

## **Handbook for inspecting schools in England under section 5 of the Education Act 2005**

### **Inspecting the impact of the teaching of mathematics**

**175.** When evaluating the effectiveness of a school's work in mathematics through the analysis of performance information/published data, observations in lessons and scrutiny of pupils' work, inspectors will consider:

- how well the school is identifying and tackling inconsistency in the quality of mathematics teaching between different groups of pupils, key stages, sets and classes, including those taught by non-specialist teachers of mathematics in secondary

- in the mathematics lessons observed, through discussions with pupils and scrutiny of their work and by reviewing curriculum plans, how well teaching:

- fosters mathematical understanding of new concepts and methods, including teachers' explanations and the way they require pupils to think and reason mathematically for themselves

- ensures that pupils acquire mathematical knowledge appropriate to their age and starting points and enables them to recall it rapidly and apply it fluently and accurately, including when calculating efficiently and in applying arithmetic algorithms

- uses resources and approaches to enable pupils in the class to understand and master<sup>60</sup> the mathematics they are learning

- develops depth of understanding and readiness for the next stage, be it the next lesson, unit of work, year or key stage, and including into post<sup>16</sup> mathematics. Note that the national curriculum for mathematics<sup>61</sup> at key stages 1 and 2 specifies the aims and then states, 'The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace'. At all key stages, the national curriculum<sup>62</sup> states, 'Decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on'

- enables pupils to solve a variety of mathematical problems, applying the mathematical knowledge and skills they have been taught

- how well pupils develop and/or use their mathematical knowledge, understanding and skills across the curriculum.

<sup>60</sup> An increasing number of schools are adopting mastery approaches to the teaching of mathematics. Such approaches reflect particular beliefs and pedagogical practices. However, it for each school to determine, in the best interests of its pupils, how the mathematics curriculum is taught. <sup>61</sup> 'Statutory guidance - National curriculum in England: mathematics programmes of study', Department for Education, July 2014; [www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study](http://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study). <sup>62</sup> 'Statutory guidance - National curriculum in England: mathematics programmes of study', Department for Education, July 2014