

# Planning 2

## Objective

By the end of these sessions teachers will:

- have planned a detailed unit of work to cover several hours of teaching (e.g. 9 hours).

## Resources

### For the trainer

- Computer with data projector, Microsoft PowerPoint and Presentation 8.ppt
- Whiteboard or flipchart
- Sample units of work ready to give to each teacher (e.g. Handout 8.1)
- Extra copies of Handouts 8.2, 8.3 and 8.4 from the *Teacher's pack*
- *Curriculum Standards for mathematics: Grades K to 12*

### For each teacher

- *Teacher's pack*  
Handouts 8.1a, 8.1b and 8.1c (held back until the relevant point of the session)  
Handouts 8.2–8.5
- *Curriculum Standards for mathematics: Grades K to 12*

### For each school group

- Mathematics textbooks brought by teachers

## Session outline

|  |   |            |
|--|---|------------|
| <b>Introduction</b><br>Slides 8.1–8.3                                | Whole group presentation and discussion                     | 10 minutes |
| <b>Planning a unit of work</b><br>Slides 8.4–8.5<br>Handouts 8.1–8.4 | Whole group presentation<br>Task 1: Planning a unit of work | 90 minutes |
| <b>Sharing ideas</b>   | Task 2: Sharing ideas<br>Feedback from group work           | 30 minutes |
| <b>Adding details</b><br>Slide 8.6                                   | Whole group presentation and discussion                     | 10 minutes |
| <b>Leadership and problem solving</b><br>Handout 8.5                 | Task 3: Problem solving                                     | 20 minutes |

# Introduction

10 minutes

Welcome everyone back and make any introductions. Deal with any domestic or administrative matters.

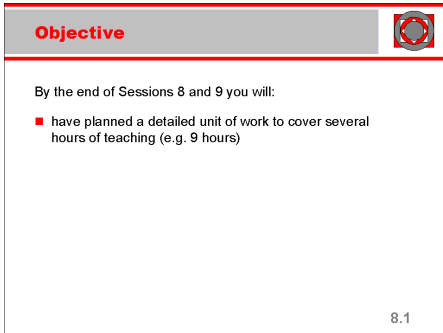
Refer to the *Teacher's pack*. Point out the programme for the third day, the evaluation form for completion at the end of today's sessions and the reduced copies of the slides at the back of the pack.

Explain that the third day of this workshop focuses on planning. Use **slide 8.1** to introduce the objective for Sessions 8 and 9.

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

Make sure that each teacher has a copy of the standards

Load **Presentation 8.ppt**.



**Objective**

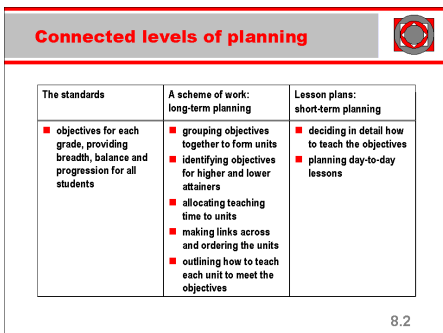
By the end of Sessions 8 and 9 you will:

- have planned a detailed unit of work to cover several hours of teaching (e.g. 9 hours)

8.1

Say that good planning underpins good practice. Good planning ensures that teaching is focused on what students need to learn to make good progress. Remind everyone of the function and purpose of a scheme of work: it translates the standards into teaching units that, in turn, support lesson planning.

Remind teachers of the connected levels of planning, explaining each part carefully. Show **slide 8.2**.



| The standards  | A scheme of work: long-term planning  | Lesson plans: short-term planning  |
|--|---|--|
| <ul style="list-style-type: none"><li>■ objectives for each grade, providing breadth, balance and progression for all students</li></ul> | <ul style="list-style-type: none"><li>■ grouping objectives together to form units</li><li>■ identifying objectives for higher and lower attainers</li><li>■ allocating teaching time to units</li><li>■ making links across and ordering the units</li><li>■ outlining how to teach each unit to meet the objectives</li></ul> | <ul style="list-style-type: none"><li>■ deciding in detail how to teach the objectives</li><li>■ planning day-to-day lessons</li></ul> |

8.2

Say that this session continues from Session 3 on Day 1 and will focus on planning a unit of work, and in particular the first, second and last bullets in the middle column of the slide. Day 4 will focus on the right-hand column, lesson planning.

Remind everyone that several principles need to be remembered when a scheme of work is planned. Show **slide 8.3**.

**Factors to consider**

- Make sure that the units of work in each semester have an appropriate balance across the strands
- Include all the key performance standards for the grade at least once during the year
- Incorporate reasoning and problem solving skills
- If possible, revisit key performance standards at least once during the course of the year
- Provide opportunities to link different aspects of mathematics
- Consider the time needed for regular assessment and review

8.3

Remind everyone that the recommended balance across the strands can be found in the introduction to the standards.

