

## Lower Secondary Curriculum Reform

# Inservice Topics and Activities

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## TOPIC 1: Structural and curriculum reform – key ideas and policy documents

*The activities for this topic are designed to bring teachers up-to-date with current education policies. Teachers will need time to read and discuss the documents listed below. If inservice sessions are 40 minutes or less then a separate session will be needed for each document. Other activities in this topic will need at least 30 minutes to complete. Some activities require a commitment to long term implementation.*

### Resources

National Curriculum Statement - 2003	Gender Equity in Education Policy
National Assessment and Reporting Policy - 2003	Gender Equity in Schools
National Education Plan	HIV/AIDS Policy
	Language Policy in Schools

### Activity 1 - NCS, NA&RP and the NEP

- Work in pairs or small groups to read sections from the NCS, NA&RP and the NEP and find answers to the following questions. Share your answers with other groups.

#### National Curriculum Statement

1. What is the purpose of the NCS?
2. Give two reasons for the need for a PNG curriculum.
3. Why has PNG chosen an outcomes-based curriculum?
4. What are three aims of the secondary curriculum that are not being currently met?
5. What are the bilingual requirements for secondary schools?
6. Why is there an emphasis in the reform curriculum on catering for gender differences? How will this be done?
7. Section 5.4 tells us about changes to teaching and learning. Highlight five aspects of the recommended teaching and learning practices that are not currently happening in your school.

#### National Assessment and Reporting Policy

1. What does the Secretary's message say about criterion-referenced assessment?
2. List two things you have read about assessment that are not currently happening at your school?
3. Study sections 6.1 and 7.4 closely and describe which of your responsibilities for assessment could be improved.

#### National Education Plan 2005-2014

1. Skim read sections of the NEP that relate to secondary schooling and highlight at least five things that are new to you.
2. Compare your selection with another person in your group and discuss the differences.
3. As a group, list three things in the plan that will have a big impact on teaching and learning in your school.

- Use information from the resource documents and your own knowledge to prepare a short speech to explain to parents the reasons for reforming the education system.
- Draw a chart to help illustrate components of the PNG education system for parents.
- Use information in the policy documents to identify and list roles and responsibilities of teachers and other key people in secondary education.
- Discuss the extent to which the roles are currently being carried out in your school and suggest ways the situation could be improved.

**Activity 2 - Gender Equity in Education Policy, Gender Equity in Schools**

- Read the gender equity documents and highlight at least five things that are new to you.
- Compare your selection with another person in your group and discuss how the items you have both selected will impact on your teaching practice.
- Plan three steps you will take to improve gender equity practices in your classroom.
- Implement the planned improvements.

**Activity 3 - HIV/AIDS Policy**

- Read the HIV/AIDS policy and list roles and responsibilities of teachers and other key people in secondary education.
- Identify what has been done in your school already to educate students, teachers and the community about HIV/AIDS.
- Brainstorm ideas for expanding your HIV/AIDS education and awareness program. (You may find ideas in the Personal Development Teacher Guide and in the resources supplied to the professional learning team).
- Implement some of the ideas discussed above.

## TOPIC 2: Outcomes-based Education (OBE)

*The activities in this topic are designed to increase teachers' understanding of the principles and practice of outcomes-based education, especially the structure and interpretation of learning outcomes. Notes about different aspects of the outcomes approach are included before each activity.*

### Background reading

Section 2 in the Lower Secondary  
Implementation Handbook

National Curriculum Statement

"Outcome-Based Education means clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences. This means starting with a clear picture of what is important for students to be able to do, then organizing the curriculum, instruction, and assessment to make sure this learning actually happens." (Spady, 1994:p.1)

A focus on outcomes represents a major shift in school curriculum from a focus on educational inputs and time allocation toward one that emphasises the desired results of schooling. Outcomes describe the result of learning over a period of time - the result of what is learnt, rather than what is to be taught.

An outcome-focused approach accepts that learning progresses along a broadly identifiable developmental continuum. All students can learn and succeed, but not all in the same time or in the same way. Outcomes allow all students to progress and successful learning promotes more successful learning.

### Outcomes and objectives – the difference

Many books, educationalists and teachers use the terms goals, aim, objective and outcomes interchangeably so there is a lot of confusion.

Objectives can be thought of as broad statements of what students are expected to learn for example, 'by the end of this topic/lesson students should be able to ..... (future). They are general statements that provide direction for teaching. Objectives are often written using words like: learn, know, understand, appreciate, and these are not directly measurable. Many teachers do write their objectives in behavioural terms using active verbs, but many objectives are written using vague terms so that it is difficult to determine whether the students have met the objective.

Learning outcomes are more specific statements of the learning which will occur generally within a subject, topic or lesson. Learning outcomes are not statements that describe the content of the unit (eg students will gain an understanding of X, Y, or Z'). Nor are they statements of what the teacher intends to do. (e.g.. 'The objectives of this unit are to ...'). They are brief, clear, specific statements of what a student is expected to know and be able to do upon completion of the learning exercise or activities. Learning outcomes (also called performance objectives or competencies) are developed from the curriculum/syllabus goals or aims.

A student-centered syllabus requires that we shift from what we, the teachers, are going to cover in our units/lessons to a concern for what information and tools we can provide for our students to promote learning and intellectual development. All learning outcomes should focus on the student. A learning outcome states what the learner can do or perform, not how the learner learns or what the teacher intends to do. To ensure that learning outcomes are student-centered, a good learning outcome should appropriately complete the statement "The student can..."

Evidence of whether the learner has learned/mastered the material comes not from reading the text book or copying notes from the board or listening to the teacher talk, but from being able to explain the principles in his/her own words or apply it in a practical activity or describe it in writing.

Many teachers already use an outcomes approach when teaching because they plan their lessons and units around developing student's skills or understandings rather than covering a content area. Many teachers already use an outcomes approach when teaching because they require students to demonstrate what they know and can do through active involvement in a range of settings. Many teachers already use an outcomes approach when teaching because they include learning experiences involving higher order thinking skills such as decision making, problem solving, and interpreting.

### **An example**

For an example of how outcomes can be developed, let's assume that we are writing a unit for Social Science. The aim of the unit is to teach students about different cultures. What might the specific tasks and associated learning outcomes include?

An example of a poorly written outcome is:

*In this unit you will learn about different cultures.*

This statement is not an outcome but a description of the unit content. Another example of a poorly written outcome is:

*After completing this unit you will appreciate the differences between cultures*

These two outcomes do not indicate observable behaviours, making assessment of their mastery impossible. How do we know if someone knows, appreciates or understands something? What does it really mean to 'appreciate the difference between cultures'?

The following outcomes are far better examples of the use of observable behaviours.

*After completing this unit you can:*

- *Identify the characteristics of a culture OR*
- *Compare the characteristics of different cultures OR*
- *Describe the characteristics of different cultures*

These outcomes are built around very discrete tasks. Instead of the vague objective to "appreciate the difference between cultures," the learner knows exactly what is expected for successful achievement. More importantly, these behaviours are observable. A student can be observed as s/he describes aspects of a culture to a group. Because there is no ambiguity, learner expectancy is achieved and a proper evaluation can be made.

In the following table notice that the outcome statements focus on the learner, are performance-oriented, begin with an action verb and can be observed or measured.

