra; he made the second and last blocks disappear (use props)		
Bridging 2	To count confidently from 0-20, then to 50 and then to and across 100.	**<u>White Rose Maths Reception Summer Term</u>** **Provide opportunities for the children to count beyond 10 learning the number name in order. Once children can confidently say the number names, provide opportunities for them to match them in quantities and symbols. Prompt children to recognise that as we count, each number is one more than the number before building staircase to show the growing pattern within number to 20**  • Counting games such as I count, you count can be applied to numbers beyond 10. Last man standing can be adapted by asking children to count round in a circle from 1-20. The person who says 20 sits down and the count starts again from 1. If you are playing with a large group, the children may want to choose 3 or 4 numbers which would eliminate them rather than just 1. • Encourage the children to represent numbers to 20 in different ways  • Hand out cards showing pictorial representations and numerals for 11-20. Ask the children to find their partner and arrange themselves in order. Can they see any patterns in the numbers?  • Provide different collections of loose parts such as shells, buttons, beads or pebbles for the children to count. Encourage the children to estimate how many first and to arrange the items onto 10 frames as they count to help them see the full ten and part of the next ten. • Provide a number track 1-20 for each child. Children to take turns to roll a dice. If they roll 1-5, the collect the corresponding counters to fill their track. If they roll a 6, they go back to the start. 		

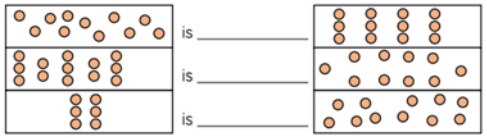
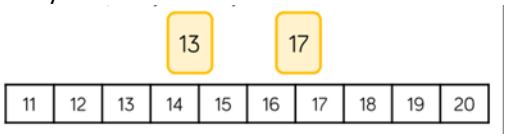
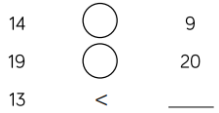
	To count and write numbers to 20	• Don't' say 20 – A game for 2 players. On their turn, the players choose to continue the count with 1, 2 or 3 numbers. The next player continues the count e.g. if the first player counts 1,2, the second player could count 3 or 3,4 or 3, 4, 5. The aim is to avoid saying 20. Two 10 frames and 20 counters could be sued to build the numbers as they count. • Bingo – Have sets of numerals from 11 to 20 and corresponding pictorial representations. Ask the children to choose 4 picture cards one by one. If the children have a matching picture they place a counter on their card. The first play to cover all their cards wins. **<u>White Rose Maths Year 1 Autumn Term</u>** **Count and Write numbers to 20** • Children are building on their existing knowledge of counting forwards and backwards by introducing the numbers 11-20. Children should explore the meaning of the suffix '**teen**' and what this tells us about a number. 11, 12, 13 and 15 are usually difficult for children to understand because they cannot hear the single digit in the name like others e.g. sixteen – six ones and a ten. • Match the representations to the correct numbers  12 7 10 • Write the number show on the ten frames in numerals and words. Also use numicon to show value of numbers.  • Use your ten frame/numiocn to show me the value of these numbers: fourteen, 18, nine, 16 etc. • Fill in the missing numbers  **Numbers from 11-20** • Children use concrete and pictorial representations to explore the different ways to represent a number. Children should be encouraged to use multiple representations. • Use numicon/cubes to show me 13. Compare yours with a partner. What's the same? What's different? • Practise and consolidate making numbers from 11-20 using pictures cards/pictorial representations/numicon/ten frames • Complete the table		

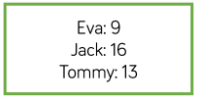
	To know one more and one less for any number up to 30 and then 50	 • Using two ten frames, show me a number: More than 12, less than 20, equal to 10+10 etc **Tens and Ones** • Children learn each number form 11-19 has '1 ten and some more'. They will see 10 and 20 as having just tens and no ones. Children still need to understand that numbers can be seen in different ways. Discuss 1 ten being equal to 10 ones. Base 10 can be used here. They can use them concretely or draw them as 'sticks and bricks. A line represents one ten and a dot represents 1 one. • Use the part-whole model to complete the sentences: My number is_____ One part is _____, the other part is _____ The whole is _____  My number is _____ It has _____tens and _____ones The whole is _____  • Fill in the ten frames with counters to show 14 and complete the sentence  14 has _____ ten and _____ ones. **Count One More and One Less** • Encourage children to use counting skills to find one more and one less and use resources such as number lines and number tracks. Also use concrete resources e.g. base 10, so that children understand it is one more 1 and not one more 10. • Make one more and one less than these numbers		