## Planning a unit of work

**90 minutes**

Say that on Day 1 of the workshop teachers considered how to develop an outline plan for the number and flow of units throughout the school year. Once the flow of the units has been decided, each unit will need to be developed.

Give out **Handout 8.1**, the sample unit(s). Use **slides 8.4 and 8.5** to point out the features of the unit.

Choose a suitable unit (e.g. Handout 8.1a for lower primary, Handout 8.1b for upper primary or preparatory and Handout 8.1c for secondary).

**Describe briefly:**

- what the unit is about: the topics covered, where the unit links to other units, and so on
- the learning outcomes, a summary of what students might be expected to achieve, drawn from the standards
- vocabulary or technical terms that students need to learn
- the main resources that will be needed for work in the unit
- the teaching objectives for the unit, drawn from the standards, showing what students should be taught

8.4

**Describe briefly:**

- how topics can be approached by teachers
- suitable activities for students
- suitable assessment activities
- further notes for teachers
- which of the school's learning resources can best support students' work during the unit, including relevant parts of textbooks

8.5

Explain these points.

- Expectations are summaries of the learning outcomes and are drawn from the shaded panels at the start of each strand of the standards.
- Producing the teaching objectives was a task that teachers practised in Session 3.
- The teaching and learning activities include short activities that would be useful as starters and substantial activities that would be useful as main teaching activities.
- Space is left in each unit for teachers to add their own notes about which of the school's resources, including parts of textbooks, can best support students' work, since this will vary from school to school.
- The assessment examples include examples drawn from the standards and could be included in the consolidation phase of a lesson.
- Some of the information on the first page is best added after the rest of the unit has been completed.

Stress that there is no given way to set out a unit of work. The design and layout is up to individual schools. The details of what is or is not included are also up to schools. The sample represents the minimum needed.

Pause for 5 minutes to allow everyone to look through the units. Answer any questions before moving on.

### Task 1: Planning a unit of work

Ask teachers to work in school groups and to plan a unit of work for their school.

Suggest that they start by identifying appropriate objectives for the unit, basing these on the standards.

Remind them to include reasoning and problem solving objectives and activities in their unit.

Suggest also that when they plan the activities pages that they refer to the textbooks that they have brought with them and that they include references in their unit to relevant teaching input, student activities and practice exercises from the textbooks.

Explain that they can plan their unit using **Handouts 8.2, 8.3 and 8.4**, or they can design their own pages. Offer spare copies of the handouts as necessary.

Allow up to 90 minutes for this task. Take a break at a suitable point and continue for about 20 minutes into the start of Session 9.

## Sharing ideas

30 minutes

### Task 2: Sharing ideas

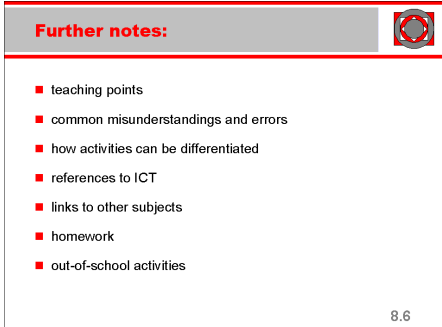
Bring the whole group together. Invite school groups to describe what they have done and to explain what they found easy to do and what was more difficult. Invite all the groups to suggest ways round any difficulties and add your own suggestions.

Allow up to 30 minutes for this task.

## Adding details

10 minutes

Say that as teachers use and refine a scheme of work, they sometimes choose to add further details to it to make lesson planning easier. Show **slide 8.6** to illustrate.



Further notes:

- teaching points
- common misunderstandings and errors
- how activities can be differentiated
- references to ICT
- links to other subjects
- homework
- out-of-school activities

8.6

Choose one of the units that the teachers in the group have developed. Work through the bullets on the slide and ask the group as a whole to suggest what they might add to the unit for each of the bullets.

## Leadership and problem solving

20 minutes

State again that joint planning, in teams or as a whole department, provides an opportunity for professional dialogue and continuing professional development. This kind of work is at the heart of school effectiveness.

Draw attention to the benefits of planning with colleagues, for example, discussing what objectives are appropriate, the best teaching strategies to use, ways of incorporating reasoning and problem solving. Acknowledge that it is not always easy to find the time but that joint planning is known to be an effective strategy to make a difference to the quality of teaching and learning. Joint planning also helps everyone to get to know the standards and how they can support planning.

### Task 3: Problem solving

Ask teachers to work in pairs from different schools and to turn to **Handout 8.5**, a set of problems.

In turn, the partners should choose a problem and read it out. The pair then agrees how a subject leader and the school's senior managers might address the problem.

When time up is called after 7 minutes, pairs join to make fours and each pair in turn outlines a problem and explains their agreed strategy. You may need to say that there are no right or wrong answers and that a solution to a problem in one school may not necessarily work in another.

Conclude this session by saying that Day 4 will continue the discussion on planning. The next session will consider assessment, including the part that it needs to play in planning.

