## Observation and Grading of Mathematics Lessons

	Outstanding	Good	Requires Improvement	Inadequate
Learning Environment	The teaching of mathematical vocabulary is a key part of the teaching; it is having an impact on learning.	Key mathematical vocabulary is displayed and referred to during the lesson.	Mathematical vocabulary available if children choose to use it Resources prepared	No key mathematical vocabulary displayed Resources not prepared
	specific lesson resources are used and distributed with minimal disruption. The LSA is deployed strategically, is actively engaged with learners who make above average progress as a result.	andfor their distribution are establishedon.LSA is deployed strategically to supportisindividuals and/or groupsnoa result.	LSA works alongside groups of children to ensure they remain on task	LSA has little or no impact on learning
Planning and Progress	Learning objectives permeate the lesson. An effective system for sharing, reflecting on and assessing them is in place. Children are involved in developing success criteria, which are referred to throughout the lesson and used for self, or peer evaluation. There is a shared and understood link between previous learning and the lesson. Preparation is made to link learning to the next lesson. Tasks are carefully design, chosen and adapted to meet the needs of the full range of learners. Building on 'mini-plenaries' through the lesson, the Learning Objectives are extended; children articulate and communicate their mathematical learning; wider implications and links are clarified; links made to future learning. All children engage fully with the learning and demonstrate that they have made good progress.	Learning objectives are referred to throughout the lesson and form the basis of the plenary. Learning objectives are distinguished from context. Clear success criteria are planned and developed before the task. Examples of success are shared in the lesson and the plenary. Clear links are made to previous learning and the lesson clearly builds on this. Tasks are planned carefully to meet the learning needs of three core groups of learners (lower, middle and higher attainers) with some provision for SEN and G&T. The Plenary effectively summarises the learning; examples of work that exemplify the Learning Objectives and Success Criteria are shared; children are actively involved including peer/self- evaluation. All children make progress and most fully meet, or exceed the expectations.	Appropriate learning objectives are shared at the beginning and end of the lesson. Success Criteria are shared in the lesson as a general guide. Previous learning is referred to in the introduction, but only as a guide. Task is differentiated principally by outcome or quantity of work. The lesson ends with a summary; reference is made to learning objectives and success criteria. All children make some progress in their learning, but not as much as planned.	Learning Objectives are not shared, or do not reflect the teacher's intention. Success Criteria are not shared; the children do not know what constitutes success. No reference made to previous learning. Tasks are not clearly differentiated. The plenary, if done, only refers to what has been done; does not offer opportunities to reflect on learning. Some children do not make progress.
Teaching	The teacher uses in-depth mathematical subject knowledge to support all learners, including high attainers and to extend learning.	The teacher is able to make links to other areas of mathematics to support learning.	The teacher demonstrates adequate subject knowledge. The teacher uses a range of questions (open and closed).	There are noticeable gaps, inaccuracies or misconceptions in the teacher's subject knowledge.

Teaching	Carefully chosen open and closed questions are used strategically to explore understanding and misconceptions, and to extend children's mathematical thinking and understanding. The teacher clearly models expectations and indicates how to both meet and exceed the learning objective/success criteria. The lesson has an effective structure that injects a sense of determination and perseverance into the lesson. The mental and oral starter (when used) is carefully chosen and well-paced. The skills practised are relevant to the main part of the lesson, or selected for other particular reasons.	The teacher asks carefully chosen questions to encourage thinking and reasoning and to assess and clarify learning. The teacher models what the children are expected to do, referring to the learning objective and/or success criteria. The lesson has a clear, appropriate struc- ture that ensures that each section is built on the last and supports the next at a pace that continues to engage the chil- dren throughout. Any mental and oral starter is brisk and engaging.	The teacher completes examples of what the children will do. The lesson has a clear structure and keeps to time. When appropriate and necessary, the lesson has a mental and oral starter.	The teacher does not ask the children questions. The teacher does not model. Aspects of the lesson are missing and the lesson significantly under/overruns. There are no opportunities to practise/rehearse mental mathematics.
Learning	The lesson is planned and presented in a way that enables the children to be actively involved throughout. Effective use of mathematical dialogue, including modelling, within the class- room ensures that all children have op- portunities to express and discuss as- pects of their learning, including with the teacher Work in the class is organised in a way that the children must use skills of inde- pendence to succeed, while support mechanisms are also effectively used The children make effective use of their Talk Partner both when directed and to support their own learning. The children use the Success Criteria and Learning Objectives to effectively assess their own work and learning, to identify strengths and weaknesses and to set tar- gets. The atmosphere is such that children are free to ask mathematical questions, make conjectures and explore their own mathematical thoughts.	There are regular opportunities for the children to be actively involved throughout the lesson. Opportunities for mathematical dialogue are planned in the lesson and used to promote learning. There are regular opportunities for the children to work independently in the course of a lesson The children engage actively with their Talk Partner to explain mathematical thinking and the teacher uses Talk Part- ners strategically to support the chil- dren's learning. The children use the Success Criteria and Learning Objective to evaluate their own work and learning. The children ask mathematical questions in discussion with a Talk Partner and, at times, in the course of the lesson.	The children are actively involved in aspects of the lesson. There are opportunities for the children to engage in mathematical dialogue with each other and the teacher. Children have the opportunity to be independent during the lesson. Talk partners are used occasionally through course of the lesson. The children have some opportunities to assess their own work. The children are encouraged to ask mathematical questions with a Talk Part- ner.	Children are not actively involved in their learning. There are few, if any, opportunities for the children to engage in mathematical dialogue. Classroom practices discourage independence. The children are not used to working with a Talk Partner. The children do not carry out self-assess- ment. The children ask no mathematical ques- tions.