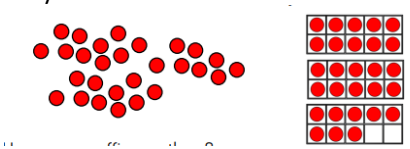
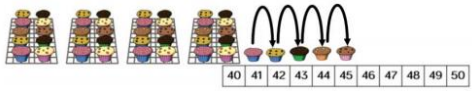
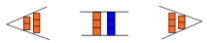
Numeral	Representation
17	
13	

	To compare numerals and say which is bigger and which is smaller	 • Draw base 10 to complete  • Draw to complete  **Compare Objects** • Children us the language of 'equal to', 'more', 'less', 'greater than', 'fewer' and 'less than' to compare groups of objects. Children do not need to know the difference between the groups, just that one group is greater or less than another or that the groups are equal to each other. • Circle the picture with more trees  • Use **greater than, less than or equal to**, to complete the sentences. **NB DP NOT teach them <, > or = to yet**  • Draw counters in the box to represent the sentence  		

Bridging 3	To count confidently from 1 – 100 To know 1 more and 1 less than any numbers to 100	**<u>White Rose Maths Year 1 Autumn Term</u>** **Count backwards** • Children develop counting to continue a number sequence backwards using numerals, words and images. Children should be able to find consecutive and non-consecutive missing numbers in sequences. Children should also be aware of the numbers 0. • Write the numerals to match the cubes. Can you describe the pattern?  • Complete the numbers tracks  • Fill in the empty boxes  **One More One Less** • Children find one more and one less than given numbers to 50, then 100. They build on the prior knowledge of numbers to 10 and 20. Children should use equipment to build the numbers before using number tacks and 1-50 grids. Encourage the children to notice that it is the ones column that changes most of the time apart from when the ones number is nine. • Fill in the blanks:  There are ___ donuts. One more than ___ is ___ There are ___ donuts. One less than ___ is ___ • Build and find one more and one less.  One more than ___ is ___ One less than ___ is ___ One more than ___ is ___ One less than ___ is ___ • Find one more and one less:  One more than ___ is ___ One less than ___ is ___ One more than ___ is ___ One less than ___ is ___ One more than ___ is ___ One less than ___ is ___		

	To compare numerals and say which is bigger and which is smaller	**Compare groups of objects** • Once children are confident making and exploring numbers greater than 10, they can begin to build on this by comparing groups of numbers. Continue to use vocabulary of comparison such as: greater than, less than and equal to. • Which is greater? By how many? A  B  • Use **'less than', 'greater than', or 'equal to'** to complete the sentences.  • In pairs, bot make a number suing base 10 or numicon. Compare the numbers in a sentence and using inequality signs. **Compare Numbers** • Children build on comparing numbers by comparing numbers to 20, 50 and 100. Children can start to be given abstract numbers written in digits and need to be encouraged to use previous learning to choose an efficient method to compare numbers. • Circle the greatest numbers Twelve Twenty Four Seventy two Seventeen 35 15 • Here are tow number cards. Use a number track to explain which one is smaller and by how many  • Complete the statements 		

	To be able to use ordinal numbers	**Order Groups of Objects** • Children build on ordering groups of up to 10 by applying the same skills for numbers to 20, 50 and 100. Children should order three groups. Use different concrete resources. • Order the number of crayons from smallest to greatest. Greatest to smallest etc.  • Use cubes to make these numbers and then order them from greatest to smallest. Smallest to greatest etc. 19 3 14 • Draw counters in each box to make the increasing pattern correct.  **Order Numbers** • Children can now move onto ordering abstract digits from 0-20. They can choose to represent this with concreate materials or draw them to help them order. Children need to apply their knowledge of tens and ones to help them e.g. when comparing 18 and 42, the numbers 42 has 4 tens so must be greater. • Order the numbers from greatest to smallest: 18 56 29 etc. Now order the numbers smallest to greatest. What do you notice? • Three children were playing basketball. The scoreboard shows how many hoops they score each. The winner is the child who scores the most hoops. Place the children in 1st, 2nd and 3rd.  **Ordinal Numbers** • Create a tower using different coloured cubes. Describe the order of the colours using ‘first’, ‘second’, ‘third’ and ‘last’ etc. Can you give your partner accurate instructions so that they can create the same tower? 		

