

Self-evaluation grid for mathematics subject leaders

This self-evaluation grid was designed to **support subject leaders in determining** the relative strengths of their school's provision and to **identify next steps** that might be taken to improve provision and standards in mathematics. It was first used in the *Numeracy coordinator's handbook* (DfES 0285/2002), published in 2002.

It may be useful to highlight the 'box' in each row that best describes where your school is and then prioritise the theme and issue that could most appropriately be developed in your school.

There are **four themes** in this self-evaluation grid:

1. Establishing priorities, analysing results and reviewing progress
2. Continuing to improve the quality of teaching and learning
3. Management and deployment of resources
4. Professional development into practice

Under each theme, there are a number of **issues**:

1. Establishing priorities, analysing results and reviewing progress
 - 1.1 Establishing priorities, action planning and review
 - 1.2 Knowing about standards
 - 1.3 Target setting
 - 1.4 Monitoring and evaluating the development of mathematics
2. Continuing to improve the quality of teaching and learning
 - 2.1 Evaluating the quality of the teaching of mathematics and giving appropriate feedback
 - 2.2 Support for planning, monitoring the process and evaluating outcomes
 - 2.3 Using ICT to support mathematics
3. Management and deployment of resources
 - 3.1 Establishing an effective learning environment
 - 3.2 Deployment of additional adults
4. Professional development into practice
 - 4.1 Identifying continuing professional development (CPD) needs
 - 4.2 Supporting colleagues

1. Establishing priorities, analysing results and reviewing progress

Issue	Focusing level	Developing level	Establishing level	Enhanced level
1. Establishing priorities, action planning and review	An audit of mathematics provision, professional development needs and quantitative outcomes, in terms of standards and progress, has been carried out. As a result, key priorities for action have been identified.	Using the audit, an agreed action plan that addresses identified priorities and appropriate resources has been developed and is being implemented.	The impact of the action plan is monitored and evaluated. The plan is refined, following the outcome of evaluation.	The school's priorities for improving mathematics are part of the whole-school improvement programme, with clearly identified subject-specific priorities and systematic review and evaluation.
2. Knowing about standards	Teachers assess children's work regularly and national/other tests are in place. There is access to relevant data on standards (e.g. baseline assessment, data on statutory and optional tests, ongoing teacher assessments and work samples). There is limited confidence in the use of data.	There is a systematic structure for assessing children's work and progress. There is a move towards using data to inform judgements on standards across the school, noting patterns in children's achievement.	There is work across the school to moderate teacher assessments and to analyse data to agree school priorities, inform teachers' planning, set targets and monitor progress in a comprehensive and systematic manner.	School assessment systems are rigorous and effective. Informal assessment informs the teaching of a sequence of lessons, across a unit. There is close cooperation between the headteacher, staff and governors in using data, qualitative and quantitative, to raise standards in mathematics
3. Target setting	There is as yet no systematic whole-school approach to the setting of numerical and curricular targets to track children's progress and raise standards in mathematics.	Teachers are supported in setting realistically challenging numerical targets for each year group. They are supported in tracking children's progress by setting curricular targets based on a clear identification of priorities of learning needs through assessment for learning. The targets are evaluated and refined.	There is an effective process for setting and reviewing numerical and curricular targets in each year group. All teachers are able to use targets to track children's progress, inform their teaching and raise standards.	There is an effective, coherent and manageable whole-school system for setting and revising targets against children's progress.
4. Monitoring and evaluating the development of mathematics	A start has been made towards monitoring and evaluating a range of aspects of subject responsibility.	There is a clear structure for monitoring and evaluating mathematics in order to identify key priorities for improving standards of teaching and learning.	The outcomes of the monitoring and evaluation of aspects of mathematics are used to inform future school improvement planning.	Monitoring and evaluating is embedded within the school improvement plan and is effective in celebrating success and identifying areas for further improvement.

