Junior School Teacher's Companion

A guide to the Competency Based Curriculum

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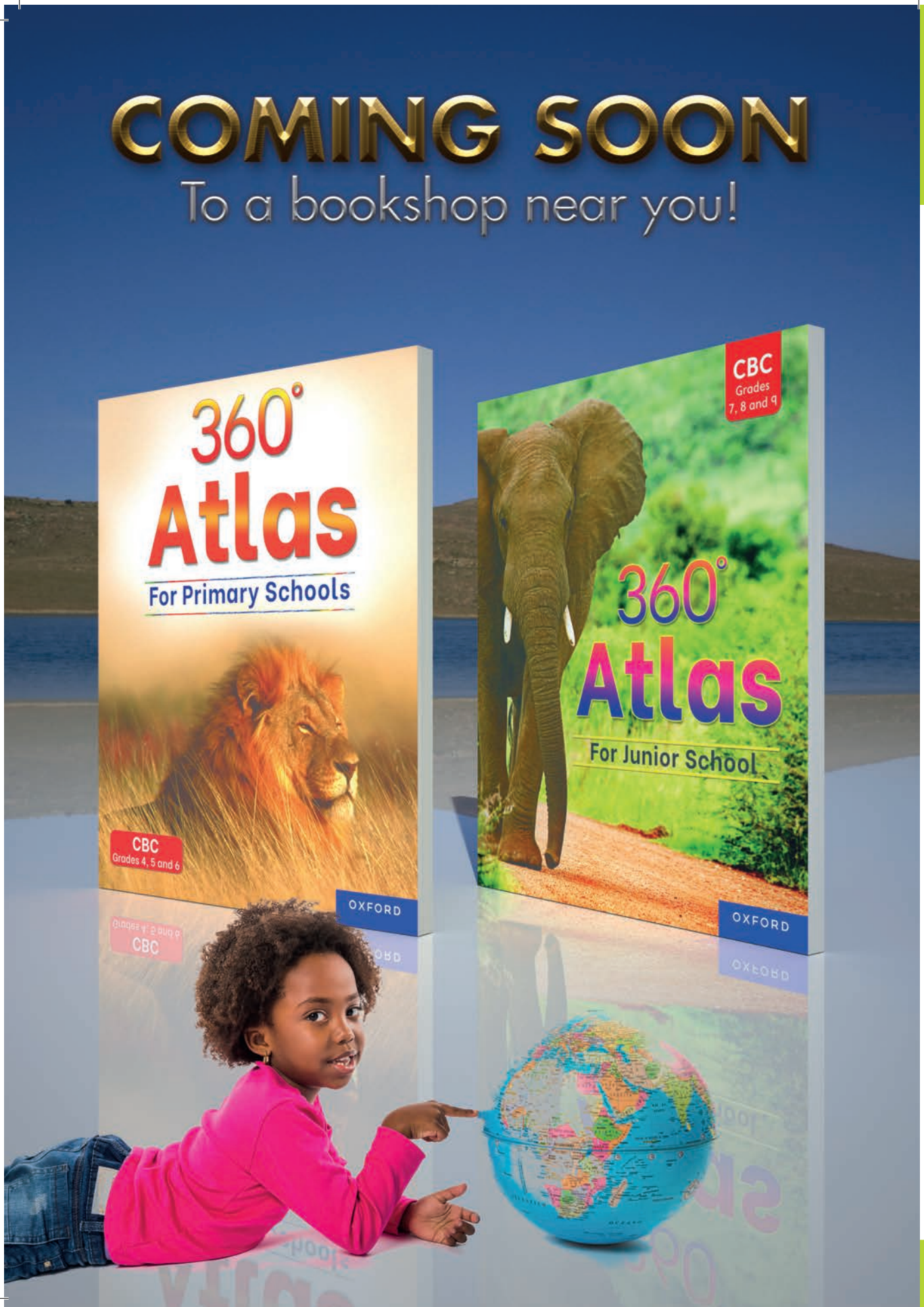
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Introduction to Competency Based Curriculum (CBC)

1

What is Competency Based Curriculum?

Competency Based Curriculum (CBC) is a product of the 2012 report of the Task Force formed by the then President Mwai Kibaki to review the education sector in Kenya. The word 'competency' is defined as 'the ability to apply appropriate knowledge and skills to successfully perform a task'. CBC is therefore designed to emphasize the importance of developing skills and knowledge and using them in solving problems in real life.