		• Colour the 7th flower blue. Start counting from the left/ Colour in another flower and complete the sentence. The _____flower is _____  • The children have a race. Alex finished first. Amir finishes third. What position does Whitney finish in? **Numbers to 50** • Count forwards and backwards with the children within 50. Children can use a number track to support where needed, especially when crossing the tens boundary and with teen numbers. Children will also learn about grouping in 10s and their understanding of 1 ten being equal to 10 ones is reinforced. • Use the number track to: count forwards from 35 to 49. Count back from 46 to 38. Can you count from ____ to _____ without a number track? Repeat with other numbers and other number tracks  • These images both show the same number of counters. Which counters are easier to count? Why?  • How many muffins are there? 		
Milestone 1	To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count numbers to 100 in numerals; count in multiples of twos, fives and tens	**Compare objects within 50** • Children compare two sets of objects using the language of 'more than', 'less than' and 'equal to'. Children also use the inequality symbols to compare sets of objects, including visual ones to support e.g.  • Teddy and Eva each have some muffins. Who has more muffins? Which picture helps you to compare?		

_____is more than _____

_____ . _____

_____ has more muffins

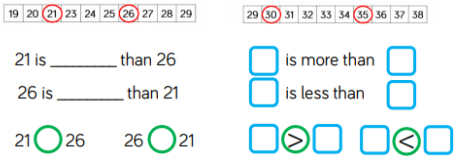
- Fill in the blanks:

- Complete each box using <,> or =. Say and write the number sentences for each one.

		
		
2 tens and 8 ones		3 tens and 6 ones

Compare numbers within 50

- Children continue to build on comparing of practical objects within 50, children now compare two numbers within 50 using the inequality symbols. Children should also use the language 'more than', 'less than' and 'equal to' alongside the correct symbols to compare numbers.
- Using the numbers track to compare the two numbers using words and inequality symbols.



- Use the 1-50 grid to compare the numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

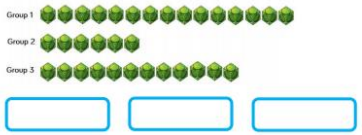
- Use a number line to 1-50 grid to compare:

Order numbers within 50

- Children continue to order numbers using the language 'largest', 'smallest,' 'more than', 'less than', 'least', 'most', and 'equal to'. They should continue to use inequality symbols to order

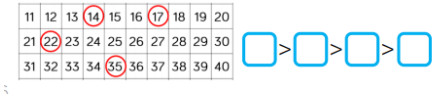
numbers in ascending and descending order. Children should be able to justify the order of numbers suing the knowledge of place value. They should know to compare the highest place value column firs (tens)t and then move onto the next column (ones).

- Order the groups of cubes from smallest to largest.



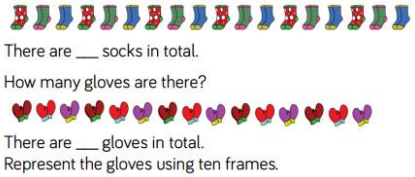
- Order the base 10, build and order from largest to smallest:
  23, 49, 19
  11, 33, 22
  41, 14, 42, 24

- Use the four numbers to complete the statement (you may want to start with two numbers first and then build up to 4)

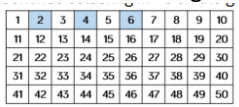


Count in 2s

- Children build on their previous knowledge of counting in multiples of 2 and go beyond 20 up to 50. They will apply previous learning of one more and ones less to count forwards and backwards in twos. For example, two more than two and two less than. The 1-50 grid can be used to spot and discuss patterns that emerge when counting in 2s.
- How many socks are there? How many gloves are there?

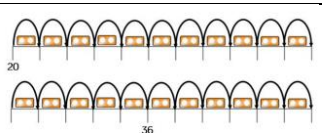


- Continue colouring in 2s on the grid. What do you notice?



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

- Complete the number line by counting in 2s.



Count in 5s

- Children build on previous learning of counting in fives to go beyond 20 and up to 50. The 1-50 grid can be used to spot and discuss patterns that emerge when counting in 5s.
- How many fish are there? How many grapes are there?

There are ___ fish in each tank.
There are ___ tanks.
There are ___ fish altogether.

