

The interactive whiteboard

Objectives

By the end of this session teachers will:

- have viewed and discussed some ICT resources;
- have considered how the workshop should be followed up in school.

Resources

For the trainer

- Computer with data projector, Microsoft PowerPoint and Presentation 16.ppt
- Interactive whiteboard and a range of software
- Whiteboard or flipchart
- Copies of the evaluation forms for Day 5

For each teacher

- *Teacher's pack*
Handout 16.1
Evaluation forms for Day 5

Session outline

Using an interactive whiteboard Slides 16.1–16.3	Whole group presentation and discussion	45 minutes
Gap tasks Handout 16.1	Explanation and discussion of gap tasks	10 minutes
Course evaluation and end of course Evaluation forms for Day 5	Discussion with participants about the course Completion of evaluation forms	15 minutes

Using an interactive whiteboard

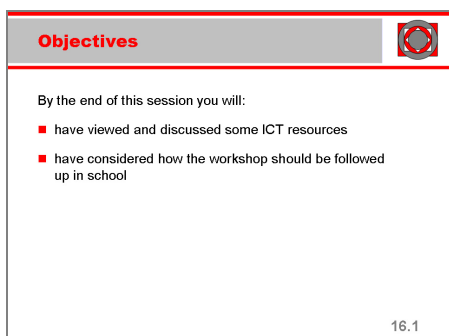
45 minutes

Explain that the last session of this five-day workshop provides an opportunity to look at the use of the interactive whiteboard. Show **slide 16.1** to introduce the objectives for this session.

Before the session starts, brief any interpreter about the key points of the session.

Set up the interactive whiteboard.

Load **Presentation 16.ppt**.



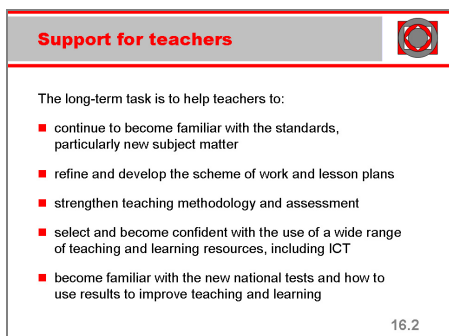
Objectives

By the end of this session you will:

- have viewed and discussed some ICT resources
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16.1

Show **slide 16.2**. Explain that the long-term goals in following up the workshops include becoming more familiar with ICT resources and maximising their use in the classroom.



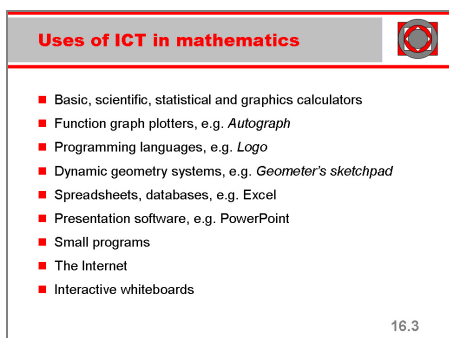
Support for teachers

The long-term task is to help teachers to:

- continue to become familiar with the standards, particularly new subject matter
- refine and develop the scheme of work and lesson plans
- strengthen teaching methodology and assessment
- select and become confident with the use of a wide range of teaching and learning resources, including ICT
- become familiar with the new national tests and how to use results to improve teaching and learning

16.2

Show **slide 16.3** to indicate the range of applications of ICT in mathematics.



Uses of ICT in mathematics

- Basic, scientific, statistical and graphics calculators
- Function graph plotters, e.g. *Autograph*
- Programming languages, e.g. *Logo*
- Dynamic geometry systems, e.g. *Geometer's sketchpad*
- Spreadsheets, databases, e.g. Excel
- Presentation software, e.g. PowerPoint
- Small programs
- The Internet
- Interactive whiteboards

16.3

Use the notes below to discuss the bullet points on the slide. For example:

- Calculators, when used to carry out tedious calculations, allow students to focus on the strategies needed to solve a problem. They can also be a useful support when students are learning arithmetic to help them to grasp ideas such as place value. Scientific or statistical calculators are used for more complex calculations, including work with trigonometric ratios and statistical work.
- Graphics calculators and function graph plotters can help students to learn about graphing – they are not just an efficient tool to use when students have mastered the basics. They allow students to see instantly the graphs of complex functions and to explore the impact of changes. Function graph

plotters can also display statistical diagrams, and can be used to develop algebraic identities.

- Programming languages such as *Logo* allow students to explore angle, direction and distance, and simple transformations, particularly rotations.
- Dynamic geometry systems (DGS) are interactive tools for constructing geometric diagrams. They allow students to see figures in two- and three-dimensional space and to experiment with the effects of transformations.
- Spreadsheets and databases allow students to enter data, compile statistics and produce a range of graphs, charts and tables. Students can decide on the most appropriate way to display the data and can readily make and test hypotheses about the impact of a change in the data set.
- PowerPoint can be used to create useful presentations. Slides can be sequenced to give the impression of a moving object or a film.
- Number games and other small programs, and ‘drill-and-practice’ software, can help to reinforce students’ basic skills and mathematical techniques. The best include an element of strategy or problem solving.
- The Internet can be used as a source of relevant data. It also allows students to exchange ideas and test hypotheses with a far wider audience. There are useful websites that give teachers or students more background to the mathematics they are learning, or problem solving websites offering a range of good problems and puzzles.
- An interactive whiteboard is just a hardware device. It combines the functions of the screen display and the keyboard of a computer. It acts as a large display and is also touch-sensitive. Information can be entered by touching specific areas of the screen.

Demonstrate a range of resources, including the interactive whiteboard.

Gap tasks

10 minutes

Summarise the next steps needed to follow up the course. You may wish to indicate the support that you will be able to provide.

Introduce and explain the gap tasks on **Handout 16.1**. These are tasks for teachers to carry out at school before the next workshop. Remind school groups about the help that they can get with these tasks from their School Support Organisations.

Check whether anyone has any unanswered questions and answer these now.

Evaluation and end of workshop

15 minutes

Ask teachers to complete the evaluation forms for the fifth day and for the overall evaluation of the course.

Thank everyone for their contributions to the workshop. Collect in the evaluation forms before they depart.

