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### **Overview**

#### **Who is this unit for?**

This unit is for those who provide support for numeracy development. It covers the support given to pupils to help them develop mathematical skills and use and apply mathematics.

#### **What is this unit about?**

This unit is about working under the direction of the teacher to support pupils during whole- class, group and individual learning activities for numeracy development. It involves discussing with the teacher how the learning activities are to be organised, and what your particular role will be, providing the agreed support and giving feedback to the teacher about pupil progress in developing mathematical knowledge, understanding and skills.

#### **This unit contains two elements:**

1. Support pupils to develop numeracy skills
2. Support pupils to use and apply mathematics

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## Support numeracy development

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### Performance criteria

#### Support pupils to develop numeracy skills

*You must be able to:*

- P1 clarify and confirm with the teacher your understanding of:
  - P1.1 the learning activities you will be supporting
  - P1.2 the teaching and learning objectives of the activities
  - P1.3 which pupils you will be working with
  - P1.4 how this will be organised in relation to what the teacher and other pupils will be doing
- P2 obtain accurate and up-to-date information about the pupils' current numeracy skills, including any specific learning targets or difficulties
- P3 agree the support strategies you will use when working with individual and groups of pupils to develop their numeracy skills
- P4 obtain the learning resources needed to implement the agreed learning activities
- P5 use the agreed strategies correctly to support development of the pupils' numeracy skills
- P6 use praise, commentary and assistance to encourage pupils to stay on task and complete the learning tasks
- P7 deal with any difficulties in completing the learning tasks in ways that maintain the pupil's confidence and self-esteem
- P8 monitor progress towards the intended learning outcomes and provide feedback to the pupils in a manner appropriate to their age and achievements
- P9 take appropriate action to resolve any problems in supporting pupils during learning activities
- P10 provide the teacher with the information needed to maintain pupil records and reports

#### Support pupils to use and apply mathematics

*You must be able to:*

- P11 clarify and confirm your understanding of:
  - P11.1 the learning activity you will be supporting
  - P11.2 the teaching and learning objectives of the activity
  - P11.3 which pupils you will be working with
  - P11.4 how this will be organised in relation to what the teacher and other pupils will be doing
- P12 agree the strategies you will use to support pupils in using and applying mathematics
- P13 obtain and/or develop learning resources to support the activity
- P14 clearly explain the learning task to the pupils involved
- P15 encourage the pupils to ask questions and to seek clarification on any aspects of the learning task
- P16 provide levels of individual attention, reassurance and help with the

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### **Support numeracy development**

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- learning task as appropriate to pupils' needs
- P17 make yourself available and easy for pupils to approach for support when needed
- P18 provide support as needed to promote pupils' learning while allowing them time and encouragement to pursue their own lines of enquiry and solve mathematical problems
- P19 use praise, commentary and assistance to encourage pupils to stay on task and complete the learning tasks
- P20 deal with difficulties in completing the learning task in ways that maintain the pupil's confidence and self-esteem
- P21 monitor progress towards the intended learning objectives and provide feedback to the pupils in a manner appropriate to their age and achievements
- P22 take appropriate action to resolve any problems in supporting pupils during the learning activities
- P23 provide the teacher with the information needed to maintain pupil records and reports

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## Support numeracy development

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### Knowledge and understanding

*You need to know and understand:*

- K1 the school policy for mathematics and the age-related expectations of pupils relevant to the age range of the pupils with whom you work
- K2 how pupils develop mathematical skills and the factors that promote and hinder effective learning
- K3 the teaching and learning objectives of the learning activities you are supporting and the place of these in the teacher's overall teaching programme for mathematics
- K4 how to obtain and use information about pupils' current mathematical skills and abilities
- K5 strategies for supporting development of mathematical skills and how these relate to different learning needs
- K6 the nature of any special educational needs or additional support needs of pupils with whom you work and the implications of these for helping them to develop mathematical knowledge, understanding and skills
- K7 the resources used at your school for developing pupils' mathematical skills and how they should be used
- K8 how to use praise and constructive feedback to promote pupils' learning
- K9 the sorts of questions, problems and tasks that can be used to help pupils in the age-range you work with to use and apply mathematics
- K10 the importance of explaining learning tasks clearly and allowing pupils to ask questions and clarify their understanding and how to do this
- K11 how to support pupils in pursuing their own lines of enquiry and finding their own solutions to problems
- K12 how to maintain pupils' interest, motivation and focus in pursuing lines of enquiry and solving problems
- K13 how to monitor and promote pupil participation and progress in developing and using mathematical skills
- K14 the sorts of problems that might occur when supporting learning activities and how to deal with these
- K15 the importance of working within the boundaries of your role and competence and when you should refer to others
- K16 the school procedures for recording and sharing information

### Additional Information

#### Glossary

##### Information

information about a pupil's current skills and abilities may be obtained from:

1. the class or subject teacher
2. written records/reports
3. observation of the pupils

##### Learning objectives

as defined by the national curriculum for the country in which you work and reflected in the school and teacher's curriculum framework for mathematics

##### Numeracy

a proficiency which involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams and tables

##### Learning resources

materials, equipment (including ICT), software, books and other written materials (e.g. handouts, worksheets), DVDs, etc. that are required to support teaching and learning

##### Numeracy skills

the skills needed to use and apply mathematics including:

1. counting and understanding number
2. knowing and using number facts
3. calculating
4. understanding shape
5. measuring
6. handling data

##### Problems

the barriers and hindrances to providing support for pupils during learning activities. Problems may relate to:

1. learning resources, e.g. quantity, quality, suitability or availability
2. the learning environment, e.g. space, comfort, noise level, disruptions
3. the pupils' ability to learn, e.g. attitude to learning, behaviour, self-esteem, concentration

##### Support strategies

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the methods and techniques used to support pupils in developing mathematical knowledge and skills, for example:

1. helping pupils to interpret and follow instructions
2. reminding pupils of teaching points made by the teacher
3. questioning and prompting pupils
4. helping pupils to select and use appropriate mathematical resources, e.g. number lines, measuring instruments, games, computer software and learning programmes
5. explaining and reinforcing correct use of mathematical vocabulary
6. introducing follow-on tasks to reinforce and extend learning, e.g. problem-solving tasks, mathematical games, puzzles

#### **Using and applying mathematics**

problem solving or pursuing a line of enquiry that involves representing ideas using numbers, symbols or diagrams, reasoning and predicting and communicating results, orally or in writing

#### **Links to other NOS**

- TDASTL1 Provide support for learning activities
- TDASTL2 Support children's development
- TDASTL6 Support literacy and numeracy activities
- TDASTL18 Support pupils' learning activities
- TDASTL33 Provide literacy and numeracy support to enable pupils to access the wider curriculum

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## Support numeracy development

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