



Reception: Exploring Composition

Unit 5: Number bonds to 5 Unit 9: Addition to 10 Unit 11: Number bonds to 10 Unit 12: Subtraction Unit 17: Shape	
Importance of this topic	Explores the composition of numbers: Partitioning and inverse operation Understanding composition gives children a deeper understanding of number, which will underpin their later work on addition and subtraction. It also links to the unit on composing and decomposing shapes which shows children that a shape can have other shapes within it, just as numbers can.
How this topic develops	Unit 5: The part-whole model is introduced -children explore the different number bonds to 5. Unit 9 Children's first attempt at adding two groups together and re-counting the whole is supported. Unit 11 Children explore and begin to learn number bonds to 10, first using a ten frame and then using a part-whole model. Unit 12 This builds on the concept of number bonds to 10, this time focusing on subtraction number bonds. Unit 17 Children begin to compose and decompose shapes so that they recognise a shape can have other shapes within it, just as numbers can.

<p>Structures and representations</p>	<p>Part-whole models</p> <p>Part-whole models support children’s understanding of composition. They also support understanding that combining two groups is the inverse of partitioning a whole into two parts. As the units progress, they begin to be used in different orientations.</p> <p>Ten frames</p> <p>Ten frames help children to visualise numbers’ cardinal values, and support their understanding of number bonds.</p>
<p>Key vocabulary</p>	<p>Describe; sort; object; part-whole model; whole; part; each; size; shape; colour; pattern; add together; addition; number story; addition story</p>
<p>Misconceptions and interventions</p>	<p>Misinterpreting part-whole models</p> <p>Children may include the whole in their count when counting the parts in a part-whole model to find the whole.</p> <p>To intervene, use differently coloured counters for each part and replicate these in the whole, allowing children to see that the whole is a combination of the parts.</p>
<p>Assessing for mastery</p>	<p>Children who have mastered the ‘Composition’ topic will be able to sort objects into groups in different ways, and describe how they have sorted the objects.</p> <p>They will use appropriate vocabulary to identify two parts and their combined whole accurately.</p> <p>They will also know how to use a ten frame and a part-whole model to represent bonds to 10.</p> <p>To deepen this understanding, ask children to say the two related bonds aloud, for example ‘2 and 8’ and ‘8 and 2’.</p>