

# Dereham Church of England Infant and Nursery Academy- Mathematics

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|  | <p><b>Year group: Reception</b></p> <p>Development Matters – Reception – Link the number symbol (numeral) with its cardinal number value.</p> <p>Count objects, actions and sounds</p> <p>Reception – Subitise.</p> <p>Reception – Understand the ‘one more than/one less than’ relationship between consecutive numbers.</p> <p>Reception – Explore the composition of numbers to 10.</p> <p>Birth to 5 Matters – Range 5 Begin to recognise numerals 0 to 10 Links numerals with amounts up to 5 and maybe beyond</p> <p>Range 6 – Engages in subitising numbers to four and maybe five</p> <p>Range 6 Uses number names and symbols when comparing numbers, showing interest in large numbers Matches the numeral with a group of items to show how many there are (up to 10)</p> <p>Range 5 – Beginning to recognise that each counting number is one more than the one before</p> <p>Range 6 – In practical activities, adds one and subtracts one with numbers to 10</p> <p>Range 6 – Shows awareness that numbers are made up of (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects</p> <p>Range 6 – Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three</p> | <p><b>Area/topic: Mathematics- Alive in 5</b></p> |
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| Prior learning                                                             | Future learning                                                                                                                                        |
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| <p>Children have previously covered numbers up to 5 in the Autumn term</p> | <p>children will use and apply this knowledge within their daily maths meeting. They will be introduced to numbers 6,7,8,9 and 10 later this term.</p> |

| What pupils need to know or do to be secure |                                                                                                                                                                               |
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| Key knowledge and skills                    | Possible evidence                                                                                                                                                             |
| Introduce zero                              | Share the story 'zero is the leaves on the tree'. Afterwards create a class book where each child creates their own page representing zero.                                   |
| Find 0 to 5                                 | Play skittles with a group of peers. Adult to model how many skittles have been knocked over, how many are still standing up?                                                 |
| Subitise 0 to 5                             | Children to create their own subitising plates using dabbers and paper plates                                                                                                 |
| Represent 0 to 5                            | Sing number rhymes. Create a class rhyme book                                                                                                                                 |
| 1 more                                      | Arrange number cards on a washing line. Hat number is missing?                                                                                                                |
| 1 less                                      | Use cubes to make staircase patterns.<br>Encourage children to notice the 1 more and 1 less pattern.                                                                          |
| Composition                                 | Show children photographs of objects showing different compositions. Ask children to tell you what they see and how they see the number of objects in different compositions. |

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| Conceptual subitising to 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Give children five double-sided counters each. Shake them and drop them on the floor. Prompt children to describe how many there are of each colour. How can we describe the parts when all the counters are the same colour? |
| Key vocabulary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                               |
| Zero, altogether, subitise, group, before, less, whole, part,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                               |
| Common misconceptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Books linking to this area                                                                                                                                                                                                    |
| <p>Prompt children to notice when zero occurs in activities in the classroom as well as in daily routines. For example, there are zero people away today or there are zero apples left.</p> <p>Children should be supported to further embed the stable order principle starting from zero, and to understand that the order of the numbers does not change.</p> <p>Encourage children to recognise that numbers can also be made up of more than two parts. Physically drawing around or moving objects will support children with this.</p> | <p>Zero is the Leaves on the Tree by Betsy Franco</p> <p>None the Number by Oliver Jeffers</p> <p>Anno's Counting Book by Mitsumasa Anno</p> <p>I Spy Numbers by Jean Marzollo</p> <p>The Ugly Five by Julia Donaldson</p>    |
| Memorable first hand experiences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Opportunities for communication                                                                                                                                                                                               |

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| <p>Many opportunities to play games. Regular use of a range of manipulatives, loose parts, natural objects etc.</p> | <p>Ask and discuss the key questions provided by White Rose</p>            |
|                                                                                                                     | <p>Discuss, share and repeat the sentence stems provided by White Rose</p> |

### 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