

# Mental Methods: Maths : Year 6 : Autumn Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To recap and use a variety of mental strategies to solve problems involving all four operations.	Children will explore a range of different calculations and identify a range of strategies that can be used to solve these calculations mentally. Children will practise multiplying by 10 and 100 (including decimals), adding near doubles, using adjustment methods and partitioning numbers to make calculations simpler.	<ul style="list-style-type: none"> <li>• Can children use mental strategies to solve addition and subtraction problems?</li> <li>• Can children use mental strategies to solve multiplication and division problems?</li> <li>• Can children use mental strategies to solve problems involving decimals?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Calculation Web 1A/1B/1C</li> <li>• Skill Sets A to F (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To be able to use and understand the role of brackets in number sentences.	Children will be introduced to the concept of brackets within a calculation, focussing on solving the calculation within the brackets first. Children will continue employing strategies to solve problems mentally wherever possible.	<ul style="list-style-type: none"> <li>• Do children understand the function of brackets within a number sentence?</li> <li>• Can children solve a number sentence that includes brackets?</li> <li>• Can children express and solve real-life scenarios using number sentences that include brackets?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Top Trump Cards 2A/2B/2C</li> <li>• Number Sentences 2A/2B (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To know the order of operations and use this when solving problems.	Children will build on their understanding of the function of brackets within a calculation by exploring the order of operations. Using multiple operations within a number sentence, children will work mentally to solve problems, identifying which parts of the calculation should be completed first and understanding why the order of operations is important.	<ul style="list-style-type: none"> <li>• Do children understand why the order of operations is important?</li> <li>• Can children solve problems mentally using the correct order of operations?</li> <li>• Can children investigate how brackets can change the outcome of a number sentence?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Highlighters</li> <li>• Worksheet 3A/3B/3C</li> <li>• Challenge Card 3A/3B/3C</li> <li>• Domino Cards 3A/3B (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to use the correct order of operations in calculations including all four operations.	Children will develop their fluency in using the correct order of operations by exploring what happens when there is more than one multiplication or division calculation in a number sentence. They will learn how to work from left to right to ensure the calculation is solved correctly, and continue to use mental methods wherever possible to solve increasingly challenging problems.	<ul style="list-style-type: none"> <li>• Can children remember the order of operations?</li> <li>• Can children solve problems accurately using the correct order of operations?</li> <li>• Can children translate word problems into number sentences to be solved?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Clue Cards 4A/4B/4C</li> <li>• Code Translator 4A/4B/4C</li> <li>• Key Sheet and Key Cards</li> <li>• Challenge Cards 4A/4B</li> <li>• Worksheet 4A (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to solve problems involving increasingly large numbers mentally.	Children will recap how to multiply numbers up to 12 by a multiple of 10 before exploring how to multiply multiples of powers of 10 together, such as $50 \times 600$ . They will recall multiplication facts for all times tables to solve such problems mentally.	<ul style="list-style-type: none"> <li>• Can children recall multiplication facts for all times tables up to <math>\times 12</math>?</li> <li>• Do children understand the effect of multiplying multiples of powers of 10?</li> <li>• Can children solve problems with increasingly large number using appropriate mental strategies?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Game Board 5A/5B/5C</li> <li>• Number Cards 5A/5B/5C</li> <li>• Calculation Cards 5A/5B/5C (FSD? activity only)</li> <li>• Worksheet 5A (FSD? activity only)</li> </ul>