Assessment Guidance

South Sudan

School-based formative assessment

This booklet gives guidance to schools and teachers on making assessments in support of the new national curriculum.

It focuses on the school-based, formative assessments that are made as part of the ongoing teaching and learning process.

The new curriculum sets out clear 'Learning Outcomes' that focus on deeper learning, higher order thinking and competencies. This booklet will help teachers make assessments in these terms.

Contents

"Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning."

Assessing Student Learning: Huba and Freed 2000

Section One: New expectations for learning need new assessment approaches

The new curriculum sets new expectations for learning. There is a shift from Learning Outcomes that focus mainly on knowledge to those that focus on skills and deeper understanding. The new Learning Outcomes require a different approach to assessment.

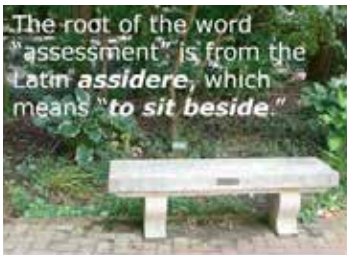
Knowledge can be assessed through written tests, but the assessment of skills and deeper understanding requires different approaches. Because of this, the role of the teacher in assessment becomes much more important. Their role is not to write tests for students, but to make professional judgements about students' learning in the course of the normal teaching and learning process.

This booklet sets out how this should be done, and gives guidance on using the new approaches.

What is School-Based Formative Assessment?

Assessment is the process of finding out what a student has learned. When this is carried out at the end of a year or semester, it is called "Summative Assessment" because it sums up how well the student has done.

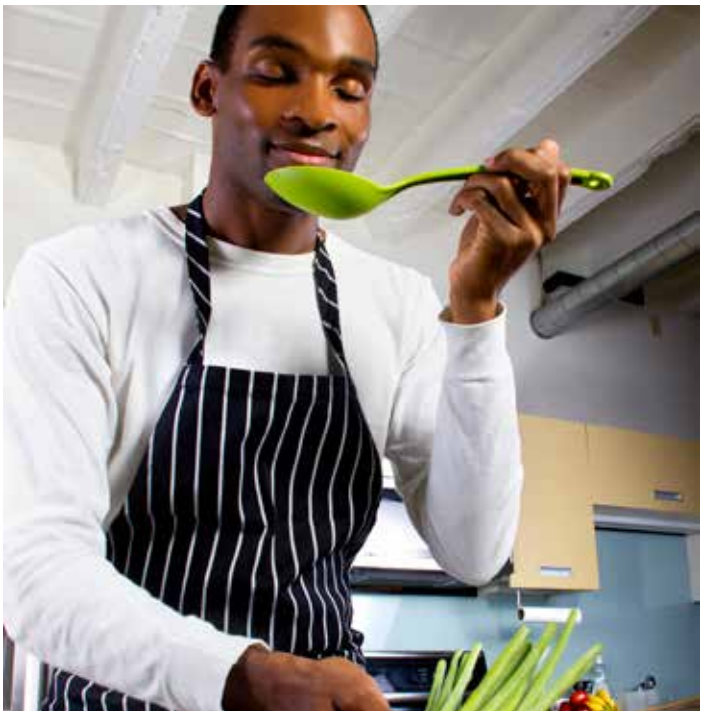
However, it is much better to find out how well a student has done before the end of the year, because it is too late to do anything about it when the year is over...



It is most helpful to the teacher to know how the students are doing during the course of the year, rather than waiting to the end. That way, the teacher is able to use assessment to decide what a student should learn next, adjust their teaching to the students' learning, help the students as they go along, and so teach more effectively. This form of assessment is called "Formative Assessment".

Teachers carry out formative assessments all the time as a natural part of their teaching. They ask questions, mark students' work, and observe their students in the process of learning. These everyday formative assessments are not necessarily recorded, but they help teachers to understand how well students are learning and so to react to the learning needs of their students.

Formative assessments are ongoing, and part of the teaching and learning process



Prof Mark Zelman points out that when a cook tastes the soup, that's formative. When the guests taste the soup, that's summative.

We talk about "School-based" formative assessment because the assessments are made by the teacher as part of their work, and do not rely upon externally set tests or examinations. They are sometimes referred to as "Assessment for Learning" (AfL) or even "Assessment as Learning". These names suggest that assessment is very much part of the learning process.

The most effective formative assessments are "criterion-referenced". That means that the students' learning is assessed against a specific criterion, which is usually a description of what is to be learned. This is much more valid and useful than giving a numerical mark (for example 8 out of 10), a position in the class or a grade (A, B or C etc.). These numerical marks, positions or grades are called "Norm-referenced". This norm-referenced information is useful for putting the students into rank order, but not very helpful in deciding what they need to learn next, or what they need to do to improve, or how they need to be helped. For this, we need formative assessment information that is based on clear criteria.

In the new curriculum, each syllabus unit sets out the expected "Learning Outcomes" for that unit. These 'Learning Outcomes' provide the criteria by which the assessments can be made. They are listed under the three headings of: Knowledge and Understanding, Skills and Attitudes. Here is an example from Primary 5 Social Studies Unit 2 about Physical Features and climate change.

Learning Outcomes		
Knowledge and understanding	**Skills**	**Attitudes**
• Understand the processes leading to the formation of the key physical features of South Sudan and Africa • Know the effects of human activity on climate and the possible results of climate change • Draw and label maps that show physical features in Africa and other continents	• Use a range of resources to investigate physical features and related processes • Collect and interpret evidence that demonstrates a change in climate in Africa • Predict the effects of climate change	• Appreciate the beauty of physical features in South Sudan • Respect and protect the range of environments familiar and unfamiliar to you

By using these Learning Outcomes as criteria for assessment, the teacher can assess the students' learning in terms of the statements in each column; for example: Do they understand the processes leading to the formation of the key physical features? Do they know the effects of human activity on climate change? Can they draw and label maps that show the physical features?