<b>Objectives</b> - By the end of this lesson/unit/topic students should...	<b>Outcomes</b> - By the end of this lesson/unit/topic students can ...
be aware of advanced mapping techniques	<i>produce</i> accurate and detailed maps using advanced techniques such as <i>GIS</i>
appreciate cultures other than their own	<i>describe</i> the key characteristics of a variety of cultures
understand different types of spoken English	<i>identify</i> and <i>interpret</i> different types of spoken English
be familiar with personal computers	<i>operate</i> a personal computer
gain knowledge of types of government in the Asia/Pacific region	<i>list</i> the main features of the types of government practiced in the Asia/Pacific region
have learned how to conduct surveys	<i>conduct</i> surveys using questionnaires, interviews and checklists
be acquainted with different classification systems	<i>sort</i> plants and animals using different classification systems
know how to use Word, Excel, and PowerPoint	<i>use</i> the three main software packages to produce specific documents
realize the need to care for the environment	<i>Plan</i> and <i>promote</i> a project to improve the local environment
have studied the causes of the Bougainville conflict	<i>outline</i> the causes of the Bougainville conflict
have covered the main features of free-market economies	<i>describe</i> the main features of the free-market economy
have acquired skills of economic analysis and reasoning	<i>use</i> the skills of economic reasoning and analysis to report on current economic conditions
have developed the ability to think creatively about new technology problems	<i>apply</i> creative solutions to technology problems
have an understanding of the connections between morality and law.	<i>identify</i> the connections between morality and law
be proficient with conversational Japanese	<i>talk</i> to classmates using conversational Japanese
have been introduced to statistics and its practical application	<i>use</i> statistical applications to solve a range of problems
know about techniques used by writers to create certain effects	<i>analyse</i> techniques used by writers to create certain effects,
know different spelling rules	<i>spell</i> most common words accurately and <i>use</i> a range of strategies to spell unfamiliar words.
understand appropriate behaviour in cooperative situations	<i>contribute</i> appropriately in a range of cooperative situations

### Activity 1

- In pairs examine the statements below and make any changes necessary to make them more acceptable according to what you have learned about outcomes.
  - Students will get an introduction to statistics.
  - Students should be able to analyse a financial statement

- Students will demonstrate an understanding of the connections between morality and law by making an in-class oral presentation at the end of the term.
  - Students will write a story using 'tok ples'.
  - Students will understand the nature of religion and ethics in modern society
  - Students should appreciate the visual arts of the Momase region.
  - Students will understand the interrelationship between the three branches of the PNG political system.
- Compare your versions with those of your colleagues and modify them again if appropriate

### **Applying the principles of an outcomes approach to education**

Applying the principles of an outcomes approach to education means repeatedly asking questions such as

1. What skills do students need to develop?
2. Why do students need to learn these things?
3. How can students demonstrate what they have learned?
4. What will they do to demonstrate how much and how well they have learned?
5. What information do students need to learn from the activities and assignments?
6. What help do students need to learn these things?

The focus is always on the student and how you as the teacher can help the student learn and apply knowledge and skills.

### **Characteristics of an outcomes-based learning environment**

- Lessons are usually less content focused and more 'skill' focused with more room for student negotiation;
- Students are aware of the reasons for learning what they are learning;
- It is recognised that all students can succeed;
- Students are given time to produce work of a high standard;
- Students are provided with opportunities for self-assessment so they can monitor their own progress;
- A wide range of teaching strategies is used to cater for the developmental differences, prior knowledge and skills of students;
- There is a learner-centred approach to learning and teaching;
- The different backgrounds, interests, prior understandings, experiences and learning styles of students are valued;
- Students are provided with opportunities to progress and demonstrate core learning outcomes in more than one context;
- There is sufficient flexibility in the curriculum to cater for the different characteristics and learning needs of students;

- Assessment is seen as a learning opportunity as well as a diagnostic tool and monitoring tool and is used to inform future planning.

A clearly written set of learning outcomes statements informs and guides teachers and students (and other stakeholders) about

- the content of teaching
- the most appropriate teaching strategies
- the sorts of learning activities/tasks set
- appropriate assessment tasks
- course evaluation.

Therefore, learning outcomes statements need to:

- identify important learning requirements (the 'content' of learning - the range and type of knowledge, skills and values required)
- use clear language, understandable by students and other potential clients
- be achievable and assessable
- relate to explicit statements of achievement (e.g. level of understanding required).

## The structure of learning outcomes

Learning outcomes are written using the stems "Students can", "Students are able to". Learning outcomes are written using active verbs eg 'Students can ...discuss, demonstrate, illustrate, analyse, debate, apply, use ...'

Learning outcomes usually contain three parts - the verb, the concept, and the context, but not necessarily in that order. (In the following examples the VERB is capitalised, the *concept* is in italics and the context is underlined to help illustrate this).

- Students can USE a variety of *communication skills* in any daily business activity.
- Students can DESCRIBE and EXPLAIN how people can *manage resources* in a sustainable way.
- Students can CREATE and PERFORM traditional *dance, drama and musical items*.

### Activity 2

The following unit learning outcomes have been selected from the nine lower secondary syllabuses.

- Examine each one and identify the verb/s, the concept to be learned and the context in which the concept is applied.
  - Design and write a small business enterprise plan
  - Apply geographic skills to describe the physical surroundings they live in
  - Investigate and explain the properties of images formed by optical devices
  - Explore and develop ideas to produce designs in a variety of contexts
  - Create narrative texts based on Papua New Guinean experiences using appropriate structures and language features

- Identify and create representation of patterns to solve equations
- Apply technical drawing techniques to produce a range of appropriate drawings
- Assess personal physical fitness and explain its relevance to health
- Plan and conduct pest or disease control measures on selected crops or animals

### **Linking learning outcomes to learning and teaching strategies**

If we are to succeed as educators our students must be able to do more than simply recall on demand large amounts of information – the simplest of declarative knowledge. Successful learners can apply what they have learnt in new and different situations using critical thinking skills e.g., to analyse, interpret, evaluate and synthesise information

Clearly, to achieve the learning outcomes in the examples below will require more than simply the presentation of relevant information by the teacher. Students will need to be engaged in activities that provide opportunities to develop the higher order skills involved. The action verbs of the learning outcomes suggest/indicate the sorts of learning activities that will best lead to their attainment.

For example, if one learning outcome is for students to be able to analyse and interpret data, then there should be activities where students are asked to analyse and interpret data, and opportunities for them to monitor, assess and receive feedback on their progress regarding these skills. If, as an outcome, students are expected to write a report using particular conventions, then they will need to be taught the skills involved and engaged in activities that allow them to practise and refine those skills.

Let's look more closely at a Business Studies learning outcome from the unit – Business Communication – to see what knowledge and skills are embedded in the learning outcome and what you can do to help students achieve the learning outcome.

*Students can use a variety of communication skills in any daily business activity.*

This outcome requires you to teach your students the principles and the importance of good communication and how to be effective communicators. You will need to provide opportunities for your students to identify and discuss communication problems and issues and skills and suggest solutions. You will need to provide practical exercises where students role play hypothetical situations.

Let's look at another unit learning outcome, this time from the Social Science unit - Resource Development and Management.

*Students can describe and explain how people can manage resources in a sustainable way.*

This outcome requires you to provide opportunities for students to gather information and examples about the sustainable use of resources from a variety of sources in their local area, in Papua New Guinea, and globally. Students should be given the opportunity to make comparisons with the way resources were used in the past and how resources are used now both in PNG and globally.

