

Dereham Church of England Infant and Nursery School- Mathematics

	Year group: Reception	Area/topic: Mathematics- Sharing and grouping
Development Matters - Reception Compare numbers. Explore the composition of numbers to 10. Development Matters - Reception - Automatically recall number bonds for numbers 0-5 and some to 10. Birth to 5 Matters - Range 6 Estimates of numbers of things, showing understanding of relative size Counts out up to 10 objects from a larger group Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects		

Prior learning	Future learning
Children will have past experiences of sharing, this could have been at mealtimes, snack times or during independent learning time.	Children will apply this knowledge during daily maths meetings

What pupils need to know or do to be secure	
Key knowledge and skills	Possible evidence
Explore sharing	Show children a bowl of strawberries and two plates. Explain that you are going to share the strawberries so that each plate has the same number. Put a handful straight onto each plate without counting, making sure that one plate clearly has more strawberries than the other. Ask children whether it is fair. Prompt them to show

Sharing

you how to share the strawberries fairly. What if there are three plates?

In the dough area, start off with all the dough in one ball. Break the dough and give each child a noticeably different amount of dough. Ask, "Is it fair? Does everyone have the same amount?"

Provide opportunities for children to see items shared equally and unequally. Give each child a noticeably different handful 16 17 14 14 17 16 20 16 of cards - is it fair? Do all the children have an equal number of cards

Read stories such as The Squirrels Who Squabbled by Rachel Bright. Outside, set up two tyres with one character in each. Provide children with a collection of natural materials, such as acorns, conkers or pinecones. Encourage them to explore whether these items can be shared equally between the two characters. Prompt children to explain their reasoning.

Provide teddy bears, plates and small quantities of loose parts to represent different food items. Ask children to share out the loose parts fairly so that each teddy gets the same amount. Are there any items left over? What will happen if another teddy joins the picnic?

Explore grouping

In pairs, play a throwing game using quoits. Give children a bucket of quoits and tell them that each player needs to start the game with the same number. How will we share the quoits equally? How can we make it fair? Repeat with different numbers of quoits and different numbers of players.

After reading stories such as *One Hungry Cat* by Joanne Rocklin, support children to bake cookies or make them in the dough area. Once they have made the cookies, encourage them to share them equally with a partner. How many cookies does each child have? Have they shared the cookies equally?

After reading books such as *The Doorbell Rang* by Pat Hutchins, give children 12 cookies. Act out the story and encourage them to share the cookies between 2, then 3, then 4 people. What will happen if one more person arrives?

After reading stories such as *Ness the Nurse* by Nick Sharratt, enact a similar scenario with children. Show them how many objects you have, such as 10 stickers. Give 1 sticker each to 7 children, then give the remaining 3 stickers to another child. Ask children, "Have I grouped the stickers equally?" If we have 10 stickers and we

Grouping

give 1 to each child, how many children can we give stickers to?

Ask children to make groups using the small-world animals. If they have 6 sheep and 2 sheep need to go in each field, how many fields will they need? What happens if they make groups of 3 and place 3 sheep in each field? Can they make more groups of 2 or more groups of 3? Repeat this in different contexts.

Challenge children to help you reorganise the mark making provision. Tell children that you would like to put 3 pencils in each pot. How many pots will you need? Repeat this and reorganise different areas of provision, such as paintbrushes in jars or books in baskets.

Encourage children to sit in small groups for a picnic outside and provide different quantities of food. Prompt children to give out the food in different ways to encourage grouping. For example, if each child needs 3 cream crackers, how many children can eat at the picnic with us? How can we find out?

Provide children with plant pots, soil and seeds for planting. Explain to children that we need to put 3 seeds in each pot. How many pots can be filled? Flower Seeds This could be repeated, by

Even and odd sharing

giving children a different number of seeds to be put in each pot. Does the number of pots change?

Play relay races in small groups, explaining that we need teams of 4 children to play the game. How many teams can we make? Repeat with different numbers of children needed in each group. How many teams can we make this time?

Give children 12 cubes. If they put 2 cubes in each tower, how many towers will they make? Ask them to investigate different ways of grouping their cubes into towers. Which numbers make equal groups? Which numbers don't?