This form of assessment, made in the actual context of the learning is often referred to as "Authentic Assessment" and is considered much more valid and valuable than setting written tests.

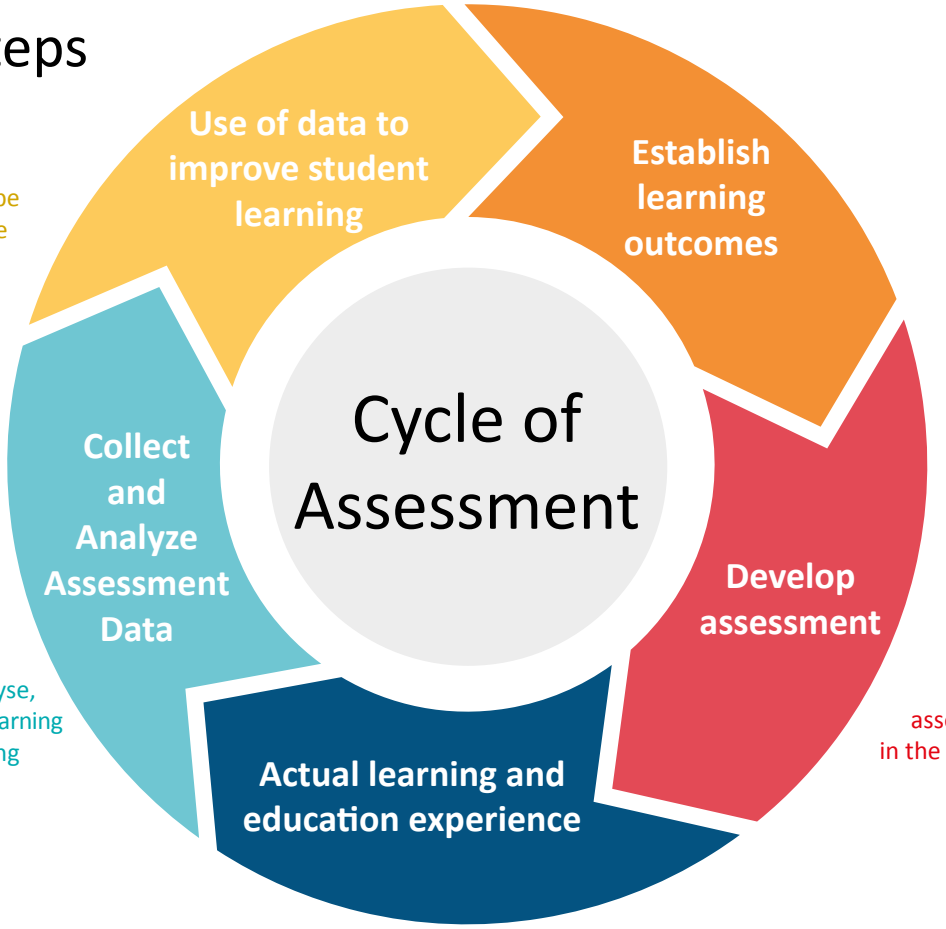
Using the Learning Outcomes in the new syllabuses to make school-based formative assessments is part of a wide process of using assessment to improve learning. The process can be seen as a cycle.

Section Two: What is the Cycle of Assessment?

The five steps in the Cycle of Assessment are:

- Establish learning outcomes
- Develop assessment approaches
- Actual learning
- Collect and analyse data
- Use data to improve student learning

The five steps



What changes need to be made to plans for future teaching and learning?

Find these listed in subject overviews and units of work.

Develop robust recording systems to collect assessment data that enable you to analyse, compare and evaluate learning against expected learning outcomes.

Look for examples of assessment opportunities in the 'Learn About' sections of the units of work.

Be ready to assess alongside students where possible.

This booklet focuses on three of these, and gives guidance on how to:

- Develop assessment
- Collect and analyse assessment data
- Use data to improve student learning

The other two steps are fairly straightforward:

- Establish learning outcomes: this has already been done in the syllabuses
- Actual learning and educational experience: are the lessons and other learning experiences that take place in school.

It is this cycle that enables formative assessment to impact on learning:

- The syllabuses set out the learning outcomes
- The lessons seek to achieve these outcomes
- Assessment finds out whether or not the outcomes has been achieved
- This information guides the next steps in learning and so sets new learning outcomes

And so the cycle goes round again.

Section Three: What is the difference between knowledge, understanding and skills?

The "learning Outcomes" in the syllabuses are set out in terms of Knowledge & Understanding, Skills, and Attitudes. It is not possible to assess attitudes in the same way as knowledge, understanding and skills because they are more personal and variable and are long-term aspirations. This does not mean that attitudes are not important. It means that we must value things that we cannot easily assess.

Therefore this guidance booklet focuses on knowledge, skills and understanding. Each has its own implications for learning and assessment:

Knowledge	The retention of information
Understanding	Putting knowledge into a framework of meaning – the development of a 'concept'.
Skill	The ability to perform a physical or mental act or operation

So, to assess each of these we need to look for different things.

Knowledge is the easiest to assess because it is fairly straightforward to find out whether or not a student has retained some information: a simple questing can usually find this out. We ask them to name something, or state something, or label a diagram. For example:

- Name the capital city of Kenya
- Label the parts of a flower
- State the elements found in water

Assessing deeper **understanding** is much more difficult, so we usually ask students to explain, compare or outline a process. This will give us some idea of the extent of their understanding. For example:

- Outline the process of photosynthesis
- Explain what is meant my 'metabolism'
- What is the difference between current and static electricity?