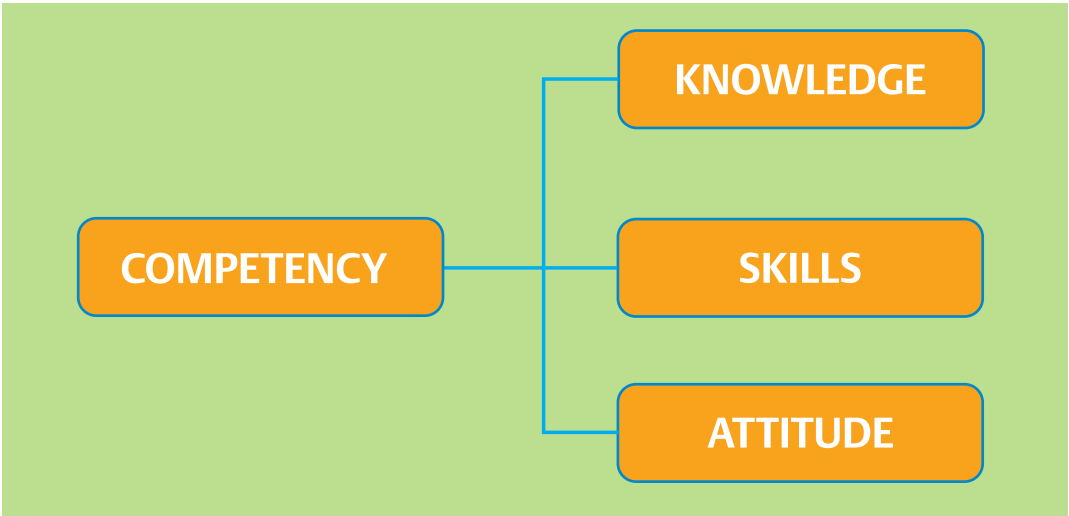


Figure 1.1: What comprises competency

Competency Based Curriculum (CBC) therefore refers to a system of instruction, assessment, grading and academic reporting that is based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education.

The main objective of CBC is to improve the quality of education at all levels and to nurture every learner's potential. In order to achieve this, teachers must be empowered with effective, efficient and sound instructional strategies, methodology and techniques that facilitate and assess competency-based learning. This also requires that pedagogical approaches are enhanced to support creativity, critical thinking and innovation.

Differences between objective-based curriculum and CBC

Table 1.1 gives a summary of how CBC differs from the previous objective-based curriculum.

Table 1.1: *Summary of differences between CBC and objective-based curriculum*

Objective-based curriculum	Competency Based Curriculum
Content focus Teachers disseminate information to students. Students are recipients of knowledge (passive learning).	**Focus on the acquisition of competencies.** Teachers have a dialogue with students, helping students construct their own knowledge (active learning).
Rigid and prescriptive curriculum with limited flexibility.	Learners' interests and special abilities should be considered in the learning process. Flexible with opportunities for specialisation.
Teaching where the role of the teacher is directing and authoritative.	Learning where learners take charge of their learning and teachers role is facilitating, guiding and providing resources.
Teacher centred.	Learner centred.
Emphasis is on summative assessment and competition among the learners	Emphasis is on formative assessment and collaborative learning where learners share knowledge and experiences.
Strict adherence to a fixed curriculum.	Learners' interests are valued, which leads to identification and nurturing of talents.
Learning is based on repetition.	Learning is interactive and builds on what the learner already knows.

Source: *Revised Basic Education Curriculum Framework (BECF)*

Overview of Basic Education Curriculum Framework (BECF)

Basic education is organized into three levels in CBC as follows:

- Early Years Education
- Middle School Education
- Senior School

Figure 1.2 summarises the different levels and the main focus for each.

