# Learning through observation: Observing the specialist mathematics practitioner

Use the following prompts to help you focus on aspects of good practice in the teaching of mathematics.

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| **Teacher’s planning and mathematical content knowledge**What is the **learning objective** for the lesson? Where does this come from?How is **mathematics specific vocabulary** used by both teacher and pupils?What **resources and representations** are used by the teacher during whole class teaching? In what ways do these support pupils’ learning? How effective are they and why?What **resources and representations** are used by pupils during the lesson? Have all children got access to the same resources? How do pupils access resources? What impact do these have on children’s learning?What **connections** are made between different components of mathematics (symbols, pictures, concrete experiences, language)? Are any **links** made to other aspects of mathematics, to other subjects or to the ‘outside’ world? What impact do these links have?How does the teacher tackle **misconceptions**? |
| **Pupil Progress**How does the teacher make links with previous lessons? What strategies does the teacher use to assess how well the pupils are doing in the lesson? (e.g. questioning, pupil self-assessment, scanning, aids such as number cards). How does the teacher use this information to improve learning within the lesson and over time? Is there a sense of progression over the lesson? How is this achieved? Are pupils asked what they have learned at the end of the lesson? |
| **Questioning**What sort of questions does the teacher ask in order to develop children’s thinking? How much time does the teacher allow for thinking? Who does the teacher ask to answer? Why? Does the teacher use partner work? How is questioning used to extend children of all levels of attainment? |
| **Organisation**How are pupils organised in the different stages of the lesson? (e.g. whole class, paired discussion, group work, independent work etc.) What impact does this have on their learning? How does the teacher ensure that all children are involved in all stages of the lesson? |
| **Mastery**How does the teacher ensure all parts of the lesson are accessible and challenging to **all** pupils? How are activities designed to enable mastery and to deepen and broaden understanding of higher attainers? |
| **Three key things that I have learned from this observation:**1.2.3. |