SKILLS are the ability to perform so we shall always be looking for some action on the part of the student: are they able to do something, can they carry out an operation? For example:

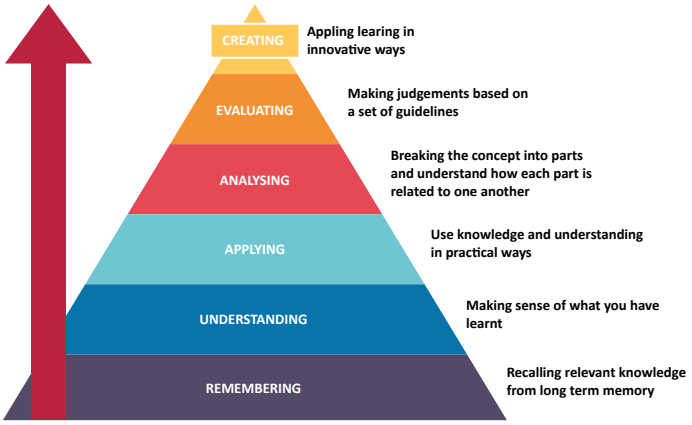
- Predict the effect of climate change on ecosystems
- Investigate the resistance of different materials in an electric circuit
- Control the variables in a physics experiment

Each of these examples starts with a key **verb**. These sorts of words help us to make assessments, and you will find them in the 'Learning Outcomes' of the syllabuses.

Knowledge	State, name, list, describe, label, write, recall ….
Understanding	Explain, compare, contrast, outline …
Skill	Construct, perform, predict, investigate, interpret, carry out …..

Higher Order Thinking Skills

The new curriculum has been written to encourage students to develop 'Higher Order Thinking Skills'. These are contained in the "Skills" column of the "Learning Outcomes", and are illustrated in Bloom's Taxonomy which divides learning into six ascending levels. The lowest level is **remembering** (which refers to knowledge) and the second is **understanding**. To reach the higher levels, learners have to use a skill to **apply** their learning in some way. This is illustrated in the diagram below:



The new curriculum is aiming for the higher levels of Bloom's Taxonomy, so assessment must be made at these levels. The key question is, "Are the students applying their knowledge and understanding?" Without this application, they will never reach the even higher levels.

The new curriculum also draws on the analysis that has been put forward by Norman Webb:

Level 1	**Recall and reproduction** Recall of a fact, information or procedure
Level 2	**Application of skills and concepts** Use of information or conceptual understanding – two or more steps
Level 3	**Strategic thinking** Requires reasoning, developing plan or a sequence of steps, some complexity, more than one possible answer
Level 4	**Extended thinking** Requires an investigation, time to think and process multiple conditions of the problem.

Both of these analyses have been used in developing the new syllabuses. The Skills sections of the 'Learning Outcomes' are drawn from these higher levels.

Neither Webb nor Bloom saw their levels as relating to the age of the student. Even the youngest student in P1 can reach the higher levels. What makes it easier for them is the simpler context of the knowledge that they are applying. Young students think about and apply simple things, older students think about and apply more complex things. There is a good example in the Primary 2 Science Unit 2 about "Plants and Animals".

We must take account of these levels of expectation in our assessment, and look for examples of students operating at the higher levels.

Having investigated the sorts of plants and small animals living in the local environment an expected Learning Outcome is to: "Evaluate what would make the best habitat for a particular animal or plant". Even young children can work out that fish need water, birds nest in trees and frogs like wet places. This is an evaluation in Bloom's terms.

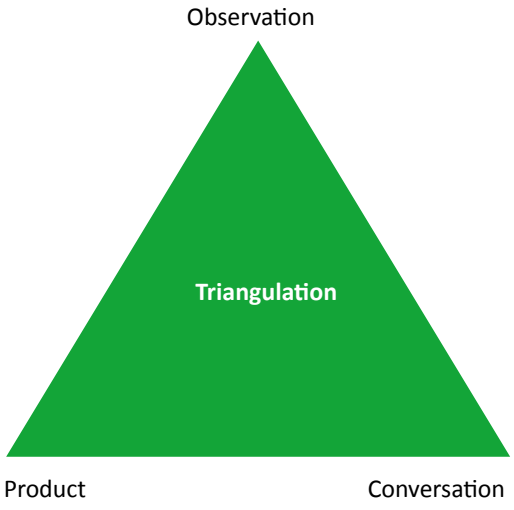
Section Four: How do we find the opportunity to make formative assessments?

School-based formative assessment is a part of the normal teaching and learning process, and so the assessment opportunities will also occur during this normal process. It is not something that needs to be added on after learning; it is an integral part of it.

These opportunities occur in three forms. Dr Anne Davies (Making Classroom Assessment Work 2011) called these:

- Observation – watching students working (good for assessing skills)
- Conversation – asking questions and talking to students (good for assessing knowledge and understanding)
- Product – appraising the student's work (writing, science report, maths calculation, presentation, map, diagram, model, drawing, painting etc). In this context, a "product" is seen as something physical and permanent that the teacher can keep and look at, not something that the student says.

When all three are used, the information can be checked against the other two forms of assessment opportunity. This is often referred to as "triangulation".



Triangulation of assessment opportunities

To find these opportunities, look at the "Learn About' sections of the syllabus units. These describe the learning that is expected and in doing so they set out a range of opportunities for the three forms of opportunity.

Here are the Learning Outcomes from the Primary 7 Drugs Unit where the context is sports and games

English Primary 7	Unit 1: Drug Abuse
Learning Outcomes: Skills	
• Listen with comprehension to a talk on drug abuse and understand the key points • Give a presentation fluently on this topic, arguing their case convincingly • Recognise how authors achieve their effect	

To find the assessment opportunities for each of these, we need to look in the 'Learn About' section of the unit:

Learn about
They should listen to a talk from a health worker on the dangers of drug abuse and ask relevant questions. They should work together in groups to identify the key messages that come from this reading and the talk, and turn these into a presentation to the class on the dangers of drug abuse that argues the case convincingly. Their discussions should be about how to be persuasive and convincing, and their presentations should include references to their source material. They should read some fiction that deals with the issue of drug abuse and discuss how the authors achieve their effect through the use of language. They should write their own fiction on this theme.