### Activity 3

- Working with a partner select three of the learning outcomes from the list below and write a paragraph that identifies the knowledge and skills embedded in the learning outcome and suggest ways the teacher could help students achieve the learning outcome.
  - Design and write a small business enterprise plan
  - Apply geographic skills to describe the physical surroundings they live in
  - Investigate and explain the properties of images formed by optical devices
  - Explore and develop ideas to produce designs in a variety of contexts
  - Create narrative texts based on Papua New Guinean experiences using appropriate structures and language features
  - Identify and create representation of patterns to solve equations
  - Apply technical drawing techniques to produce a range of appropriate drawings
  - Assess personal physical fitness and explain its relevance to health
  - Plan and conduct pest or disease control measures on selected crops or animals
- Find other pairs who have selected the same learning outcomes and compare what you have written with their paragraph. Discuss any differences in the interpretations of the learning outcome.

## TOPIC 3: Lower secondary curriculum framework – subjects, timing etc

*The activities in this topic are designed to improve teachers' awareness of the scope and requirements of the reform lower secondary curriculum. All teachers should be familiar with the structure and requirements of the whole curriculum, not just their own area of expertise.*

### Resources

All lower secondary reform syllabuses

Lower Secondary Curriculum

All lower secondary teacher guides

Implementation Handbook

### Activity 1

You have been asked to do a presentation to potential Grade 9 students and their parents to tell them about the structure and requirements of the lower secondary curriculum.

- Draw up a chart/table that lists all lower secondary subjects. Your chart/table should include columns for the curriculum areas, subject fields, subjects, and time allocations. Your chart/table should also include the number of periods allocated to each subject.
- Select three subject syllabuses, your own and two others you are interested in. Read and summarise the *Secretary's message*, *rationale*, and *aims* sections in the documents and write a concise paragraph that explains why these subjects are included in the lower secondary curriculum.
- Compare your paragraphs with others written about the same subjects and discuss the differences. As a whole group, write one comprehensive paragraph for each subject and attach them to the chart.
- Display the chart/table in a location where it can be read by students and visitors to the school.

### Activity 2

Ideally schools should offer all subjects in the reform curriculum. What will have to be done at your school to ensure this is possible?

- Read the section in the *Implementation Handbook* that outlines the essential requirements for each subject. What does a school have to do to offer a subject?
- Take a walk around the school and assess the facilities and resources available in each department. Make a list of essential improvements and suggest realistic ways of supporting the development of each subject.

### Activity 3

For the first few years of implementation schools will have to be innovative in their approach to staffing the subjects, especially those that are new such as Personal Development. How will your school manage?

- Conduct an audit of the qualifications, teaching experience, skills and interests of the teaching staff by developing a questionnaire that everyone agrees to complete. (The questionnaire can be anonymous for this activity)
- Collate the results of your survey by identifying in one column the collective teaching experience of the staff and in a second column, the additional skills and interests of staff members.
- Identify the areas of weakness in teaching experience and determine whether the additional skills and interests of teachers can be utilised to improve the weaknesses. (For example you may only have one experienced PE teacher but three other staff members who regularly play a range of sports)
- Discuss strategies for expanding the knowledge and skills of all teachers beyond a single area of expertise.

## TOPIC 4: Syllabus study - Curriculum principles

*The activities in this topic are designed to ensure teachers understand the foundations of the reform curriculum.*

### Resources

All lower secondary reform syllabuses

All syllabuses (elementary, primary and lower secondary) contain a section entitled *Curriculum Principles*. These are the key ideas that underpin Papua New Guinea's approach to school education. In the lower secondary syllabuses they include:

1. Our way of life
  - Cultural relevance
  - Maintenance of vernacular language
  - Cultural diversity
  - Multiculturalism
  - Ethics, morals and values
2. Integral human development
  - Facilitating integral human development
  - National building and national unity
  - Sustainability
  - Citizenship
3. Catering for diversity
  - Gender
  - Special needs
4. Teaching and learning
  - Student centred learning
  - Inclusive curriculum
  - Relevance
  - Language development across the curriculum
  - Lifelong learning
  - Integration
  - Safety

### Activity 1

- Work in subject groups. Write a few sentences to explain how the study of your subject contributes to the development of the curriculum principles listed in the first three sections above.

*(Hint: Ask yourself a question about each point eg how is my subject culturally relevant? How does my subject help maintain vernacular languages? How does my subject help develop good citizens?)*

- Compare what you have written with what is in your syllabus and discuss the differences.

- Discuss with a partner the section on 'catering for diversity". Record some ideas about how you might create a gender sensitive classroom and cater for students with special needs. Still working together, write a classroom scenario that demonstrates to practising teachers at least one way the teacher has catered for girls and students with special needs.

### Activity 2

Read the section on *Teaching and learning* in at least one syllabus.

- Write one or two paragraphs to explain what student centred learning means. Include specific examples of typical student-centred activities in your explanation.
- Discuss with a partner the section on 'inclusive curriculum'. Record some ideas about inclusive classroom practices. Still working together, write a classroom scenario that demonstrates to practising teachers at least one inclusive practice in action.

### Activity 3

The principles of relevance and integration are closely linked. Read these two sections in your syllabus closely and think about other curriculum subjects that have close links with your own.

- Pair up with a teacher of a subject that links easily with your own, for example Arts and D&T; Maths and Business Studies. Brainstorm ways you could work together to provide more relevant learning for your students.
- Now pair up with a teacher of a subject that you would not usually link to your own, for example English and Agriculture. Brainstorm ideas for developing natural links between the two subjects.

## TOPIC 5: Structure of the syllabuses and teacher guides

*The activities in this topic are designed to guide teachers through sections of the two most important documents for implementing the reform curriculum - the subject syllabus and teacher guide. Teachers should be familiar with the structure and content of as many syllabuses and teacher guides as possible.*

*This topic will take at least two hours to complete.*

### Resources

- All lower secondary reform syllabuses
- All lower secondary teacher guides
- Lower Secondary Curriculum Implementation Handbook

In addition to the curriculum principles the syllabuses contain the following information:

- Broad learning outcomes and unit learning outcomes
- Subject strands
- Unit sequence
- Unit descriptions, learning outcomes, content and assessment tasks
- Assessment , examination and certification

### Activity 1

- Study your syllabus (and others) in more detail and answer the following questions.
  - a. What is the link between the broad learning outcomes and unit learning outcomes?
  - b. How would you describe a unit to a person unfamiliar with the syllabus? (Hint: think about timing, sequencing, layout).
  - c. What does each unit have in common across all the syllabuses?
  - d. What does a school have to do to teach an option unit?
  - e. How are option units assessed?
  - f. What is the difference between an assessment task and assessment criteria?
- Compare your answers with those of a colleague and discuss any differences in your responses.

### Activity 2

Take some time to browse through the different sections in a Teacher Guide. These include the Secretary's message, Introduction, Teaching and learning, Assessing .....(subject), Planning and programming units, Recording and reporting, Resources, References and the Glossary.

- You are in charge of a group of trainee teachers on their first school experience visit. Form a small group to brainstorm ten questions that a trainee may ask about using the teacher guide.

- Swap your questions with another group and use the teacher guide to provide answers for the questions they have developed. Include an introductory comment that explains the purpose of the Teacher Guide.
- What information, if any, is missing from the teacher guide? Where can you find that information?

### Activity 3

- Split into groups and select one of these sections from the Teacher Guide - Teaching and learning, Assessing ....., or Recording and reporting. Read the selected section individually and highlight information in the selected section that is new to you.
- Share your selection with other members of your group and together discuss the implications of this new knowledge for your teaching.
- Prepare a consequence chart that can be displayed for the whole staff to discuss.

