

Dereham Church of England Infant and Nursery Academy- Mathematics

	Year group: Reception	Area/topic: Mathematics- Mass and capacity
	Development Matters – Reception – Compare length, weight and capacity. Birth to 5 Matters – Range 6 Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy Range 6 Becomes familiar with measuring tools in everyday experiences and play	

Prior learning	Future learning
Children will have explored capacity in the water tray and mass whilst playing with the large balance scales in the mud kitchen	Children will develop this learning in KS1

What pupils need to know or do to be secure	
Key knowledge and skills	Possible evidence
Compare mass	Read stories such as Who Sank the Boat? by Pamela Allen. Provide children with recyclable junk modelling resources to build their own boats. How many small world characters can they fit in the boat before it sinks? Prompt children to explore whether this changes for different combinations of animals.

Find a balance	Place classroom objects on a balance scale. Add cubes to the other side until the scale is balanced and point out what this looks like. Prompt children to count how many cubes made the scale balance. Will they need more or fewer cubes to make a different object balance the scale? Provide sets of similar containers in different sizes, such as sets of nesting bowls or boxes. Prompt children to fill the containers with objects such as cubes, buttons or marbles. Encourage children to compare and order the capacities of the different containers.
Explore capacity	
Compare capacity	
Key vocabulary	
Heavier, lighter, balance, float, sink, heavier, lighter, balanced, mass, fill, container, greatest, smallest, more, less, most, least,	
Common misconceptions	
Books linking to this area	

Children will become more familiar with using balance scales and distinguish between the different quantities on either side. Use different kinds of scales so children do not think there is only one way to compare mass. It is important to provide a range of resources to explore, including loose parts, so that children can investigate the mass of different objects.	Who Sank the Boat? by Pamela Allen Balancing Act by Ellen Stoll Walsh A Beach for Albert by Eleanor May
Explain that the line across the balance scale needs to be straight, using gestures to emphasise the horizontal line. Emphasise to children that when balancing a scale, both sides need to have an equal mass. Allow children to use different materials such as water, rice, sand and beads to explore the containers' capacities.	
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

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