If we take the Learning Outcomes one at a time, and compare them to the 'Learn About' section, we can see that:

- To find out whether students can "listen attentively to a talk on drug abuse and understand the key points", a teacher would observe the students whilst they "listen to a talk from a health worker.." and ask some questions (conversation) about the key points.
- To find out whether students can "Give a presentation fluently on this topic, arguing their case convincingly", a teacher would observe the "presentation to the class"
- To find out whether students can "recognize how authors achieve their effect" the teacher would listen to the students "discuss how the authors achieve their effect through the use of language" (observation) and then read "their own fiction" (product) to see if they can use these effects.

All of these opportunities – conversation, observation and product – are contained in the 'Learn About' section of the syllabus unit.

Section Five: How do we make judgments about the Learning Outcomes?

The key to making a judgement is to find a context in which the knowledge, understanding or skill can be demonstrated by the learner. In the above example of an English syllabus unit, the expected Learning Outcomes were that students should be able to:

- Listen with comprehension to a talk on drug abuse and understand the key points
- Give a presentation fluently on this topic, arguing their case convincingly
- Recognise how authors achieve their effect

In order to apply these to observation, conversation or product, the teacher needs to be clear where to look in order to know whether or not a student has met these expected outcomes. These are usually to be found in the "Learn About" section:

- **Have they understood the key points?**

Context: *The student would need to be able to refer to the main points of the health worker's talk*

- **Is their presentation fluent and convincing?**

Context: *The student is able to make a presentation to the class that combines the health worker's message and their own research*

- **Do they recognize how authors achieve their effects?**

Context: *The student is able to refer to the effects in discussion, and then use them in their own writing*

In making the assessment judgement, the Learning Outcomes need to be interpreted in the context of the actual learning that is taking place. It is this context that makes assessment "authentic", and so more valid than a test.

We could set out the Assessment Opportunities and the Contexts for this English Unit in a table:

English Primary 7	Unit 1: Drug Abuse
Assessment Opportunity (from the Learn About section)	
Teachers observe students listen to a talk from a health worker Teachers observe students working in groups and ask questions (conversation) to find out if they can identify the key messages that come from the talk Teachers observe the presentations to the class on the dangers of drug abuse. Teachers read the students' writing on the subject (product)	
Learning Outcomes	**Contexts for the Judgement (what the teacher needs to look for)**
• Listen with comprehension to a talk on drug abuse and understand the key points • Give a presentation fluently on this topic, arguing their case convincingly • Recognise how authors achieve their effect	• The student is able to refer to the main points of the health Worker's talk • The presentation combines the health worker's message and their own research • The student is able to refer to the effects in discussion, and then use them in their own writing

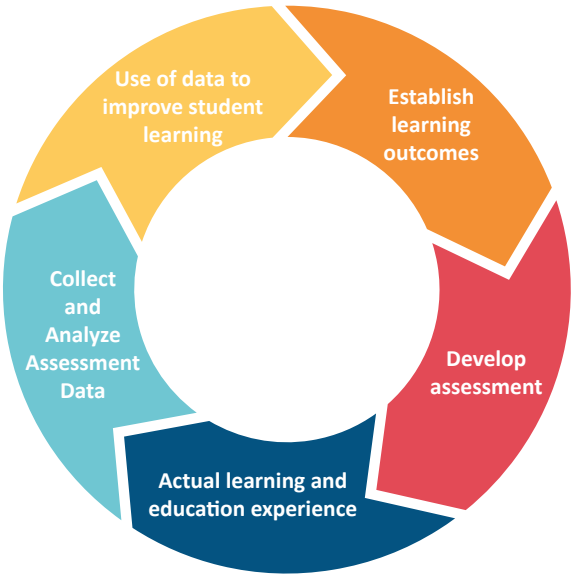
There are more examples in Annex 1.

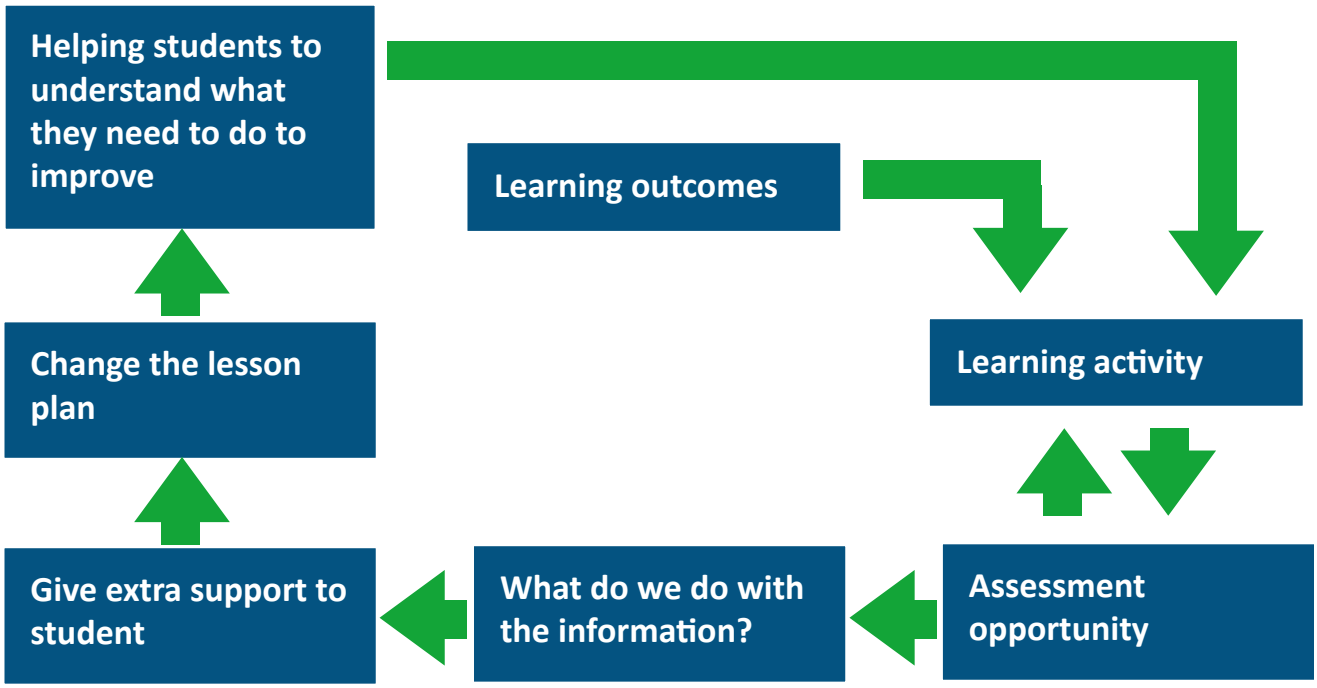
Section Six: How do we use Assessment Information?