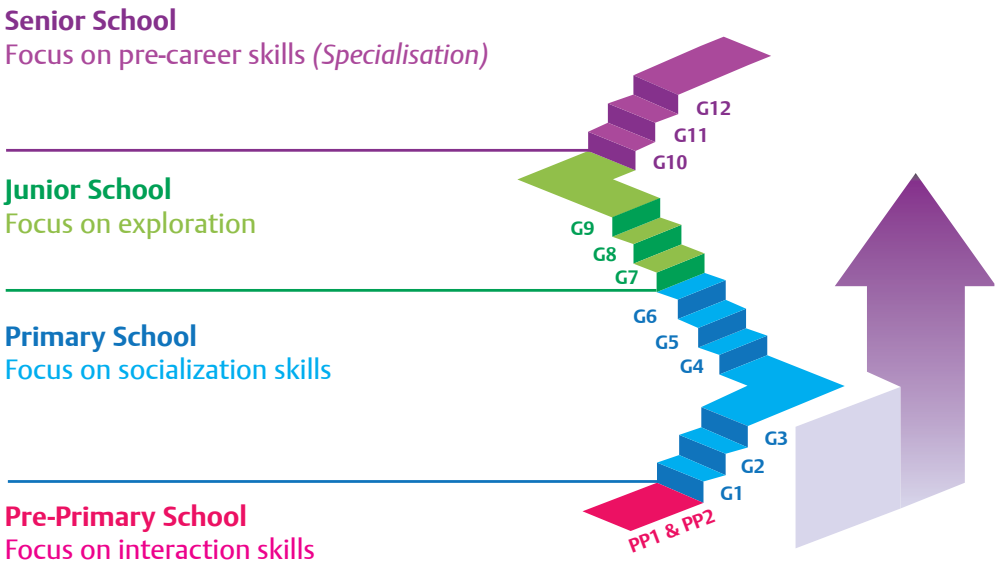


Figure 1.2: *Different levels of education in CBC* | ***Source:*** *Revised Basic Education Curriculum Framework (BECF)*

(a) Early Years Education

This comprises two years of pre-primary and three years of lower primary school education.

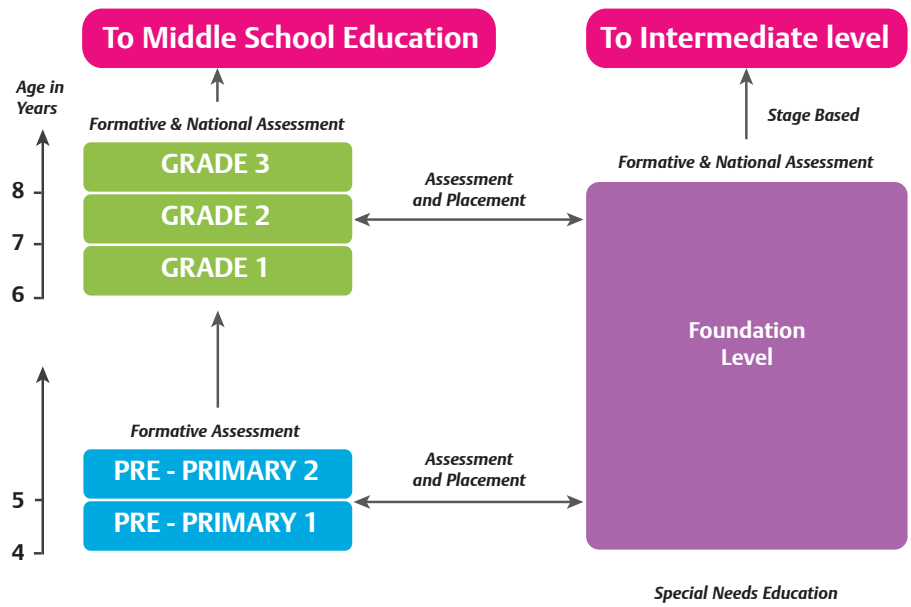


Figure 1.3: Early years education structural model | ***Source:*** *Revised Basic Education Curriculum Framework (BECF)*

After the early years in school, the learners proceed to middle school education.

(b) Middle School Education

This level comprises three years of **upper primary** education and three years of **junior secondary** education.