<b>Example of a consequence chart for Assessing .....</b>	
<b>New knowledge or information</b>	<b>Implications for teaching practice</b>
<i>For example</i> Providing feedback	This means we should schedule assessment tasks throughout the term so that we can identify weaknesses in students and provide appropriate help.

<b>Example of a consequence chart for Recording and reporting</b>	
<b>New knowledge or information</b>	<b>Implications for teaching practice</b>
<i>For example</i> Reporting using performance standards	This means we should develop a new format for reporting to parents

**Activity 4**

- As a whole group study the consequence charts developed for the previous activity and select one change from each chart to focus on for the coming term. For example all teachers agree to provide and mark one assessment task early in the term and to adjust their teaching program to provide feedback in response to an evaluation of student performance.

## TOPIC 6: Broad learning outcomes and unit learning outcomes

*The activities in this topic are designed to help teachers develop an understanding of the links between the broad learning outcomes for Grades 9 & 10 and the learning outcomes in each unit. Teachers will also look for links between the learning outcomes of different subjects.*

*This topic should take no longer than one hour to complete.*

### Resources

- All lower secondary reform syllabuses
- All lower secondary teacher guides
- Lower Secondary Curriculum Implementation Handbook

Betty Moses was a secondary classroom teacher with a university degree but no formal teaching qualification. She decided she wanted a *promotions position in a school within two years* (broad outcome). Betty first *checked what different universities had to offer re teacher training* (specific outcome). She then found out what financial assistance was available to her. Betty *selected a suitable program and applied to the university for admission* (specific outcome), and to the Education Department for release. For the next three semesters Betty applied herself diligently to her studies, passing most subjects with a Distinction. Because of her academic record and her past teaching experience Betty was approached by a private school to join them as Head of Department.

This story illustrates the concept of broad and specific outcomes. The broad outcome was that Betty would have a promotions position at the end of two years. The specific outcomes were Betty's steps and achievements along the way.

The broad learning outcomes in the syllabuses are statements that identify the knowledge, skills, attitudes and values all students should achieve or demonstrate by the end of Grade 10. For example one Business Studies outcome states that 'students develop the ability to identify and manage resources in a variety of contexts'. Students demonstrate this ability in Units 9.1, 9.2, 10.3 and 10.4 by, for example, using a decision making process for the purchase of goods and services; applying bookkeeping skills in a range of small business situations; and describing factors that enable and contribute to the production of goods and services for both producers and consumers. The activities and content of each of the units listed contribute to student achievement of the broad learning outcome.

### Activity 1

- In pairs elect two syllabuses from those available and open them at the section titled "Content overview". This section lists the broad learning outcomes for the subject; describes the strands which underpin the organisation of content; and contains a table that maps the unit learning outcomes against the broad learning outcomes.

- Study the outcomes table from one syllabus and select one broad learning outcome. Track which units contribute to the achievement of that outcome and discuss how and why this happens.
- Do the same with a broad learning outcome from the other syllabus.

### **Activity 2**

- As a whole group identify broad learning outcomes that are similar in several syllabuses.
- Discuss why these similarities exist. What do they tell us about real life learning?

## TOPIC 7: Planning for outcomes

*The activities in this topic are designed to help teachers develop an understanding of an outcomes approach to planning.*

*This topic should take about one hour to complete.*

### Resources

- Handouts and Powerpoint slides on Outcomes-based Education distributed at provincial workshops (Check with the professional learning team)

### Activity 1

- Draw two columns. In the first column list 4 or 5 headings you currently use when planning a topic.

Traditional planning	Planning for outcomes
Unit/topic name	Unit/topic name

When planning and programming for outcomes the teacher works backwards, starting with the outcomes, that is, the end points - what the students know and can do at the end of the unit or topic.

Outcomes-based syllabuses and units are designed and written by focussing on the following four questions.

**What do my students need to know and be able to do at the end of this learning program?** (A learning program might be a few lessons, a week, several weeks, a term etc). The answer to this question is found in the learning outcomes. In the new curriculum the unit outcomes are fixed but teachers may write learning outcomes for topics or sub topics within a unit.

**What's the best way to find out if my students know and can do this .....?** The answer to this question comes from the assessment strategies and tasks used to seek evidence of the achievement of the learning outcomes. Each unit in the syllabus contains recommended assessment tasks and criteria for those tasks, but teachers must write clear instructions for students, describing the requirements of the task. Teachers also decide when to assess.

**What are the best learning and teaching strategies to help my students achieve the outcome/s?** The answer to this question comes when you think about appropriate teaching and learning strategies and activities consistent with the outcomes, that meet

student needs, and match local resources and contexts. The teacher guide provides examples of student-centred activities to help teachers.

**What's the most appropriate content to help my students achieve the outcome/s?**

The answer to this question comes from the content section in each unit. The content is set out in the syllabus as topics and sub topics. Teachers have to expand content, selecting information and materials that match local resources and contexts.

**Activity 2**

- Now that you have read the notes above, in the second column list the steps used to plan for outcomes.
- What is the main difference between the two lists?

**Activity 3**

- Select a topic you have taught in the past and share your topic plan with a partner. Find the same or a similar topic in the syllabus and teacher guide and compare them. What are the similarities? What are the differences?
- Try to explain why they are different.

## TOPIC 8: The unit approach

*The activities in this topic are designed to help teachers develop an understanding of the unit approach and how it is applied in each syllabus.*

*This topic will take at least two hours to complete.*

### Resources

- All lower secondary reform syllabuses
- All lower secondary teacher guides
- Lower Secondary Curriculum Implementation Handbook

Units are a way of clearly organising subject content, activities and assessment to ensure that all schools teach and assess the same things to the same standard. This is because of the School Certificate examination at the end of Grade 10.

Units generally take one term to complete although some subjects have shorter units. Each subject has specific requirements about the order in which units are taught. Some subjects have both core and option units. The core units contain the essential learning needed to progress in that subject.

### Activity 1

Following the learning outcomes table in the 'Content Overview', is the 'Unit sequence and content' section. This section provides an overview of all the units in a table. This table enables teachers to see at a glance what is to be covered in each year, and what the main topics are for each unit. The units are set out numerically but in some subjects the units can be taught in a different order.

- Find the section in the *Implementation Handbook* that describes the essential requirements for each subject. Identify which subjects have a set sequence of units and which subjects allow teachers/schools to make a choice.
- Discuss why choices are available and how the choices may be applied in your school.

### Activity 2

The next section of the syllabus contains detailed descriptions of all the units.

Each unit starts with a brief description of the focus of the unit. This is essential reading because it often contains important information about the purpose of the unit and suggestions for how the unit might be taught.

- Divide into subject groups and read the unit description for each of the Grade 9 units in your subject syllabus. For each unit list one thing you will have to do as a teacher of that subject.
- Discuss how this is different from your current teaching.

### Activity 3

Each unit comprises a set of learning outcomes; the content set out as topics and sub-topics; and the assessment requirements for the units. Some subjects also list the skills that need to be taught and practised and some useful resources.

- Pair up with another teacher of your subject and select one *Grade 9* unit from the syllabus. Read through the content and select one topic for discussion.
- Decide with your colleague how the selected topic relates to the learning outcomes and assessment and what skills and knowledge you would have to teach.
- Locate suitable resources for the topic or decide what you will need to buy or develop.