The cycle of assessment will only be complete if the information gained is used to improve the students' learning.

There is a range of ways in which it can be used, three of which are outlined in 6.1 (above) and which have been mentioned in Section 2:

- Amending programmes or teaching approaches where necessary
- Identifying students needing more support to meet the expected Learning Outcomes,
- Enabling students to understand what they have to do to improve





The extra support to students includes:

- Further explanations and clarifications
- Practice sessions
- Re-grouping
- Mentoring

The ways in which the lesson plans or approaches can be amended include:

- More lessons on the topic
- Different materials or tasks
- Different lines of questioning

Enabling students to understand what they have to do to improve involves giving them some feedback on how well they are doing and what they need to do next.

Section Seven: How should we give feedback to students?

Feedback to students is a key aspect of Assessment for Learning. If students understand how well they are doing and what they need to do next, they will learn better. Feedback can take three forms:

- Marking students' work and giving written comments
- Making general comments to the class
- Holding a conversation with individual students

It is the last of these that is the most effective.

Whether written or oral, feedback should be directed at:

- Enabling the student to realize where they are in relation to the "learning outcomes"
- Clarifying misunderstandings, and filling gaps in learning
- Helping students to understand what they have done well
- Clarifying what they need to do next

It is important that feedback should be honest and clear – but it should not be discouraging to the student. The feedback should come as soon as possible after the assessment (immediate) and be specific about what the student can do to improve. After the feedback, the student should know what they need to do to improve – this is often called "actionable feedback".

Feedback should be:

- Encouraging
- Specific
- Immediate
- Honest
- Actionable

Encouraging **Specific** **Immediate** **Honest** **Actionable**

Section Eight: What Assessment Records should be kept?

Keeping detailed records of students' individual progress is always difficult with very large numbers of pupils. For the purposes of school-based formative assessment, it is not even always necessary to keep such detailed records anyway. If feedback is give immediately and action is taken, the learning is changed and the record would soon become out of date and redundant.

Most formative class-based assessments are dynamic in that they feed straight back into the teaching and learning process. Therefore detailed records of these are not appropriate.

It is possible to identify four broad groups of students in terms of their achievements:

Descriptor
No Learning outcome achieved
Some LOs achieved, but not sufficient for overall compliance
Most LOs achieved, enough for overall compliance
All LOs achieved – compliance with ease

There is no need to set a test to find this out.

These overall assessments should be made on the basis of the many formative assessments that the teacher has made during the course of teaching the unit. If teachers have been working with the students over the course of the unit, they will be able to make a broad judgment about which students have met or have failed to meet the unit's Learning Outcomes. These "Authentic Assessments" will be more valid and valuable than a test set by the school.

Recording these overall assessments will be simple, manageable and yet valuable, and can be recorded on a sheet such as the one below in which the categories are indicated with a number.

Although a very simple process, these four categories will give rich data when a comparison is made between the students in each category for different subjects and units. They will also identify easily those students who need extra support or who may not be ready to move on to the next grade at the end of a year (if this is the agreed policy).

Section Nine: How do we make end-of-year summative assessments?

The problem

Written tests are seldom effective for assessing the deeper understanding, skills, competencies and higher order thinking that are at the heart of the new curriculum. This is especially the case for tests made up by individual schools. It is possible to set questions that address higher order thinking and deeper understanding, but the techniques for doing so are very specialized, the questions generally require open-response answers and the marking schemes are very complex.

Written tests are popular because they are easy to administer to large groups, but they do not actually test the sort of learning that is required in the new curriculum

The solution

If records are kept of the learning outcomes of each syllabus unit through the year (Section 8, above) then there will be no need for an end of year test. Teachers will already have a record of those students who have met the learning outcomes, and those who have not done so. Therefore teachers will know if there were any students not ready to progress to the next grade.

An overall record should be made of the individual unit assessments by subject in terms of the 4 categories in Section 8. If numbers (0-4) are used as identifiers, then it will be possible to arrive at an overall number for a year by aggregating the identifiers for each unit.

Descriptor	Identifier
No Learning outcome achieved	0
Some LOs achieved, but not sufficient for overall compliance	1
Most LOs achieved, enough for overall compliance	2
All LOs achieved – compliance with ease	3

In the example below, the table shows the end-of-unit assessment for six students.

English										
	U1	**U2**	**U3**	**U4**	**U5**	**U6**	**U7**	**U8**	**U9**	**U10**
Student A	3	3	2	3	3	3	3	2	3	3
Student B	2	2	3	2	3	2	2	2	3	2
Student C	1	1	2	1	1	2	2	3	2	3
Student D	1	1	2	1	1	2	1	1	2	1
Student E	0	1	2	1	0	1	0	1	1	1
Student F	0	0	1	0	0	1	0	0	1	0

It can be seen from the above table that Students A and B have performed very well (there are several 3's) and have achieved overall compliance in all the Units. Student C has achieved overall compliance in all but four Units – and has improved considerably during the year (1s at the beginning 3s by the end of the year. Students D and F have not achieved overall compliance in many Units (they have several 1's). We hope there will be no student like Student F!