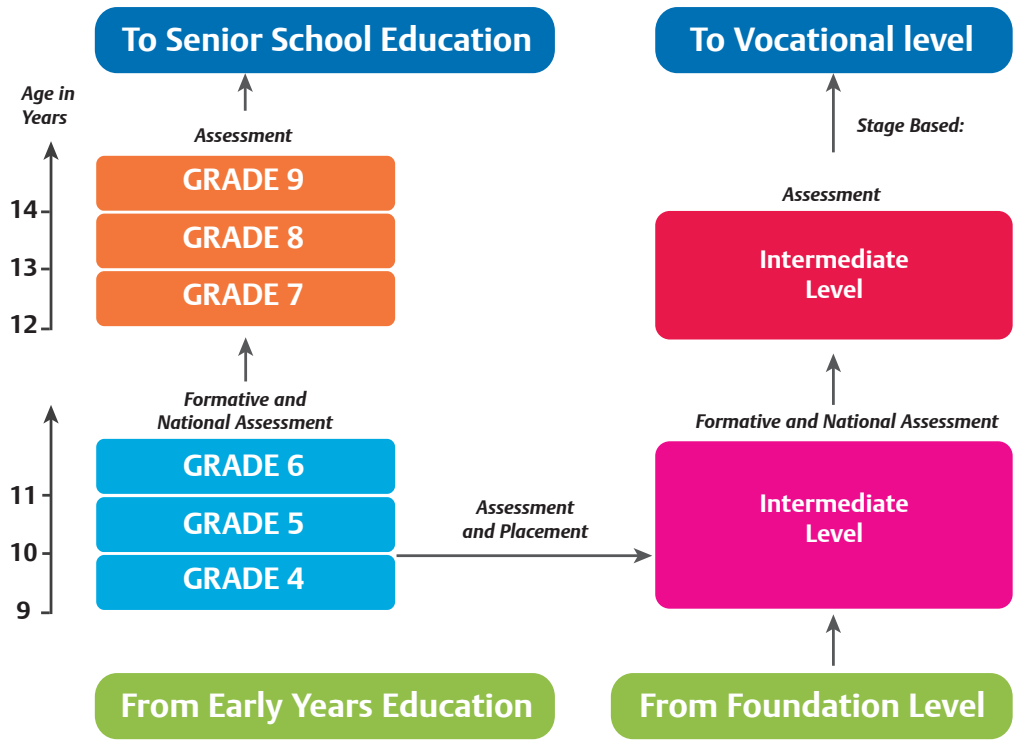


Figure 1.4: Middle School Education structural model | ***Source:*** *Revised Basic Education Curriculum Framework (BECF)*

Upper primary comprises a three-year programme where learners are exposed to a broad curriculum and given an opportunity for exploration and experimentation.

Secondary education

Secondary education is organised into **two levels** namely, Junior School (Grades 7, 8 and 9) and Senior School (Grades 10, 11 and 12).

(i) Junior School

Graduates of primary school, after Grade 6, join Junior School at Grade 7. Junior School exposes learners to a broad-based curriculum as well enables them to explore their abilities, personality and potential as a basis for choosing subjects according to career paths of interest at Senior School. As such, learners in Junior School should undergo a rigorous career guidance programme to enable them make informed choices as they transit to Senior School.

Subjects at Junior School

Learning areas in Junior School are divided into core and optional subjects as shown in the Table 1.2.

Table 1.2: *Learning areas in Junior School*

Core Subjects	Optional Subjects
1. English 2. Kiswahili or Kenyan Sign Language 3. Mathematics 4. Integrated Science 5. Pre-Technical studies 6. Social Studies 7. Religious Education – learners choose one of the following: (i) Christian Religious Education (ii) Islamic Religious Education 8. Business Studies 9. Agriculture 10. Sports and Physical Education	1. Visual Arts 2. Performing Arts 3. Home Science 4. Computer Science 5. Foreign Languages: Either (i) German (ii) French (iii) Mandarin (iv) Arabic 6. Kenyan Sign Language 7. Indigenous Language

(ii) Senior School

Senior School comprises three years of education for learners between 16 to 18 years. It lays the foundation for further education and training at the tertiary level and the world of work. It marks the end of Basic Education as defined in the Education Act, 2013. Learners exiting this level are expected to be **'engaged, empowered and ethical citizens'** ready to participate in the socio-economic development of the nation.

At this level, learners are supposed to specialise in a career path of choice since they have had opportunities to explore their potential, interests and abilities. The specialisation entails choosing to pursue studies in one of the three pathways available in Senior School namely:

- Arts and Sports Science
- Social Sciences
- Science Technology Engineering and Mathematics (STEM).

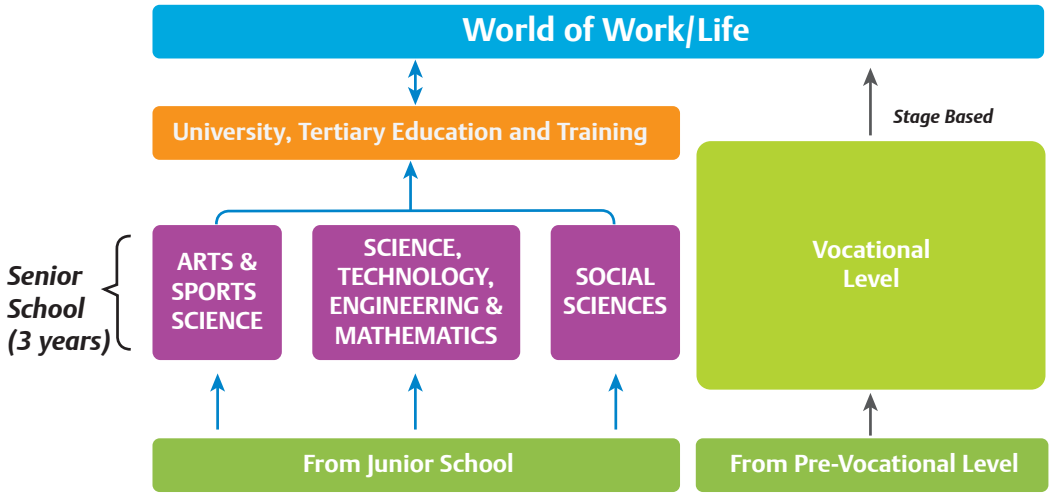


Figure 1.5: *Pathways in Senior School* | ***Source:*** *Revised Basic Education Curriculum Framework (BECF)*

Senior schools are intended to be institutions of specialisation that provide opportunities for learners to focus in a field of their choice to form a foundation for further education and training and/or gain employable skills.