2. Continuing to improve quality of teaching and learning

Issue	Focusing level	Developing level	Establishing level	Enhanced level
1. Evaluating the quality of the teaching of mathematics and giving appropriate feedback	<p>Classroom observations and/or scrutiny of children's work has raised awareness of:</p> <ul style="list-style-type: none"> the quality of teaching of mathematics across the school; the strengths and weaknesses of teachers' subject knowledge; the range and effectiveness of the different teaching approaches used within a sequence of lessons. 	<p>There is a developing programme to monitor the quality of teaching of mathematics. Weaknesses in teaching are recognised and staff are given feedback. Actions to be taken are identified and incorporated into the mathematics action plan or school improvement plan.</p>	<p>Systems are in place for monitoring and evaluating the quality of teaching. This is impacting positively on classroom practice. Some areas of weakness in teaching remain, but are being addressed through feedback and CPD.</p>	<p>There is systematic and structured evaluation of mathematics teaching across the school. The mathematics lesson is taught well. Weaknesses in subject knowledge and teaching and learning are being addressed effectively. There is appropriate feedback, support and related training for all staff.</p>
2. Support for planning, monitoring the process and evaluating outcomes	<p>Teachers' weekly plans are sampled.</p>	<p>Teachers are supported in their planning and given feedback to help them to moderate and amend as appropriate.</p>	<p>Medium- and short-term plans are reviewed and teachers are supported in ensuring that plans match the expected levels of children's achievement.</p>	<p>Colleagues are supported in producing plans that are coherent, succinct and effective in addressing learning needs. Plans are evaluated in the light of learning outcomes.</p>
3. Using ICT to support mathematics	<p>Staff are aware of the need to incorporate ICT as a resource to support the teaching and learning of mathematics and use a limited range of ICT resources.</p>	<p>Staff are aware of PNS training materials and use a range of ICT resources to support the teaching and learning of mathematics.</p> <p>The professional needs of teachers in the use of ICT to support mathematics have been identified.</p>	<p>The mathematics subject leader works closely with teachers to support planning for the appropriate use of ICT in the teaching and learning of mathematics.</p> <p>Monitoring of the use of ICT in mathematics teaching is identifying where it supports the learning and practice can be shared.</p>	<p>ICT is being effectively integrated into teachers' planning for mathematics.</p> <p>Evaluations show that ICT is being used effectively in mathematics teaching and that learning is being enhanced.</p>

3. Management and deployment of resources

Issue	Focusing level	Developing level	Establishing level	Enhanced level
1. Establishing an effective learning environment	The importance of an effective environment to support teaching and learning of mathematics in all classrooms is recognised.	Through classroom observations and an audit of resources, including ICT, key areas for action have been identified in order to promote an effective environment that will support children's learning in mathematics.	A systematic plan is in place across the school to support improvements to the environment in which children learn mathematics.	The school environment makes a key contribution to mathematics learning for all children. ICT, where available, supports learning in mathematics.
2. Deployment of additional adults	<p>The expertise and skills of additional adults are matched to children's identified needs in mathematics and across the school.</p> <p>Use of data enables targeting of children needing wave 2 interventions (springboard materials) and wave 3 mathematics appropriately.</p>	<p>Support systems are developing between additional adults and teachers for planning support and reviewing the progress of targeted groups of children.</p> <p>Teachers monitor the progress of those children who receive intervention and support.</p>	<p>The impact of support by teachers and additional adults is evaluated against quantitative and qualitative learning outcomes.</p> <p>Additional adults who support children report on the progress children are making.</p>	<p>Monitoring of the impact of additional adult support shows that a difference is made to children's attainment and progress. This is evaluated through discussions with children, ongoing assessment and work scrutiny.</p> <p>There is a clear understanding between teachers and additional adults of the learning needs of children and ongoing assessments and progress reports are updated and shared regularly.</p>