Read the story The Gingerbread Man. Give children a number of gingerbread biscuits and some raisins to use as buttons and prompt them to place 3 buttons on each gingerbread biscuit. How many gingerbread biscuits can have buttons? Repeat this with different numbers of buttons - how many biscuits can have buttons this time?

In pairs, children select a numeral card and count out the corresponding number of counters. Is this an even or odd number? Encourage them to share the counters between the two of them. Do they have two equal groups or is there one counter left over? 6 Children then bring their numeral card to the front and sort it into an odd or even hoop.

Play with and build doubles

Encourage children to make an odd or even potion by collecting natural objects such as sticks, pebbles, leaves and petals. How many of each object do you have? Prompt children to try sharing the objects equally between two cauldrons or pots to check whether they have an odd or even potion.

Provide pairs of children with a 30-second timer. Outside, ask them to collect as many loose objects as they can. Have they collected an even number or an odd number? How do they know? Prompt children to share their objects into two groups to find out.

After reading stories such as *Bean Thirteen* by Matthew McElligott, give children a number of beans. Do they have an odd number or an even number? How do they know? Prompt them to share the beans equally between two groups to investigate.

Play a game of double bingo. Provide children with some counters and a numbered grid with numbers up to 5 on it. Show them a numeral card such as 8 and ask them which number is doubled to make 8. They then place their counter on the corresponding number, such as number 4. To support children, give them cubes to use to work out the double.

	Play caterpillar doubles. Provide children with a number track shaped as a caterpillar with the numbers 2, 4, 6, 8 and 10 displayed on it in a random order. Prompt children to roll a 1 to 5 dice, double the number and put a transparent counter on the double. 6 4 2 1 Ask children to spin a 1 to 5 spinner. Double the number the spinner lands on by building towers or drawing spots on blank dominoes. What number did you land on? What is the double? Show children a 'doubles town' in the small-world area. Explain that everything in the 'doubles town' shows a double. For example, there are 6 houses, which shows double 3. Ask children to reason why each object is part of the 'doubles town'. Do we have all the doubles to 10 in our town? Can children make their own 'doubles town'?	
Key vocabulary		
Fair, equal, same, left over, between, altogether, odd, even, double		
Common misconceptions	Books linking to this area	

. Children are more likely to notice when things are fair when it involves items that are of importance to them, such as food and toys. Try to use other non-food resources to prove 'fair' and 'not fair'. Remember that grouping involves dividing a set by placing a certain number of items in each group, whereas sharing (see small steps 1 and 2) involves dividing a set equally between a certain number of groups.	The Last Marshmallow by Grace Lin The Squirrels Who Squabbled by Rachel Bright One Hungry Cat by Joanne Rocklin The Doorbell Rang by Pat Hutchins Ness the Nurse by Nick Sharratt The Gingerbread Man Bean Thirteen by Matthew McElligott Missing Mittens by Stuart J. Murphy Alison Hubble by Allan Ahlberg
Memorable first hand experiences	Opportunities for communication
Many opportunities to play games. Regular use of a range of manipulatives, loose parts, natural objects etc.	Ask and discuss the key questions provided by White Rose Discuss, share and repeat the sentence stems provided by White Rose

DCINA Reasonable adjustments for pupils with SEND

Communication and Interaction Use a range of visual aids Give clear instructions one at a time Repetition Provide simple instructions Pre teach vocabulary Use working wall where modelling is displayed Give children thinking time Model task	Cognition and Learning Check understanding regularly Allow rest breaks Give thinking time Colour code signs that could be confusing Work checklists Break down tasks into small steps Give opportunities for over-learning
Social, Emotional and Mental health Allow access to a quiet and calm space Give child a special role to increase self esteem Provide a visual support- what to do if you are stuck Provide a movement break Seat pupil by more confident peer Now and next board Sand timers Movement breaks Break down tasks into small steps	Sensory and Physical Consider carpet space position Reduce background noise Provide a range of manipulatives- dienes may be too small Appropriate seating Wobble boards Writing slope Enlarge text Variety of writing tools available