### Activity 4

The outcomes approach requires you to find evidence that students have achieved or are working towards achieving the learning outcomes. This evidence can come from formal and informal assessment, from observation and from set tasks and activities.

Most subjects require students to complete two assessment tasks each term. Each syllabus uses a range of assessment methods to ensure that the different learning styles of students are catered for.

- Read the assessment tasks for the *Grade 9* and *10* units and draw up a table listing the different types of tasks, for example

Unit	Task
9.1	Test - multiple choice and short answer Presentation using charts/maps

- Highlight on your table any assessment methods/tasks you have not used before.
- What will you need to do to make sure you use these methods/tasks appropriately?

## TOPIC 9: Planning and programming units

*The activities in this topic are designed to introduce teachers to the recommended steps in planning and programming using an outcomes approach. These steps are detailed in each of the teacher guides in the section titled 'Planning and programming units'.*

### Resources

- All lower secondary reform syllabuses
- All lower secondary teacher guides

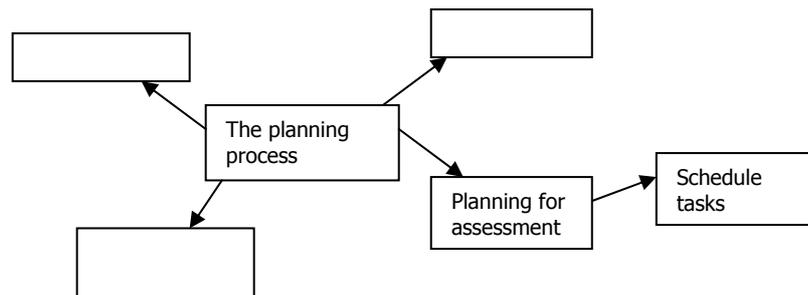
The main purpose of planning and programming is to help you to arrange the presentation of the unit in an organised manner. This will help you to know what to teach and when to teach it. It is strongly recommended that you make plans with the other teachers who teach the same grade. By planning together, you will all have better lessons and make better use of your limited resources.

It is also recommended that teachers teaching the same subject to the same grade meet frequently to share ideas for lessons; to discuss assessment requirements and marking; and to evaluate the quality of learning and teaching.

The essential documents for planning and programming are the subject syllabus and teacher guide which must be used together. The syllabus outlines the unit requirements including assessment, content and skills development while the teacher guide suggests some learning and teaching activities and provides detailed information about performance standards for assessment.

### Activity 1

- Read the section titled 'Planning and programming units' in your teacher guide. Draw a mind map to illustrate the steps involved in the planning process, including actions within each step. For example



## Activity 2

The teacher guides provide ideas for programming and organising each unit, following the thinking processes used in an outcomes approach. (see Topic 7)

- In pairs or subject groups study unit 9.1 in your teacher guide. List the different types of information/help provided in the unit, for example,
  - a brief description of the main requirements of each learning outcome
  - performance standards for assessment tasks.

## TOPIC 10: Planning for assessment

*The activities in this topic are designed to enhance teachers' understanding and skills in assessing students using an outcomes approach.*

*Most activities should take at least half an hour to discuss and complete. Activities 5 & 7 require practical applications in the classroom and follow up evaluation and discussion.*

Resources	
<ul style="list-style-type: none"> <li>All lower secondary reform syllabuses</li> <li>Handouts and Powerpoint slides on Outcomes-based Education distributed at provincial workshops (Check with the professional learning team)</li> </ul>	<ul style="list-style-type: none"> <li>All lower secondary teacher guides</li> <li>Lower Secondary Curriculum Reform Implementation Handbook</li> </ul>

The assessment tasks outlined in the lower secondary syllabuses and teacher guides have been designed:

- to provide evidence for the overall achievement of the unit learning outcomes
- to provide evidence that students are working towards the achievement of the broad learning outcomes
- to enable all students to demonstrate required knowledge and skills
- using criteria and performance standards to be applied consistently by all teachers.

All teachers need to understand the meaning of the assessment terms used in the lower secondary curriculum documents.

Assessment methods (also called 'strategies', 'techniques', 'procedures')	<p>Assessment methods are major categories into which assessment tasks (and tools) fit. The broadest categories are observation, tests and analysis of products and processes.</p> <p>These broad categories can be further divided into portfolios, performances and oral/verbal responses, products, projects, written responses, examinations, self and peer assessment.</p>
Assessment tasks	<p>Assessment tasks are the activities the students actually do/complete to be measured or assessed.</p> <p>(Examples - extended response/essay, research, report, cloze exercise, short answer, debate, matching exercise, presentation, journal, experiment, calculations, project, construction, performance, portfolios)</p> <p>For example, Bus St: 9.1 “<b>Research assignment</b> describing the production and trading of goods produced in PNG. Students present their work using, for example, charts/posters, maps and/or flow charts”.</p>

<p><b>Assessment criteria</b></p>	<p>Assessment criteria are statements that are used to judge the quality of student performance. They are the conditions set to demonstrate what has been achieved, or the qualities that must be met by performances/ products for work to be deemed successful.</p> <p>For example, Bus St: 9.1 “Assessment task two will be assessed on the extent to which students can: Identify and describe the production of PNG made goods Describe the distribution process from producer to consumer Communicate information in a variety of ways</p>
<p><b>Performance standards (also known as rubrics)</b></p>	<p>Performance standards are 'descriptors' which signify the extent to which the criteria have been met, enabling the teacher to give an appropriate mark. The 'descriptors' provide the key features of performance for each level of achievement.</p> <p>For example, Bus St: 9.1 - <b>High achievement</b> – ‘describes in detail steps in the production process’</p>
<p><b>Task instructions</b></p>	<p>Assessment tasks need clear instructions to help students meet the criteria and to help the teacher mark consistently.</p> <p>For example, Bus St: 9.1 – Research assignment – Select two different products made in PNG and use labelled pictures or diagrams to describe all stages in the production cycle. Use a flow chart to illustrate the distribution process from producer to consumer. Present your work on butcher’s paper to be displayed in the classroom.</p>
<p><b>Marking guide</b></p>	<p>The marking guide helps students understand how different components of the task will be marked and helps the teacher mark consistently.</p> <p>Marks assigned to each component of the task must reflect the importance of the component in relation to the assessment criteria and achievement of the learning outcome.</p> <p>For example, Bus St: 9.1 – Research assignment (60 marks)</p> <ul style="list-style-type: none"> <li>- labelled pictures/diagrams of production cycle product 1 (15 marks)</li> <li>- distribution process flow chart product 1 (12 marks)</li> <li>- labelled pictures/diagrams of production cycle product 2 (15 marks)</li> <li>- distribution process flow chart product 2 (12 marks)</li> <li>- classroom display (6 marks)</li> </ul>
<p><b>Checklists</b></p>	<p>Checklists are lists of things that demonstrate the achievement of a particular end (usually a product or performance), to be ticked off by an observer.</p>

The assessment tasks are described in the syllabus. They indicate what specific knowledge and skills students will need to demonstrate that they have achieved the unit learning outcomes. However teachers must develop clear and detailed instructions for completing the tasks and ensure all students know exactly what they have to do.

Teachers have to decide when to schedule the assessment tasks to allow sufficient time to teach the required content and time for students to develop the necessary skills. Teachers will also need time to mark the task and provide feedback. Practical tasks may, for example, be broken into a series of stages that are marked over several weeks as

students progress with making their product. It is not appropriate to leave all the assessment until the end of the unit.