4. Professional development into practice

Issue	Focusing level	Developing level	Establishing level	Enhanced level
1. Identifying continuing professional development (CPD) needs	Information about training is selected, and staff are encouraged to attend relevant courses.	Staff are helped to be more selective about the type of professional development in which they participate, and to relate this closely to the mathematics action plan.	A CPD policy that relates to individual and school needs is in place, with clear links to the development of mathematics. Most staff are committed to the policy and understand how it will impact on their own professional development.	The planned CPD programme supports school, LA and national priorities and meets the needs of all staff. The impact of the CPD programme on children's learning is monitored and evaluated systematically.
2. Supporting colleagues	Resources to support colleagues in improving the teaching of mathematics are managed and organised, including PNS materials and ICT. On request, individuals are supported to help them improve the quality of the teaching of mathematics.	A planned programme of support is being developed in order to address whole-school and individual needs. This support programme includes trainee teachers and other additional adults.	There is a coherent support programme in place and all staff are involved in reviewing and evaluating the professional development and support they have received. When appropriate, the impact of professional development is evaluated through visits to classrooms and via formal and informal feedback. A planned programme of support has been devised, responding to whole-school and individual needs.	All staff are supported in developing high-quality teaching and learning in mathematics. Evaluation of the support shows a positive impact on teaching and learning.

This table suggests the type of **evidence** that *could* be used to support your self-evaluation judgements.

All evidence may be kept electronically, rather than as hard copy.

1. Establishing priorities, analysing results and reviewing progress

Issue	Evidence statement	Focusing level	Developing level	Establishing level	Enhanced level
1	a. Establishing priorities, action planning and review	Copy of audit carried out and available for scrutiny (e.g. at least annually).	A copy of the agreed action plan, implemented from the outcomes of the audit, is available.	The impact of the action plan is monitored and evaluated.	Evidence shows that mathematics priorities are integrated with the school development plan.
	b. Knowing about standards	Hard copy of findings is available. Regular scrutiny of work from every class and setting takes place (e.g. perhaps once every six weeks where there are concerns about widespread underperformance).	Evidence is available to show that a systematic structure is in place.	There is evidence to show that moderation takes place (e.g. file, record book and minutes from staff discussions).	School assessment systems shown to be thorough and rigorous, with reducing numbers of underachieving children. Regular scrutiny of work takes place alongside discussions with children or teacher's planning.
	c. Target setting	Whole-school numerical targets are known by the subject leader.	Evidence shows how the subject leader supports staff in setting numerical and curricular targets.	Evidence shows that all teachers and practitioners use targets and track children's progress against age-related end-of-year expectations.	Evidence shows an effective school-wide system where all children make good progress against age-related end-of-year expectations.

Issue	Evidence statement	Focusing level	Developing level	Establishing level	Enhanced level
	d. Monitoring and evaluating the development of mathematics	Records are available to show that aspects of the subject leader's role have been identified.	Evidence shows that a clear structure for monitoring and evaluating support for key mathematics priorities exists.	Records show that outcomes are clearly identified and are used to inform subsequent planning.	Evidence shows that monitoring and evaluating mathematics development is embedded within the whole-school improvement plan.

This table suggests a range of **resources** to support your subject knowledge of each theme and issue (with its reference number and a brief description of that resource if you are not familiar with it).