Getting ready for CBC

To execute your mandate effectively in the wake of CBC, consider the following:

1. Understand the basics

Every teacher must understand the basics of the education framework in order to effectively implement the new curriculum. Refer to the notes above.

2. Know your policy documents

Teachers must ensure that they have the required policy documents to find the correct footing and develop good foundation in CBC. Below is a checklist of some of these documents:

- The Constitution of Kenya 2010
- The Basic Education Curriculum Framework (BECF)
- Sustainable Development Goals
- EAC Curriculum Education Harmonization Framework
- KICD Curriculum Designs
- CBC materials/coursebooks.

In addition to these documents, the teacher needs to be equipped with the 21st century learning/teaching skills and approaches.

3. Understand pedagogical approaches necessary for CBC

There are a variety of approaches teachers are encouraged to employ to enable them deliver the Competency Based Curriculum. It should be remembered that

learner-centred approaches to teaching are central to this curriculum. Table 1.3 gives some suggestions and explanations to some pedagogical approaches that a teacher can use.

Table 1.3: *Suggested pedagogical approaches*

Pedagogical approaches	How to use the approach meaningfully
Open-ended instruction	Questions are structured in a way that multiple answers are possible so that learners are not directed towards one 'right' answer but rather multiple answers that open up room for further questions and answers.
Integrated learning	Content and skills from one learning area are used in other learning areas. This means content from the various related learning areas should be infused in the learning process.
Enquiry-based learning	Learning is focused through questions, problems or challenges that learners work to address. Learners are provided with questions/problems to solve and some guidance by the teacher on how to arrive at solutions given. The teacher is required to clarify the question(s) and skilfully lead the learners to think through the process to follow in order to arrive at solutions. Guided enquiry approach is appropriate for the younger learners while for older learners, the self-directed approach where learners generate the questions and assume much of the responsibility for how to solve them is more applicable.
Differentiated instruction	The teacher consciously designs activities and learning experiences that address a range of learning styles, abilities and readiness. There may be need to consider the gifted and talented learners as well as the time takers. This means that the teacher is tasked to develop a variety of instructional approaches that address the needs of different learners including those with learning difficulties.
Experiential learning	Experiential learning brings real life experiences into the learning process, for example manipulating real objects. Coupled with simulation and mentorship, this approach provides experience beyond the classroom thus making it more likely to address real world issues and problems.

Pedagogical approaches	How to use the approach meaningfully
Co-operative learning	Group and co-operative learning strategies focus on learning in small groups. The teacher is however required to explicitly understand some of the co-operative learning strategies and try them out in the classroom for both teaching and assessment of learning.
Discussion	The teacher together with the learners form groups to discuss a specific problem. The group leaders need to be varied for different discussions in order to provide an opportunity for every member to participate. At the end, the group may make presentations to the rest of the class through their group leader.
Peer teaching	Learners learn best from each other! It would be useful to have teachers guide learners to learn from their peers. This approach provides opportunities for learners to actively present their knowledge and skills to peers and/or act as teachers and mentors of each other. Peer teaching promotes incidental learning from presentations and peer engagement. Peer teaching also creates an intentional opportunity to empower learners to teach others and for the teacher to master the concepts being taught.
Case studies	Case studies are thorough descriptions of real events from real situations. The teacher can narrate a story or let learners read stories on real life situations and allow learners to reflect on.
Role play, dramatisation and storytelling	Learners internalize learning much better if it is done through role play, dramatization and storytelling. This helps the learners to associate with the characters, empathize with them and later practise the lessons learnt. For creativity and innovation, the teacher can ask the learners to construct their own brief stories, drama and role plays.

4. Understand the paradigm shift

Competency Based Curriculum emphasizes development of competencies as opposed to knowledge acquisition. Figure 1.6 illustrates some of the changes in the curriculum.