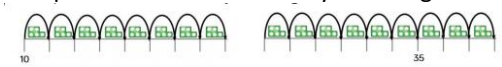
How many grapes are there?

There are ___ grapes in each bunch.
There are ___ bunches.
There are ___ grapes altogether.

- Continue counting in 5s on the grid

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

- Complete the number lines by counting in 5s

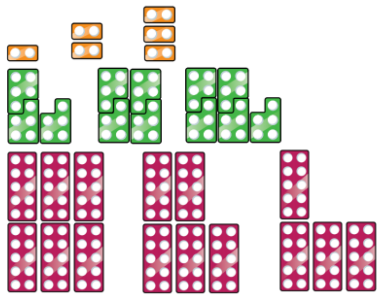


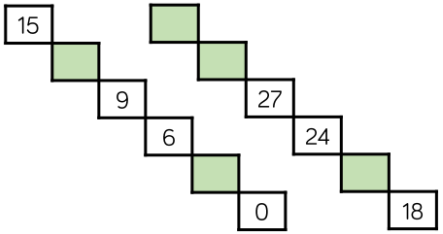
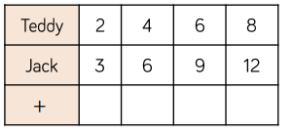
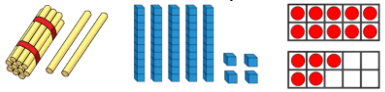
Counting to 100

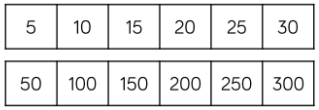
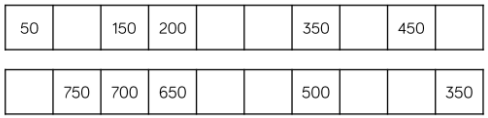
- Children build on their previous learning of numbers to 50. They should continue grouping in 10s to make counting quicker and more efficient. Children are also introduced to the 100 square and use it to count forwards and backwards within 100.
- How many flowers are there altogether? Can you represent the flowers using ten frames and counters?

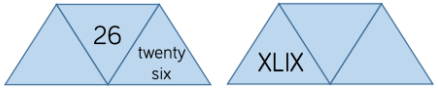
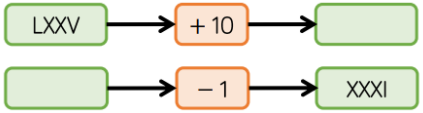
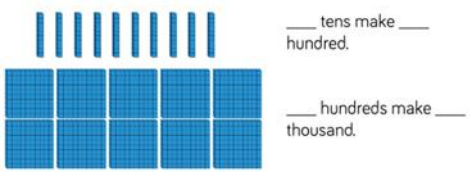
- How many straws are there? Bundle the straws into tens to make them easier to count.

		• Use a hundred square to:
		  • Count forwards from 80 to 92
		  • Count backwards from 73 to 65
		  • Write down the numbers between 75 and 81
		  • Find what number comes between 46 and 48
		 		

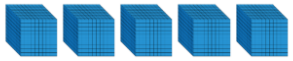
Milestone 2	To count in steps of 2, 3, 5 and 10 from 0 and then from any given number.	• Education City to revise counting in steps of 2, 3, 5 and 10. • Number lines/tracks to show the jumps. • Draw number tracks on the playground for children to jump along in steps of 2, 3, 5 and 10 saying the numbers. Varying the starting point. • Assign numbers to children and they stand in order going up in different steps. • Use Numicon Shapes to build up steps of 2, 3, 5 and 10 from different numbers. • Use computer games such as Percy Keeps Counting and Percy Teaches Maths as well as Purple Mash. **Count in 2s, 5s and 10s** • Children should count forwards and backwards in 2s, 5s and 10s. Children should not always start from 0 and should start on a multiple of 2 or 5 when counting in 2s and 5s but can start from any number when counting in 10s. For example, when counting in 2s they should not start at 3. Encourage children to look for patterns as they count. • Continue each number sequence  • Circle the odd one out in each number sequence 2, 4, 6, 8, 9, 10, 12….. 0, 5, 10, 20, 30, 40 ….. 35, 30, 25, 20, 12, 10 • Count forwards and backwards in jumps of 10 from fifty-seven **Count in 3s**		