Theme 1: Establishing priorities, analysing results and reviewing

Resource name	Issue	Description of resource
1. RAISEonline	1 2 3	RAISEonline will combine the PAT and software to support school self-evaluation and target setting issued by the DfES which includes the Ofsted PANDA. RAISEonline will enable you to: <ul style="list-style-type: none"> • examine content, attainment and value-added data • explore hypotheses about pupil performance • analyse question level data for national, optional and progress tests • set and moderate pupil targets.
2. <i>Excellence and enjoyment: learning and teaching in the primary years (AfL)</i> (DfES 0518-2004G)	3	A set of professional development materials about learning and teaching in the primary years. There is an introductory guide and six CPD units which are organised into three themes: <ul style="list-style-type: none"> • Planning and assessment for learning • Creating a learning culture • Understanding how learning develops.
3. <i>Numeracy coordinator's handbook</i> (DfES 0285/2002)	1 2 4	Designed to support the leadership of mathematics across the school. The handbook includes four elements: a self-evaluation grid, a coordinator planner, training materials and supporting information. The self-evaluation grid has been designed to support work in four key areas. <ol style="list-style-type: none"> 1. Establishing priorities, analysing results and reviewing progress 2. Continuing to improve the quality of teaching and learning 3. Management and deployment of resources 4. Professional development into practice.
4. <i>Using curricular targets in Year 2: materials for teachers, parents and carers</i> (DfES 1021-2004)	1 2 3	These materials have been designed to support teaching in Year 2, identifying six curricular targets for mathematics, with associated targets for children. These are linked to key PNS resources and <i>QCA National Curriculum test: implications for teaching and learning</i> .

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5. <i>Using curricular targets in Year 6: materials for teachers, parents and carers</i> (DfES 1022-2004)	1 2 3 4	These materials have been designed to support teaching in Year 6, identifying six curricular targets for mathematics, with associated targets for children. These are linked to key PNS resources and <i>QCA National Curriculum test: implications for teaching and learning</i> .
6. The Primary Framework for mathematics	2 3	

Theme 2: Continuing to improve quality of teaching and learning

Resource name	Issue	Description of resource
1. Ofsted Framework for inspection	1	
2. <i>Excellence and enjoyment: learning and teaching in the primary years: designing opportunities for learning</i> (DfES 0518-2004G)	2	A set of professional development materials about learning and teaching in the primary years. There is an introductory guide and six CPD units organised into three themes: <ul style="list-style-type: none"> • Planning and assessment for learning • Creating a learning culture • Understanding how learning develops.
3. The Primary Framework for mathematics	2	
4. <i>Mathematical vocabulary</i> (DfES 0313/2000)	2	This will support teachers in introducing appropriate mathematical language at the right time; it provides four pages of vocabulary checklists for each year group. Class teachers can use these lists to identify the vocabulary relating to a series of lessons they are planning.
5. <i>QCA/NNS: Teaching mental calculation strategies – guidance for teachers at Key Stages 1 and 2</i> (QCA/99/380)	1 2	This booklet offers guidance on teaching effective mental calculation strategies for mental calculation.
6. <i>QCA/NNS: Teaching written calculation strategies, Guidance for teachers Key Stage 1 and 2</i> (QCA/99/486)	1 2	This booklet offers guidance on teaching effective written calculation strategies.
7. <i>Mathematical challenges for able pupils in Key Stages 1 and 2</i> (DfES 0083/2000)	2	This book suggests extension and enrichment activities in mathematics. It also addresses class organisation, planning and teaching through answers to commonly asked questions.