If this table is kept throughout the year it will enable schools to identify students who:

- Are doing well in one subject but not another
- Are doing well in one unit but not another
- Started off well but have not maintained their progress
- Are doing very well overall
- Need extra support or guidance

The table also shows that students had more success with Units 3 & 9 than with the other units.

For end-of-year summative purposes, it will be possible to add up the identifiers for each unit and come to an overall score. If numbers (0-4) are used as identifiers, then it will be possible to arrive at an overall number for a year by aggregating the identifiers for each unit, and dividing by the number of units.

In the example below, the table shows the end-of-unit assessment for six students. The range will always be 0-3.

English											
	U1	**U2**	**U3**	**U4**	**U5**	**U6**	**U7**	**U8**	**U9**	**U10**	**Total**
Student A	3	3	2	3	3	3	3	2	3	3	**2.8**
Student B	2	2	3	2	3	2	2	2	3	2	**2.3**
Student C	1	1	2	1	1	2	2	3	2	3	**1.8**
Student D	1	1	2	1	1	2	1	1	2	1	**1.3**
Student E	0	1	2	1	0	1	0	1	1	1	**0.8**
Student F	0	0	1	0	0	1	0	0	1	0	**0.3**

The Subject Records can be averaged on an Overall Record as below. The Total for each subject will need to be divided by the number of units. If necessary, an overall compliance or 'pass' score could be set.

If it were set at 1.0 in the above example, then Students A to D would be seen as complying whilst Students E and F would not.

Overall Record									
Class List	**English**	**Nat Lang**	**Maths**	**Science**	**Social Studies**	**RE**	**The Arts**	**PE**	**Total**
Student A	2.8								
Student B	2.3								
Student C	1.8								
Student D	1.3								
Student E	0.8								
Student F	0.3								

If the subject totals are aggregated, the range will be 0-24 for these eight subjects. If end-of-year summative assessments are being used to decide whether or not students should progress to the next grade, then a "pass" mark can be fixed (say, 10 in the above example).

This unit-by-unit approach is a more effective way of assessing students' learning than an end-of-semester or end-of-year test. This form of "continuous assessment" also has the advantage of emphasizing to students the importance of each unit.

School-based formative assessments are made as part of the normal teaching and learning process. They take account of a range of information to assess students' learning and use this information to improve teaching and learning.

Annex One: Assessment Examples

The following pages set out four examples:

- Primary 1: National Languages
- Primary 4: Social Studies
- Secondary 1: Chemistry
- Secondary 4: History

In each example, the first page sets out the Syllabus Unit from the new curriculum. The second page of each example sets out a way of establishing for that unit:

- Assessment opportunities
- Assessment Context

These examples illustrate the way in which assessing the Learning Outcomes in all the other syllabus units can be approached.

Example 1: Primary National Languages
Syllabus Unit 1: Animals Around The World

National Languages Primary 2	**Unit 1: Animals Around The World**
Learn about	Key inquiry questions
Learners should expand their vocabulary by listening to stories about famous animals around the world and participate as a group to discuss the stories and to explore the main elements. They should be given opportunity to create new endings for the story. Students should use appropriate language to compare the differences and similarities between some of the world's animals by looking at pictures of various animals and describing them. These animals can be classified into various groups, such as those with 4 legs, those with fur, those that live on land etc. Learners should be divided into teams and act out how different animals behave. The other team can guess which animal they are acting out. Learners should be given opportunity to draw an animal and use emergent writing skills to write some phrases about it.	• What are the main elements of a story? • How can you create alternative endings to a story? • How can we compare, contrast and classify animals? • Which details need to be included to represent an animal using body language?

Learning outcomes

Knowledge and understanding	**Skills**	**Attitudes**
• Understand the elements of a story such as main character, setting etc. • Express opinions about a story read in class. • Listen carefully and respond increasing appropriateness.	• Show awareness of the listener by including relevant detail. • Begin to read simple texts with accuracy and understanding. • Build words from letters • Blend 2-5 taught letters/sounds to read unfamiliar new words made up of those letters. • Form up to 5 letters taught, accurately and consistently in size, both lower and upper case • Use new vocabulary specific to the topic of animals around the world.	• Enjoy reading and writing, know that reading and writing is fun. • Value the system of their language. • Appreciate their own creativity and the creativity of others. • Enjoy seeing their own ideas expressed in written form. • Enjoy stories.

Contribution to the competencies:

Critical thinking: Comparing, contrasting, sorting and classifying information about animals of the world

Communication: Reading and comprehending a story, speak clearly and communicate about around the world, listening to and comprehending speech, using emergent writing to communicate ideas about animals around the world

Co-operation: Working collaboratively to write a story, classify and sort pictures, negotiating with each other to write a class story, contribute to environmental sustainability as they look at animals around the world

Culture: Build understanding of South Sudanese heritage in relation to the wider world

Links to other subjects:

Science: Learning about classification of animals

Example 1: National Languages Primary 2 Assessment Opportunities and Criteria

National Languages Primary 2	Unit 1: Animals Around the World
Assessment Opportunity 1	
Learners should participate in a group discussion with the teacher to explore a story and its main elements. (Conversation). They should be given opportunity to create new endings for the story by acting it out as a group (Observation).	
Learning outcomes	**Assessment context**
• Understand the elements of a story such as main character, setting etc. (K & U) • Express opinions about a story read in class. (K & U) • Listen carefully and respond increasing appropriateness (K & U). • Enjoy reading and writing, know that reading and writing is fun (A). • Use new vocabulary specific to the topic of animals around the world (S).	**Conversation:** • Who are the characters? • What happens at the beginning and the end of the story? • What was your favourite part of the story? Why? • What different endings can you create for the story? **Observation** • Are new versions of the end of the story relevant to the rest of the story? • Do learners use language and vocabulary that are appropriate for the topic of Animals Around the World?