From less	To more
Content focus	Focus on competencies
Rigid and prescriptive curriculum with limited flexibility	Flexible with opportunity for specialisation
Primarily focused on summative assessment and competition	Balanced formative and summative assessment, and excellence
Emphasis on schooling	Emphasis on education
Teaching	Learning

Figure 1.6: The paradigm shift

5. Get resourced

Appropriate resources with which to facilitate learning are critical for this curriculum. You need a good **Teacher's Guide (TG)** and **Learner's Book** with requisite competencies, stimulating visuals and relevant content as a priority to guide you in the acquisition of other relevant and suitable lesson resources. On the other hand, learners need a good course book that not only provides them with the required content, but also gives them visual stimulation to keep them interested in the learning process. It is critical that you choose this carefully.

6. Plan effectively

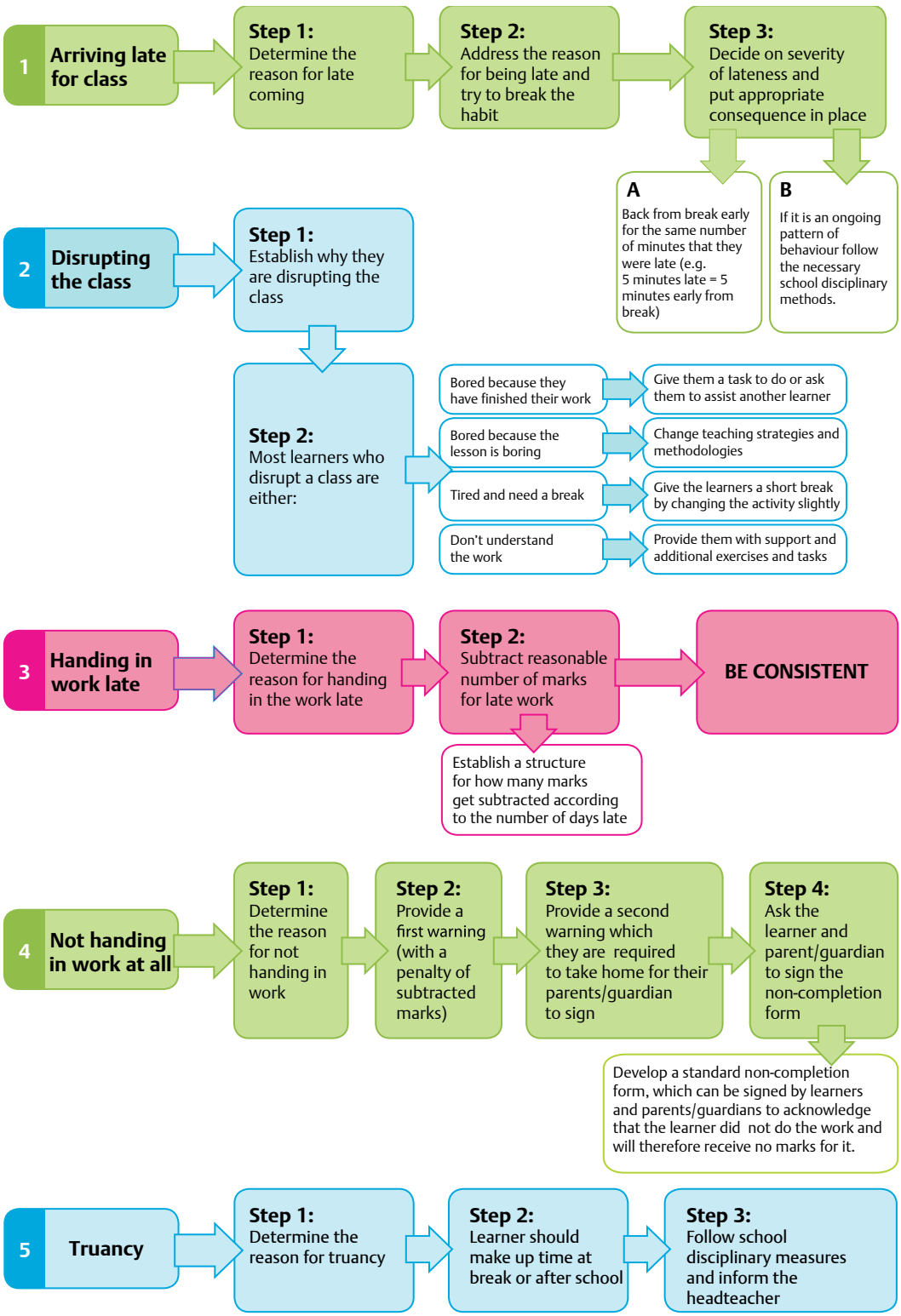
A successful CBC lesson is determined by the planning and the amount of thought put into the lesson planning. The lesson plans should have:

(a) a variety of activities and learning experiences
(b) strategies and approaches to teaching CBC
(c) strategies that cater for differentiation
(d) attainable learning outcomes
(e) key enquiry question(s) to trigger the learners' curiosity
(f) learning resources
(g) assessment items/tools
(h) opportunity for reflection and evaluation.