The teacher guides provide the performance standards and marking guides which you must use when you are marking assessment tasks. This is to ensure consistency with marks awarded to students in all schools in Papua New Guinea.

### Activity 1

Choose either a Grade 9 or Grade 10 unit from your subject syllabus and study the unit assessment tasks and criteria carefully.

- Discuss what learning outcome/s each task is assessing? What skills is each task assessing? What knowledge is each task assessing?
- Study the performance standards in the teacher guide for the same unit and discuss how these help you differentiate between different levels of achievement.

### Activity 2

- Now that you have studied the assessment tasks, criteria and performance standards for one unit, select one task and write clear and detailed instructions so students know exactly what they have to do. Your instructions should include specific and minimum requirements such as length, due date, use of diagrams etc. Use the example in the box below as a guide.

*Learning outcome: Students can identify and describe characteristics of houses in different parts of the world*

Research Assignment - Use your text book, library resources and your own observations to describe the characteristics (size, materials, structure) of three different types of PNG houses. Your project should include coloured, labelled diagrams and should be no more than three pages.

### Activity 3

- Develop a marking guide to go with your task instructions so students know exactly how you will mark them. Your marking guide should reflect the relative importance of task criteria and instructions and how the task contributes to the achievement of one or more of the unit learning outcomes.

For example, the task described in the box above is asking students to describe the characteristics of different types of PNG houses. The teacher is looking for evidence of knowledge of building characteristics (see learning outcome) demonstrated through the use of different resources, clear descriptions, comparison of three different houses, and use of appropriate diagrams.

Although students are asked to do coloured diagrams, their understanding of building characteristics is more important than their colouring and drawing skills or how many pages they handed in. The

teacher must focus on the accuracy of the information in the labeled diagrams rather than how 'pretty' the diagrams are.

#### Activity 4

- Display your task instructions and marking guide from Activities 2 & 3 and ask colleagues to critique them for you. Your colleagues should tell you if they can follow the instructions, and if not, how you could make them clearer.
- Assess the extent to which the task instructions and marking guides developed by your peers could be followed by students. Provide feedback including suggestions about how the instructions and marking guide might be improved.

#### Activity 5

- Work with at least one other teacher teaching the same subject as you (if possible) to develop clear instructions and a marking guide for an assessment task for the next topic you are teaching. When students have completed the task, ask them to evaluate how useful the instructions and marking guide were.

#### Activity 6

Checklists are an important assessment strategy, particularly suited to documenting performances and products. They are lists of things to be ticked off by an observer. To develop a useful and effective checklist, teachers must decide what really goes into the achievement of a particular end. For example, a Science teacher may want to assess whether students are able to use the 'scientific method'. A simple checklist for this purpose could look like this:

Checklist for use of Scientific method				
Behaviour	Observed - Poor to excellent			
	1	2	3	4
Identifies problem				
Poses hypothesis				
Creates experiment				
Gathers and records evidence				
Makes generalisations				

- Work in pairs to prepare a simple checklist to help assess either a practical activity - baking scones, or a product - a woven mat. Compare your checklist with one developed by another pair doing the same topic.
- Still working with your partner, find examples of checklists in at least three teacher guides. What tasks are the checklists for? How useful are the checklists and how could they be improved or adapted?
- Develop a checklist for a product, performance or process your students will be completing in the next topic you teach.

## **Classroom tests**

Each teacher guide contains information about setting tests and most teacher guides contain at least one sample test that demonstrates the application of test design principles.

### **Activity 7**

- Find and read the information in the assessment section of your teacher guide and study the questions included in a sample test.
- Select a topic from one of the syllabus units and prepare a classroom test. Make sure you follow the principles and include different types of questions and levels of difficulty.
- Work with colleagues to prepare a short test (including marking scheme and sample answers) for a topic you are currently teaching. Make sure you follow the principles and include different types of questions and levels of difficulty.
- Administer the test and use a moderating process to mark the tests. With your colleagues, evaluate what you learned about the knowledge and skills of the students. If the results were poor, identify what you will have to do to help students improve their knowledge and skills.

## TOPIC 11: Student centred learning and teaching activities

*The activities in this topic are designed to expand teachers' understanding and skills in using a range of student centred learning and teaching strategies and activities.*

*Each activity in this topic should take at least half an hour to discuss and complete. Activity 3 requires ongoing classroom application, as well as follow up evaluation and discussions.*

### Resources

- All lower secondary reform syllabuses
- All lower secondary teacher guides

Each teacher guide contains a section on teaching and learning strategies, either at the front of the document or as an appendix, for example, the use of artefacts.

Artefacts are objects made by humans. They can be from the past or present. By examining these students are able to gain an insight into the technology and lifestyles of people from particular cultural groups or times. Artefacts such as traditional artworks, musical instruments, cooking implements and weapons can be used in Social Science to look at change over time. They can be used in Arts as examples of arts skills and techniques, or in Science as examples of the properties of different products, or in Design and Technology as illustrations of changing technology.

### Activity 1

- Divide into subject groups and read the section on teaching and learning strategies in your teacher guide. Write down at least one specific example of how each strategy could be used in a lesson. (Do not just copy the examples provided in the teacher guide.)

The following table contains examples of student centred learning activities. These activities include behaviours/skills students could learn and/or practice, products students could make and specific learning experiences students could have

Examples of student-centred learning activities		
Behaviours/skills	Products	Experiences
Interviewing	Maps	Visiting a factory, workplace
Describing	Charts	Watching a demonstration
Discussing	Models	Browsing, researching in a library
Listing	Outlines	Examining an artefact
Grouping	Reports	Painting a picture
Explaining	Diagrams	Playing a game, sport
Predicting	Tables	Reading an advertisement, book, program
Summarising	Essays	Visiting a museum
Choosing	Murals	Designing a poster, menu
Rating	Poems	Exploring a forest, beach, river
Reading	Songs	Using a tool, appliance
Observing	Photographs	Debating an issue
Writing	Paintings	Solving a puzzle
Recording	Stories	Singing a song

Growing Listening Talking Surveying Expressing Building Analysing Making Producing Solving Outlining Asking Viewing Imagining Classifying Comparing	Big Books Artefacts Plays Timelines Timber & metal products Craft items Fabric items Food, meals Carvings, pots etc Posters, brochures Advertisements Dances	Acting in a play Inventing a new use for something Taking a photograph Performing a dance Planning a concert Watching a movie or television program Cooking a meal Building a shelter Making a toy Growing a crop, garden Looking after animals Using a computer program Drawing a map, flow chart Conducting a survey Interviewing members of the community Leading a discussion Listening to a speech Weaving a mat, basket
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### Activity 2

- Draw up a similar table just for your own subject, by selecting appropriate behaviours/skills and products from the sample table above and adding additional examples if possible. Think of as many suitable experiences as you can to add to the third column of your table. You may need to browse through the unit content sections of your syllabus to get ideas.

<b>Examples of student-centred learning activities for English</b>		
<b>Behaviours/skills</b>	<b>Products</b>	<b>Experiences</b>
Describing Discussing Reading Listening Expressing	Reports Essays Poems Plays	Reading an advertisement, book, program Debating an issue Acting in a play Watching a movie or television program

### Activity 3

- Select one Grade 9 unit in your teacher guide and read through the activities listed in the sample program and elaborations section of the unit. Highlight similar activities already listed in your table. Add to your table any skills, products and experiences in the teacher guide that are different from the examples in your table.
- Now do the same with a Grade 10 unit. (It may be useful to study every unit for new ideas).
- With the other teachers of your subject, plan one student centred activity that is new to all of you that would be suitable for the Grade 9

topic you are currently teaching. You will need to develop a set of steps or instructions for yourself and your students to ensure the activity works as smoothly as possible for a first attempt.