Assessment Opportunity 2	
Learners should be divided into teams and act out how different animals behave. The other team, together with the teacher, can guess which animal they are acting out (Observation).	
Learning outcomes	**Assessment context**
• Show awareness of the listener by including relevant detail. (S) • Use new vocabulary specific to the topic of animals around the world (S).	**Observation** • Learners should show awareness of relevant details of various animals by using appropriate sounds, movements and vocabulary to portray different animals.

Example 2: Social Studies Primary 4
Syllabus Unit 1: Technology

Social Studies Primary 4	**Unit 1: Technology**
Learn about	Key inquiry questions
Learners should discuss and describe the impacts of technology on the ways of life in the past and how it has shaped history. They should find out about these changes by studying a few key examples such as telecommunications, ploughs, steam engines, the printing press etc. They should explain the events that led to these advancements, considering how these technologies have improved life for people or have improved industry and agriculture. They should be able to explain to others the key benefits of these technologies that are of particular interest to them through presentations and stories. Learners should investigate life 'before and after' these technologies became regular features of life by exploring first and second hand evidence and recounts. As learners find out technological advancements, they should place the related people (inventors?) and events within correct periods of time. To begin with, this may be according to the lifespan of their families but should build towards using the correct terminology for centuries etc.	• What is technology? • What are the most important impacts of technology on the way of life of the people of South Sudan? • Are there any new machines that you believe could be developed in the future to help your community? • What can you say about when in technological advancements took place?

Learning outcomes		
Knowledge and understanding	**Skills**	**Attitudes**
• Explain the meaning of technology • Describe the impact of technology on the people of South Sudan • Know how to place events, people and changes into correct periods of time	• Investigate why technological advancements took place • Explore the effects on everyday life of technology today • Correlate events , people and changes against other aspects of change in South Sudan and the continent of South Africa	• Appreciate the benefits that technology can bring • Value the importance of continuing to explore how technology can be used to improve lifestyle, industry and the economy

Contribution to the competencies:

Critical thinking: Coming to conclusions about the benefits of technology in our lives today

Communication: Sharing our learning with others and valuing the role that telecommunications and the internet have in sharing learning and information

Culture: Develop an understanding of South Sudan heritage by knowing about how things worked before technology changed the way we do things

Links to other subjects:

Mathematics: Compare and order numbers in order to place events, changes and people on a timeline

Science: Knowing about sources of electricity and how this powers technology; make simple machines such as a windmill or waterwheel

Life Skills: Talk about interests

Example 2: Social Studies Primary 4 Assessment Opportunities and Criteria

Social Studies: Primary 4	Unit 1: Technology
Assessment Opportunity 1	
Learners should investigate important technological advancements in South Sudan as set out in the 'Learn About' section. Learners should present documents and posters that describe these technologies. (Product) The teacher should ask learners to share their presentations with each other, encouraging them to explain what they believe to be the key features of technology that is of benefit to them. (Observation)	
Learning outcomes	**Assessment context**
• Explain the meaning of technology.(K) • Describe the impacts of technology on the people of South Sudan.(K&U) • State the key benefits of technology(S)	**Product:** • Does the presentation outline features if technology clearly? • Does it identify the impacts of technology on the people of South Sudan • Does it state the key benefits of technology? **Observation** • What key words are used to define technology? • How do learners explain their choices for the key benefits of technology?

Assessment Opportunity 2	
Learners should continue to investigate technology by exploring what events lead to these advancements. The teacher should observe how learners use a range of resources in pairs to investigate how technology has improved life in South Sudan in the present day. (Observation). The teacher should discuss with learners why they believe these advancements were necessary and what other technologies may need to be developed for the future. (Conversation)	
Learning outcomes	**Assessment context**
• Explore the effects on everyday life of technology today(Skill) • Identify the events and changes against other aspect of change in South Sudan and the whole of Africa.(Skill) • Investigate why technological advancements took place (Skill)	**Observation** • How do learners select key facts and information from the resources they are exploring? • How effectively do learners explain their findings to each other? **Conversation** • What impact on everyday life does technology have in your community? • Which of these do you believe to be the most important? • What source of evidence do learners select to show the positive impact of technology on South Sudan and Africa?

Example 3: Chemistry Secondary 1
Syllabus Unit 1: Separating Mixtures and Compounds

<table>
<tr><th colspan="2">Chemistry Secondary 1</th><th>Unit 1: Separating Mixtures and Compounds</th></tr>
<tr><td colspan="2">Learn about</td><td>Key inquiry questions</td></tr>
<tr><td colspan="2">In this unit students will be introduced to techniques of separating mixtures and compounds with emphasis on the processes of filtration and crystallization or evaporation, sublimation, distillation and fractional distillation, use of a separating funnel and paper chromatography. They should be given the opportunity to use these techniques practically for a range of mixtures and compounds and be asked to choose the appropriate process for the mixture or compound to be separated. By using the techniques, they should obtain pure substances from a range of mixtures and compounds.

They should design and carry out practical investigations involving the separation of mixtures and compounds and their properties, and relate this to their understanding of molecular structure so that they can explain why the process is effective.

They should relate this work to practical and industrial processes such as the refinement of oil, and make a presentation to the class on their findings.</td><td>• How can we get pure substances from mixtures and compounds?
• Which techniques are most effective for different mixtures and compounds?
• How you apply techniques of separating of mixtures in daily life?</td></tr>
<tr><th colspan="3">Learning outcomes</th></tr>
<tr><th>Knowledge and understanding</th><th>Skills</th><th>Attitudes</th></tr>
<tr><td>• Explain why the techniques of separating mixtures and compounds work in molecular terms
• Link the concepts to industry, especially crude oil</td><td>• Use appropriate techniques, apparatus and materials to separate mixtures and compounds
• Record observations, measurements and estimates and interpret and evaluate observations and experimental results
• Make predictions about which process will be most effective, and propose hypotheses for why they work</td><td>• Appreciate knowledge of chemistry in daily life
• Develop precision and accuracy in taking measurements</td></tr>
<tr><td colspan="3">Contribution to the competencies:
Critical and creative thinking: through exploration of uses of common laboratory apparatus, investigation, descriptions, explanation and experimentation
Communication: through presentation of group findings
Co-operation: through group work</td></tr>
<tr><td colspan="3">Links to other subjects:
Physics: use of apparatus, separation of magnetic and non-magnetic materials
Mathematics: data collection and sorting out things, measurements</td></tr>
</table>