Remember

Competency Based Curriculum is new to all stakeholders including parents, learners, teachers and school managements. An inclusive approach will be useful in enhancing greater buy-in by all stakeholders and for effective learning.

7. Step-by-step solutions to classroom problems



Teacher wellness

As an educator, your health and well-being are the keys to a productive and joyous learning experience for your learners and for yourself. To most teachers, however, their learners come first and they come second or not at all. The good news is that it only takes a few minutes a day to destress, energize and revitalize your body and mind.

There are many self-care techniques that can be practised in the classroom with your learners, so everyone benefits.

Some of the simple strategies you can use to guarantee you wellness include:

1. **Breathe.** Did you know you can trick your brain into thinking everything is fine with slow, deliberate breathing?
2. **Connect.** Reach out and connect (or vent!) with your fellow teachers and co-workers and hold each other accountable for your self-care contract.
3. **Take a timeout.** Schedule your timeouts during the day when you have no interruptions. Soon you'll look forward to this mini-recharge.
4. **Move more, sit less.** Incorporate some physical activity into your day – before, during and after school. Get started today by doing simple physical activities that take only two minutes or less.
5. **Enjoy the great outdoors.** Teachers don't have a lot of time for long hikes or adventure trips, but being with nature can be as simple as taking a leisurely walk during the lunch break or after work.
6. **Step away from the device.** Constant digital stimulation can increase your anxiety or sense of 'not doing enough'. Put down your phone and schedule some no-tech time each week.
7. **Reflect.** Think about all the things for which you are grateful. Even when life is stormy, you can always find one bright moment or thing to be grateful for.
8. **Get creative.** Do more inventive, original or artistic activities
9. **Create a comfort kit.** For those days when you're feeling particularly defeated or discouraged, a comfort kit reminds you that everything will be okay. It can include anything for example, your expression is one of the most therapeutic techniques for relieving stress. You might try drawing, painting, photography, or crafting. It can include anything you love, from your favourite tea to a note from your best friend forever (BFF).
10. **Pamper yourself.** Set aside some time during the school term to do something special for yourself. It could be a nice dinner, a manicure, or a weekend trip – experiences that will help you refuel and recharge for the school days ahead.

Additionally:

- **Rest.** Every teacher needs some downtime in the evening – even if it is only for an hour; and a good night's sleep is a must. Teaching is one of the few professions that never lets you breeze through the day – even when you're not feeling well.

- **Eat right.** What you eat can have a big effect on how you feel, how you look and how much energy you have for teaching. A simple diet of smaller meals, whole meal foods instead of processed foods, and a variety of fresh fruits and vegetables is most appropriate. Try to cut back on (or eliminate) your consumption of sugar, white flour and foods high in saturated fats. You won't believe how much energy you'll have or how incredible you'll feel.
- **Leave school work at school.** As soon as you leave the school compound, your workday is over. Leave it there. Although sometimes you may have to do marking or catch up at home, you should limit those instances as much as possible. Try not to carry your work frustrations or disappointments home.
- **Work out!** Nothing will clear your head faster or more completely than physical exercise. Go for a brisk walk or dance to your heart's content. Join a swim club. Whatever you do, make sure it's something you enjoy doing.
- **Create a culture of support.** Use your relationships to celebrate success and collaborate effectively. Ask yourself how often you share your highlights with others.

Competency Based Assessment (CBA)

2

What is assessment?

Assessment is the process of obtaining information that is used to make educational decisions about students, to give feedback to the student about their progress, strengths and weaknesses, to judge instructional effectiveness and curricular adequacy and to inform policy.

National Assessment System

According to this definition, assessment information can be used at different levels of the education system (i.e. national, county, sub county, school, classroom and at home) to make decisions about learners, about teaching and learning, about the curriculum, as well as to make the relevant education policies. In practice, this definition is applicable to the entire assessment system that impacts on the education system in any country.