- Use the activity in class next week and evaluate how it went, for example how did the students respond?
- Share your experience with your colleagues and try another example the following week. Build up to trying a student centred activity in most lessons. This way you and your students will gradually adjust to learning and teaching using a variety of activities.

## TOPIC 12: Programming a learning sequence

*The activities in this topic are designed to help teachers use the recommended programming approach for each unit. This approach, with supporting examples, is outlined in the teacher guide.*

*Each activity in this topic should take at least half an hour to discuss and complete. Activity 3 requires classroom application.*

### Resources

- All lower secondary reform syllabuses
- All lower secondary teacher guides
- Subject text books and resources

Step 3 in the *Planning and programming units* section of the teacher guide explains how to develop a program that includes a sequence of topics, the amount of time spent on each topic, examples of student centred activities and the timing of assessment tasks. Teachers must focus on planning the unit sequence as a whole first, then plans for topics, before planning individual lessons.

To develop a program, teachers must first study the topics listed in the syllabus and think about the learning activities that will best provide students with the opportunity to learn the content and practice the appropriate skills. Teachers must also think about planning for some major activities that last several weeks and smaller activities that may be completed in a single lesson. If the unit involves a project for example, teachers may plan to teach some theory at appropriate stages during the project, rather than teaching all the theory before the students start the project.

The teacher guides provide a sample program for each unit but do not provide individual lesson plans.

### Activity 1

- Study some sample unit programs in at least three different teacher guides and decide which style suits you best. (Remember these are only suggested programs to provide teachers with some ideas for programming. You may prefer the style used in a different teacher guide than your own).
- With the other teachers of your subject, decide on a programming style that you are all happy with and develop a sample program for Unit 9.1. You may incorporate ideas from the sample program in the teacher guide as well as your own ideas. **(Remember the syllabus must be consulted during this process to ensure you are covering all the topics and that the student activities contribute to the achievement of the learning outcomes.)**
- Use the template provided below as your starting point. Remember you are not required to plan individual lessons at this stage, but rather to provide an overview of how you will fit the development of knowledge and skills through activities and assessment, into the time available.

<b>Unit 9.1:</b> (insert unit name)			
<b>Week</b>	<b>Topic</b> (from syllabus) List essential resources required for topic/activities if appropriate	<b>Activities</b> Describe some major activities for the unit and list smaller activities for some topics	<b>Assessment</b> Decide the best time for assessment. Split into smaller stages if appropriate
<b>1</b>			
<b>2</b>			
<b>3</b>			
<b>4</b>			
<b>5</b>			
<b>6</b>			
<b>7</b>			
<b>8</b>			
<b>9</b>			
<b>10</b>			

Once teachers have completed a unit plan they must consider each topic in more detail. For example, if two weeks have been allocated for a topic there are ten lessons available (five lessons per week). A more detailed plan has to be developed for each topic that includes what will be covered in each lesson. The topic plan must include a sequence of student activities and teaching points that contribute to the overall achievement of the unit outcomes. The topic plan must include suggestions for what students will do in each lesson. In practice, individual lessons must flow logically, one from the previous and must be adjusted according to how students are progressing through the topic. This means that teachers must be realistic about what is achievable and be prepared to be flexible.

All units require students to be actively engaged in learning, not just copying from the board. Teachers must plan a range of activities that suit all learning needs - some reading and writing, some speaking and listening, some observing and doing.

## Activity 2

- Study the following sample English topic program. The teacher was required to select at least six (6) text types from the list in the syllabus and read the information about the key features of the text types selected. One of the text types selected by the teacher was *radio programs*. Note how the students begin the topic actually listening to the radio for two lessons to provide them with a real context for learning. The end result is that students use what they have learned to produce their own script for a radio program. The whole topic plan is student centred. Students listen, take notes, compare, discuss, write a script, rehearse and present.

<b>Topic: Radio programs (Weeks 2-3)</b>				
<b>Lesson 1</b> Listen to the radio for the lesson. Note the different segments, advertisements, music and the timing for each segment	<b>Lesson 2</b> Listen to the radio for the lesson. Note the different segments, advertisements, music and the timing for each segment	<b>Lesson 3</b> Compare the notes for the two radio sessions. How did they differ? Who were they designed for?	<b>Lesson 4</b> Discuss your favourite radio program, announcer, DJs etc. What makes them interesting?	<b>Lesson 5</b> Form small groups to develop a script for a radio program. Begin writing
<b>Lesson 6</b> Continue work on radio script	<b>Lesson 7</b> Continue writing script. Rehearse script.	<b>Lesson 8</b> Rehearse script for live performance or record program	<b>Lesson 9</b> Group presentations of radio program	<b>Lesson 10</b> Group presentations of radio program

## Activity 3

- Working with a colleague select one of the topics you listed in your Unit 9.1 plan in Activity 1. Browse through text books and teaching resources you have access to for ideas for activities related to the topic. Note chapters, pages or items that you will use for the topic.
- Now prepare a sequence of lessons using the above table as a guide. You may list more than one activity in a lesson or have an activity that takes more than one lesson to complete.
- Use this approach to prepare a sequence of lessons on a topic you will teach later this year, making sure you incorporate some student centred activities.

## TOPIC 13: Managing assessment

*The activities in this topic are designed to help teachers understand and manage the demands of new assessment approaches.*

*The activities for this topic are best completed by teachers working in subject groups. Allow up to an hour for each activity. Activity 4 requires classroom application, as well as follow up evaluation and discussions.*

### Resources

- All lower secondary reform syllabuses
- Lower Secondary Implementation Handbook
- All lower secondary teacher guides
- Any available material on assessment

Assessment is an important part of teaching and learning. It is used to:

- evaluate and improve teaching and learning
- report achievement
- provide feedback to students on their progress.

Assessment measures students' achievements of the unit learning outcomes described in the syllabus. It is an ongoing process of identifying, gathering and interpreting information about students' achievement of the learning outcomes and should be integrated into the students' normal learning activities. A learning activity can double as an assessment task, or an assessment task can double as a learning activity. For example if students are being assessed on their mapping skills, the teacher can set a number of mapping activities for the class and collect these for marking against the syllabus criteria. The marks for each small task would then be added to provide the total mark for the mapping task described in the syllabus. Similarly, if students are being assessed on their letter writing skills, they could write different types of letters in class which are then collected and marked against the syllabus criteria. The marks for each letter would then be added to provide the total mark for the letter writing task described in the syllabus.

It is recommended that teachers integrate assessment with class activities and mark tasks progressively. Oral presentations and multiple choice tests can be marked by the teacher or using peer assessment to enable instant developmental evaluation and feedback. On-the-spot assessment of progress in projects or practical work take less time to mark, and is useful, because it provides immediate feedback on student progress.

### Activity 1

Read the section called 'Assessing (your subject name)' in the teacher guide and identify and discuss any information from the following sections that is new to you.