	To read and write numbers to at least 100 in numerals and words	• Children should count forwards and backwards in 3s from any multiple of 3. Encourage the children to look for patterns as they count and sue resources as a number track and concrete representations. • What do you notice about the numbers that are circled? Continue the patterns  • Complete the number sequences  • Amir has 15 stickers. He collects 3 more each day. Complete the number track to show how many he will have in six days.  • True or false? If I start at 0 and count in 3s, I say the number 14. Explain your answer. • Teddy is counting in 2s and Jack is counting in 3s. If they add their numbers together as we count we can make a new number pattern. What patterns do they make? What happens if both Teddy and Jack count in 5s and they add them together to make a new pattern?  **Count objects to 100** • Children count objects to 100 in words and represent these numbers with numerals. Problems should be presented in a variety of ways e.g. numerals, words and images. Variation should challenge children by providing them with missing numbers which are non-consecutive. • Count and write the number of cars in the car park  • What numbers are represented below? Write your answer in numerals and words 		

		• Match the numerals to the words 		
Milestone 3	To count from 0 in multiples of 4, 8, 50 and 100.	• Education City to revise counting in steps of 4, 8, 50 and 100 • Number lines/tracks to show the jumps. • Assign numbers to children and they stand in order going up in different steps. • Use computer games such as Percy Keeps Counting and Percy Teaches Maths as well as Purple Mash. **Count in 50s and 100s** • Children use their knowledge of the patterns in the 5 times table to count in steps of 50 and 10 times table for 100. They should start from any given multiple of 50 and 100 and be able to count both forwards and backwards. • Look at the number patterns. What do you notice?  • Complete the number tracks  • Circle and explain the mistake in each sequence: 50, 100, 105, 200, 250, 300…. 990, 950, 900, 850, 800….. • Activities can be repeated for counting forward and backward in 100s		

Milestone 4	To be able to read Roman Numerals to 100 (I to C)	**Roman Numerals** **NB Children only other experience of Roman Numerals is with the clock face to 12 from year 3 Time. You may need to teach them numerals to 12.** • Children will be exploring numerals to 100. They explore what is the same and what is different between the number systems, including the fact that in the Roman system there is not symbols for zero and so no placeholders. • Teach the children Roman Numerals. You can use flashcards, posters, bingo games etc. • Lollipop stick activity. The teacher shouts out a number and the children make it using lollipop sticks. Children could also do this in pairs or groups. • Each diagram shows a number in numerals, word and Roman Numerals. Complete the diagrams  • Complete the function machines  • Solve the following calculation. You can also do other calculations e.g. subtraction, multiplication and division XIV + XXXVI = ___ **Count in 1,000s** • Children look at four-digit numbers for the first time. They explore what a thousand is through concrete and pictorial representations. To recognise that 1000 is made up of ten hundreds. They count in multiples of 1000 representing numbers in numerals and words. •  • How many sweets are there altogether? There are three jars of ____sweets. There are ____sweets altogether.		

- What numbers are represented below?



Count in 25s

- Children will count in 25s to spot patterns. They use their knowledge of counting in 50s and 100s to become fluent in 25s. Children should recognise and use number facrs that there are two 25s in 50 and four 25s in 100
- Look at the number patterns. What do you notice?

25	50	75	100	125	150
50	100	150	200	250	300

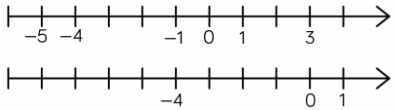
- Complete the numbers tracks

25		75		125	150				250
	725	700		650		600			

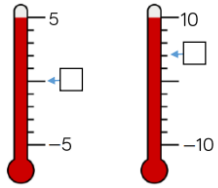
- Circle the mistake in each sequence:
  2275 2300 2325 2350 2400
  1000 975 925 900 875

Negative Numbers

- Children recognise that there are numbers below zero. It is essential that this concept is linked to real life situations such as temperature, water depth etc. Children should be able to countback through zero using correct mathematical language of “negative four” rather than “minus four” for example. This counting can be supported through the use of number square, number lines or other visual aids.
- Complete the number lines



- Fill in the missing temperatures on the thermometers



		• Dexter is counting backwards out loud. He says, “tow, one, negative one, negative two, negative three…”. What mistake has Dexter made? • Spot the mistake in these number sequence. a) 2, 0, 0, −2, −4 b) 1, −2, −4, −6, −8 c) 5, 0, −5, −10, −20		