Example 3: Chemistry Secondary 1
Assessment Opportunities and Criteria

Chemistry: Secondary 1	Unit 1: Separating mixtures and compounds
Assessment Opportunity 1	
Students should carry out the investigations suggested in the Unit "Learn About" and the teacher should observe the groups at work, and discuss with them the methods they are using and the conclusions they are drawing (Observation and Conversation).	
Learning outcomes	**Assessment context**
• Use appropriate techniques, apparatus and materials to separate mixtures and compounds • Record observations, measurements and estimates and interpret and evaluate observations and experimental results • Make predictions about which process will be most effective, and propose hypotheses for why they work	**Observation** Students select appropriate apparatus and techniques, and record necessary data **Conversation** • Why have you selected this technique? • Why do you think it will work? • What would happen if you used a different technique?

Assessment Opportunity 2	
Students should make their presentation orally and in writing and answer questions from the teacher and classmates.	
Learning outcomes	**Assessment context**
• Explain why the techniques of separating mixtures and compounds work in molecular terms • Link the concepts to industry, especially crude oil	**Conversation** • What is the difference between a mixture and compound? • Why can some compounds be separated by fractional distillation, and others not? • How is oil refined? What implications does this have for our own oil industry? • What other industries use these techniques?

Example 4: History Secondary 4
Syllabus Unit 1: The French Revolution

<table>
<tr><th colspan="2">History: Secondary 2</th><th>Unit 1: The French Revolution</th></tr>
<tr><td colspan="2">Learn about</td><td>Key inquiry questions</td></tr>
<tr><td colspan="2">Learners should use variety of information to investigate the causes and the impacts of the French revolution in Europe. They should work in groups to examine the causes and the main events in the course of the French revolution and explore the reasons for and impacts of the ‘reign of terror’.

They should assess the achievements and failures of the directorate government in France after the French revolution, and give reasons and evidence for their conclusions.

They should work in groups to make a presentation to the class of their findings.</td><td>• What were the causes of the French Revolution?
• How can the major events in the course of the French revolution be described?
• Why did the French revolution turn into the reign of terror?
• What were the achievements and failures of the Directorate Government in France after the revolution?
• What impact did the French Revolution have on the rest of Europe?</td></tr>
<tr><th colspan="3">Learning outcomes</th></tr>
<tr><th>Knowledge and understanding</th><th>Skills</th><th>Attitudes</th></tr>
<tr><td>• Explain the causes of the French revolution
• Describe the major events in the course of the French revolution.
• Explain why the ‘reign of terror’ occurred
• Identify the achievements and the failures of the directorate government in France after the revolution.</td><td>• Investigate the causes and effects of the French revolution.
• Analyse the achievements and failures of the directorate government after the French revolution.
• Examine the circumstances that resulted in the reign of terror.
• Analyse the impact of the French Revolution on the rest of Europe.</td><td>• Appreciate the condition of people that led to the Revolution</td></tr>
<tr><td colspan="3">Contribution to the competencies:
Critical thinking: Using a range of resources to explore the causes and the effects of the French revolution in Europe.
Communication: Present to the class
Co-operation: work with a group to prepare a presentation</td></tr>
<tr><td colspan="3">Links to other subjects:
Citizenship: through understanding the role of the citizen within the revolution
Peace Education: recognizing key causes of conflict</td></tr>
</table>

Example 4: History Secondary 2
Assessment Opportunities and Criteria

History: Secondary 2	Unit 1: The French Revolution
Assessment Opportunity 1	
Students produce a written presentation on the causes, main events and immediate outcomes of the French Revolution. (Product) At the end of each presentation, the teacher and the class ask questions (Conversation) Teachers should ensure that all members of the group are asked a question at some point.	
Learning outcomes	**Assessment context**
• Explain the causes and the impacts of the French revolution in Europe. (K&U) • Describe the major events in the course of the French revolution. (K&U) • Explain why the 'reign of terror' occurred • Identify the achievements and the failures of the Directorate government in France after the revolution. (K&U)	**Product** • Does the presentation set out the main causes clearly? • Does it identify the main events in their logical order? • Does it explain the reasons for the reign of terror'? • Does it list the achievements and failures of the Directorate with a judgement made about their significance? **Conversation** • Which were the most significant causes of the Revolution? • What were the reasons for the 'reign of terror'? • What were the most significant achievements and failures of the Directorate? Why?

Assessment Opportunity 2	
The teacher should observe the groups whilst they are engaged in the investigation set out in "Learn About" (Observation). The teacher should discuss with each group how they are finding the information, which pieces they are selecting, and how they judge the significance. (Conversation). Teachers should ensure that all students are asked a question at some point.	
Learning outcomes	**Assessment context**
• Investigate the causes and effects of the French revolution. (Skill) • Analyse the achievements and failures of the directorate government after the French revolution. (Skill) • Examine the circumstances that resulted in the reign of terror. (Skill)	**Conversation** • What sources give evidence of the causes and effect of the Revolution? • What evidence is there for the achievements and failures you have selected? (They should make reference to their sources to substantiate their judgements.)

Annex Two: Assessment Records - Subject Unit Record

English								
Class List	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Student A								
Student B								
Student C								
Student D								
Student E								
Student F								
Student G								
Student H								
Etc...								

Maths								
Class List	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Student A								
Student B								
Student C								
Student D								
Student E								
Student F								
Student G								
Student H								
Etc...								

Overall Record								
Class List	English	Nat Lang	Maths	Science	Social Studies	RE	The Arts	PE
Student A								
Student B								
Student C								
Student D								
Student E								
Student F								
Student G								
Student H								
Etc...								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