- Assessment for learning
- Assessment of learning
- Feedback

- Tests
- Teacher assessment
- Frequency of assessment
- Judging student performance
- Moderation
- Self assessment and peer assessment
- Managing assessment tasks for Social Science
- Develop efficiency in marking:
- Portfolios
- Reports
- Managing individual and group presentations

### Activity 2

- Select two Grade 9 and two Grade 10 assessment tasks from any unit in your subject syllabus and teacher guide and discuss with colleagues how each task might be managed. For example, could the task be broken up into smaller sections; could it be marked by peers using a checklist?
- Think about the way you currently manage oral presentations or group work. How could you do this more efficiently?

### Activity 3

- Think about the last three assessment tasks you set for any of your classes. Did all the students do well or did the majority perform poorly? Did all the questions have a range of answers or did most students answer the same question incorrectly? What does this mean for you as a teacher - that the question was too hard; that students need more time to gain the knowledge or skills; that all your students are stupid; that you need to revise the topic?
- What feedback **did** you provide for students after the marking was complete? What feedback **could/should** you have provided to help students improve their performance. How could you have used the criteria to give focussed feedback?

### Moderation

To ensure that the performance standards correctly interpreted when assessing students, it is important for teachers to undertake subject moderation of student work within the school and with teachers of nearby schools.

To moderate student work, a common assessment task must be used and a marking scheme jointly developed so that all students complete the same task under the same conditions, and all teachers use the same marking scheme. Teachers can then compare

(moderate) the students' work and come to a common understanding of the performance standards and the requirements for a particular level of achievement.

Moderation enables teachers to be sure that their understanding of the required standards for levels of achievement is similar to the understanding of other teachers and that they are assessing students at the appropriate level.

#### Activity 4

- Work with other teachers teaching the same subject to the same grade. Develop an assessment task and marking scheme for the task. Get all classes to do the task under the same conditions, for example, the same Science experiment and report in a double period, or the same maths exercises in a single period. These do not have to be test conditions, but must be fair for all students.
- Collect three or four completed tasks from each class and make copies for each teacher to mark separately using the agreed marking scheme.
- Compare your marks. How consistent were they? Did each teacher mark the same student similarly? Discuss the reasons for any significant differences in the marking.

If you all marked similarly, then you have a common understanding of performance standards. If one of your colleagues marked much harder, or easier than the rest, then you will all need to moderate most common assessment tasks to ensure students are assessed fairly.

- Try to do a similar activity with classes and teachers at a nearby school. This will help you compare the performance of your students with others, and to compare how consistently performance standards are being applied in different schools.

## TOPIC 14: Developing resources

*The activities in this topic are designed to help teachers prepare a collection of resources to support learning and teaching activities for each unit in their subject.*

*The activities for this topic are best completed by teachers working in subject groups and considerable time will be needed to complete each activity.*

### Resources

- All lower secondary reform syllabuses
- Subject text books
- Lower Secondary Implementation Handbook
- All lower secondary teacher guides
- School and community resources

Each teacher guide contains an extensive section on resources, including essential resources for the subject; useful text and other reference books; and guidelines for how to use print and other resources.

The following information is taken from Section 8 of the Lower Secondary Implementation Handbook. Read it carefully.

### Curriculum Resources

The reform curriculum and outcomes approach requires teachers to use a range of resources to enhance learning opportunities for students. Current curriculum materials including syllabuses, teacher guides, text books, worksheets should not be discarded. They are still valuable resources.

Schools will have to ensure that:

- Appropriate resources are purchased, acquired or developed to support new subjects on offer
- Additional resources are purchased, acquired or developed to support subjects that have been neglected in the past
- Subjects are given an equitable share of the school resource budget
- Effective systems are established for the management, security and storage of resources
- The library is resourced and functioning
- Facilities such as science laboratories, art rooms, kitchens, workshops are revitalised if necessary, starting with a clean up and basic repairs.

Schools could consider asking parents/students to provide some of their own resources such as drawing equipment for Practical Skills or Arts, or small digging tools for Agriculture, or a calculator for Maths.

### *Auditing*

The first step in resourcing the new curriculum is to do a comprehensive audit of what is already in the school. The audit list must then be matched with the essential requirements for each of the subjects and options offered by the school to determine what else is required.

### *Text books*

New text books written specifically for the reform curriculum will not be available for several years. Text books already in schools for most subjects are still appropriate but teachers will have to select the chapter/section/activities applicable for the unit being studied, rather than working systematically through the text book.

Text books for some subjects, such as Social Science, Business Studies and English, may contain some content that is obviously out of date or incorrect. Teachers can supplement these with newspaper/magazine clippings or notes taken from television programs. Students are far more responsive to material that reflects their interests and experiences, or material that deals with current issues, for example, advertisements for products in today's stores, not something that was advertised ten years ago.

There are many excellent text books on the market but they are very expensive. Teachers should make every attempt to see a sample of any book before ordering to ensure value for money. For example a text book on resource management may only contain one chapter that is relevant for units in the curriculum. Teachers should also consider buying text books that can be used for more than one subject. For example a Geography text book from overseas may contain material that can be used in Social Science, Science and Agriculture.

### *School developed resources*

There are many ways schools can build up a supply of resources without relying exclusively on expensive store-bought materials. Examples include:

- Working in consultation with the community to collect and use materials found in the environment for subjects such as Arts, Science, Design and Technology
- Creating cheaper versions of charts/posters and models by copying from books and other sources. Some of these can be done by students as class activities and then used as resources the following year.
- Identifying people in the community who are willing to volunteer their time, knowledge and skills to help with projects in subjects such as Agriculture, Business Studies, Arts, Design and Technology
- Creating unit resource booklets by collecting and collating material from different text books and other sources.
- Using the school as a basis for activities, for example, keeping practical rooms clean and organised, making curtains etc as an ongoing Home Economics activity; making or repairing school furniture as Practical Skills activities; decorating classrooms with paintings, murals as Arts activities; growing food crops to supplement food supplies, or making decorative gardens as an Agriculture activity; making musical instruments, simple tools etc for use the following year.

### Activity 1

- Conduct an audit of all current curriculum materials including syllabuses, teacher guides, text books, worksheets, tools, equipment etc available for your subject.
- Identify all materials that are outdated and/or inaccurate and discard them.
- Develop a resource list for each Grade 9 and Grade 10 unit in the syllabus. Make use of the suggestions have been made in the syllabus and teacher guide.
- Browse through the text books and other teaching resources you have access to and list chapters, pages or items that you can use for each unit.
- Identify units that have limited resources and discuss strategies for making or collecting additional materials.

### Activity 2

- Conduct an audit of the human resources available to you, that is, people in the school or community who could support learning and teaching in your subject, for example artists who could demonstrate particular techniques, or health workers who could talk about healthy living.
- Identify units where other teachers or people in the community with special skills and knowledge would be particularly useful.

### Activity 3

- Collect and/or make two or three resources for a unit. These could include, for example, notes on content, worksheets, materials for student activities, displays, information files.

### Activity 4

Newspapers are a valuable resource for most subjects, providing up-to-date information through feature articles, special reports, advertisements, editorials and letters. Newspapers can be used as a source of texts for English; to describe current events or issues for Social Science; to provide real life calculations for Mathematics; to provide information on commodities, share prices etc for Business Studies; to provide information on crop growing for Agriculture; to identify social and health concerns for Personal Development; to provide information on disasters, the weather for Science etc.

- Collect as many newspapers as you can over several weeks and cut out any articles, letters or advertisements that might be useful for your subject.
- Collate the articles etc you have collected and create a file for each unit.
- Select two or three items from your collection and develop at least one student activity to go with each item.