8. <i>Problem solving pack: finding all possibilities</i> (DfES 0247-2004G)	1 2	This guidance is part of a series of materials designed to help all staff involved in the teaching of mathematics to: <ul style="list-style-type: none"> • identify problems of a particular type and the strategies that children can use to solve them; • construct teaching sequences for teaching problem solving; • incorporate problem solving within the mathematics curriculum; • develop children's reasoning and explanation skills; • engage in whole-staff discussions on the above.
9. <i>Problem solving: parts 2 and 3</i> (DfES1386-2005 and DfES1387-2005)	2	This guidance is part of a series of materials designed to help all staff involved in the teaching of mathematics to: <ul style="list-style-type: none"> • identify problems of a particular type and the strategies that children can use to solve them; • construct teaching sequences for teaching problem solving; • incorporate problem solving within the mathematics curriculum; • develop children's reasoning and explanation skills; • engage in whole-staff discussions on the above.
10. <i>Models and images</i> (DfES 0508-2003GCDI)	2	This CD-ROM contains materials to help in the teaching of key areas of mathematics in Years 1 to 3, in particular by including the use of models and images. Video clips, showing teachers using models and images in their teaching, provide a focus for discussion for teachers and their colleagues.
11. <i>Learning and teaching using ICT</i> (DfES 0315-2004G)	1 3	This product helps schools to make better use of ICT across the curriculum. They cover Years 1 to 6, each of the National Curriculum subjects in Key Stages 1 and 2 and the six areas of learning in the Foundation Stage.
12. <i>Keys to learning in literacy and mathematics</i> (DfES 0360-2006DVD-EN)	1 3	This publication supports teachers in making links between their own use of ICT to support teaching and children's use of ICT to support their learning. It is designed to be used by leadership teams to support professional development for all staff, focusing on areas of literacy and mathematics commonly identified as priorities. The materials support the raised profile of the use of ICT to support learning and teaching within the Primary Framework for literacy and mathematics.
13. Interactive teaching programs (ITPs)	1 3	These ITPs are teaching resources to support the learning and teaching of mathematics.

Theme 3: Management and deployment of resources

Resource name	Issue	Description of resource
1. <i>Excellence and enjoyment: learning and teaching in the primary years: conditions for learning</i> (DfES 0518-2004G)	1	A set of professional development materials about learning and teaching in the primary years. There is an introductory guide and six CPD units which are organised into three themes: <ul style="list-style-type: none"> • Planning and assessment for learning • Creating a learning culture • Understanding how learning develops.
2. <i>Leading on inclusion</i> (DfES 1183-2005G)	2	The aim of these professional development materials and the CD-ROM is to encourage schools to take a more strategic approach to managing inclusion, focusing on whole-school development.
3. <i>The effective management of teaching assistants to improve standards in literacy and mathematics</i> (DfES 1228-2005G)	2	These materials consist of a DVD and accompanying notes and are designed to support discussion on the role of teaching assistants to help raise standards. They support schools to promote progress and achievement of all learners.
4. <i>Targeting support: implementing interventions for children with significant difficulties in mathematics</i> (DfES 1083-2005) <i>Resources and games</i> (DfES 1166-2005)	2	Wave 3 materials A publication that includes extensive teaching materials to support further development in working with children who have gaps in their mathematical understanding.
5. <i>Springboard 6</i> (DfES 0778/2001) <i>Springboard 5 Additional materials</i> (DfES 0103-2005G) <i>Springboard 5</i> (DfES 0151/2000) <i>Springboard 4</i> (DfES 0096/2002) <i>Springboard 3</i> (DfEE 0091/2001)	2	Springboard is a catch-up programme for children in Years 3, 4, 5 and booster material for Year 6. The materials focus on key areas of number. Springboard aims: <ul style="list-style-type: none"> • to support the identified children and to remedy particular weaknesses in number so that they are in a better position to access and benefit from the teaching programme in their Year and beyond; • to set the expectation that these children catch up with their peers; • to help teachers prepare a teaching programme enabling children to benefit fully from the main teaching programme for their Year as soon as possible.

Theme 4: Professional development into practice

Resource name	Issue	Description of resource
1. <i>Excellence and enjoyment: learning and teaching in the primary years: introductory guide, continuing professional development</i> (DfES 0243-2004G)	1 2	A set of professional development materials about learning and teaching in the primary years. There is a two-part introductory guide: <ul style="list-style-type: none"> • <i>Supporting school improvement</i> • <i>Continuing professional development</i> and six CPD units, organised into three themes: <ul style="list-style-type: none"> • Planning and assessment for learning • Creating a learning culture • Understanding how learning develops.
2. <i>Professional development resource pack – literacy and mathematics DVD</i> Updated version due September 2006	1 2	Interactive resources to support understanding of high-quality teaching and learning, and to help plan teaching and assessment of literacy and mathematics. It contains an electronic library, including a compilation of video sequences and an interactive study-centre.