**Willow Wood Community Primary School**
**Maths Lesson Design Toolkit**

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| 1.Retrieval and Retention | Provide a starter that recaps and reviews prior learning and consolidates knowledge e.g. what have you learned yesterday, last week, last topic. Provide a reasoning starter that acts as a hook and an assessment guide for the upcoming lesson (showing which children may need additional work with fluency). |
| 2.Purpose and Sequencing | Explain the concept you are teaching and the purpose of the lesson and how it fits into the bigger picture and wider aspects of mathematics. Ensure that all children are explicitly aware of the aim of the lesson. Ensure that all children are working towards securing gaps in their learning by building on prior knowledge. |
| 3.High Expectations and Communication | Ensure you 'teach to the top' with high and ambitious expectations. Scaffolds, including practical resources, must be provided to support learning. Ensure instructions are concise, using the correct mathematical vocabulary, and communication is clear and that language is positive and encouraging. Questions need to be targeted and illicit well thought out responses. Make sure you allow discussion time, where appropriate, as well as thinking time. |
| 4.Knowledge and Deliberate Practice | Ensure you are explicit about the core knowledge and small steps in learning you are teaching to the children and how this will be built on lesson by lesson. Ensure this is communicated to pupils during the lesson and links throughout the block of learning are explored. Ensure you are offering and allowing pupils opportunities to practice and develop their reasoning and explanation skills, allowing them to apply them succinctly and accurately. |
| 5.Modelling and Questioning | Ensure new concepts and ideas are presented in small steps and that you are explicitly modelling and showing pupils what 'success' looks like. Ensure probing questioning is used to aid mathematical thinking and discussions. Use explanation, timely intervention and live marking to address misconceptions at the point they are made and there is a drive for whole class understanding. Ensure that children are encouraged to move from fluency questions to reasoning and problem-solving style questions as soon as they show they are secure with the concept to ensure progress within each lesson. |
| 6. Key Vocabulary | Ensure that there is an explicit focus on improving and developing vocabulary throughout the whole lesson, modelled by all adults within the classroom. Encourage and check for new / subject specific / technical vocabulary to be applied to all work, recapping the cover page at the beginning of the unit of their knowledge organisers. |
| 7. Metacognition and Self-Regulation | Ensure you are explicit in communicating and teaching effective learning strategies that children can adopt themselves in independent work and at home. Ensure that you are active in explaining 'thinking' to children. Ensure that when ready, scaffolding is gradually removed to develop children's independence and confidence. Ensure lessons are inclusive for all. |
| 8.Feedback and Review | Ensure feedback is clear and timely. It needs to be manageable, specific and targeted. Ensure formative assessment is acted upon and that you are constantly aiming to gain as much feedback as possible from children during the lesson. Ensure that a plenary activity reviews information from the lesson and indicates next steps (whether that is moving on or consolidation / review work). Identify children for pre or post teaching intervention groups. Ensure that spellings of both high frequency words and key vocabulary are corrected. It is imperative that time is then given at the beginning of the following lesson to review any errors and correct these. At the end of the lesson, children need time to reflect on their learning, ensuring that they are focussing on mathematical mindsets and behaviours – using the BLP words such as rational or methodical – to support you with planning and supporting their next steps. |

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