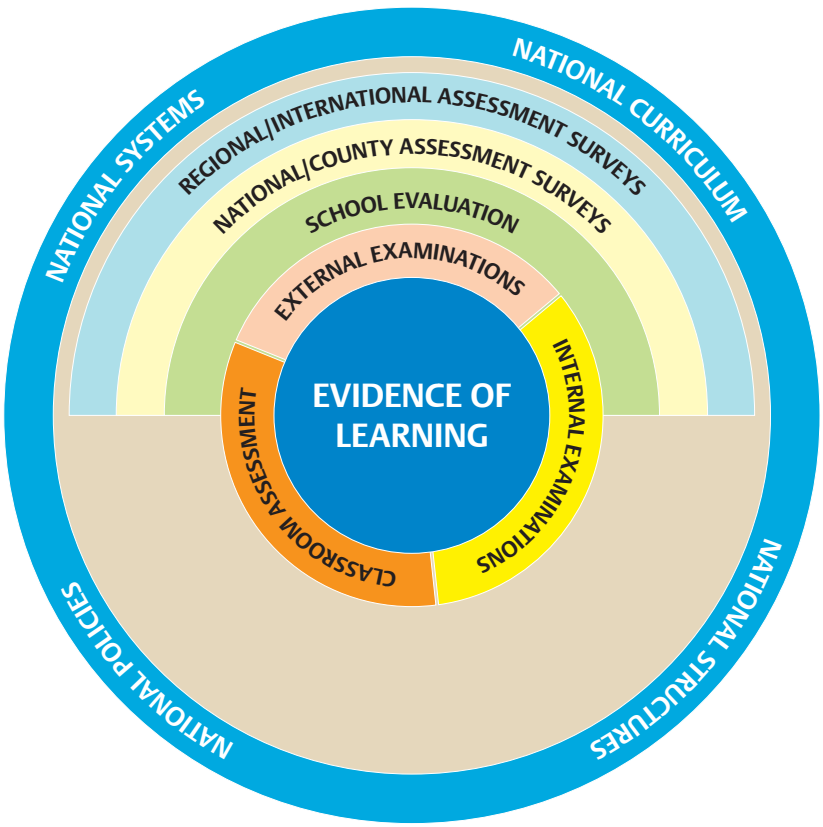


Figure 2.1: *Components of a National Assessment System (Kanjee, 2008)*

Classroom assessment versus examinations

(a) Classroom assessment

Classroom assessment refers to the process of obtaining evidence on the knowledge, understanding and skills of learners that can be used by teachers to improve learning and teaching, and by learners to improve their own learning. The primary purpose of classroom assessment is to obtain evidence for use to improve learning. Typically, assessment activities are led by the teacher in the classroom that comprise class tests, classwork, homework, peer and self-assessment, assignments, projects, questioning and observations. An integral aspect of all classroom assessments is feedback, which is used to improve both learning and teaching.

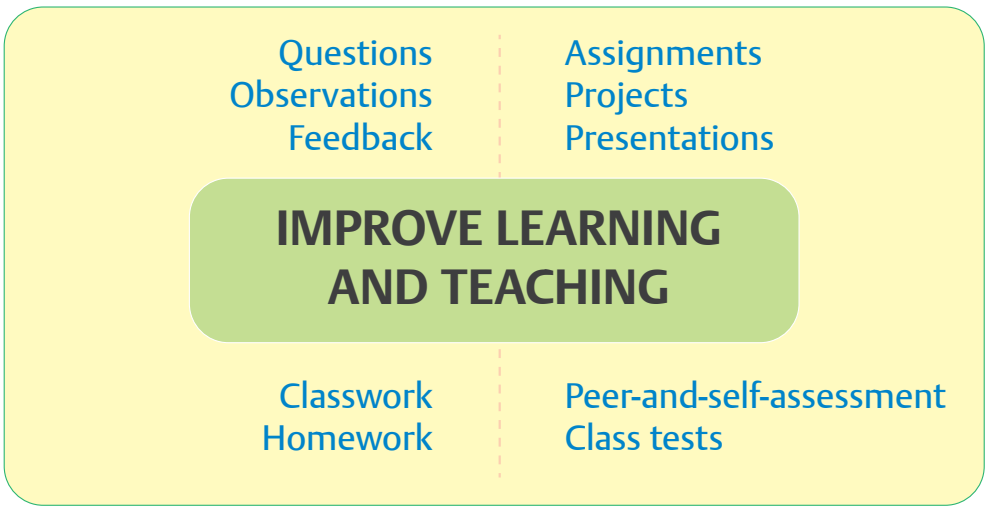


Figure 2.2: *Overview of a Classroom Assessment System*

(b) Examinations

Examinations refer to the process undertaken for determining a learners' mastery of relevant knowledge and skills taught. Examinations are generally the most common and most established component of the assessment system. The purpose of examinations is selection, usually based on specific, predetermined criteria. By definition, the function of examinations is to differentiate learners who are deemed to have or have not mastered the content being examined. Within the education sector, two types of examinations are usually conducted: internal and external.

- Internal examinations are conducted by the school, are usually developed and administered by teachers, and are conducted on a quarterly, half-yearly and/or annual basis. In addition, many countries also conduct school-based assessments (SBA) for obtaining learner scores that are used in calculating the final grade for specific external examinations. In practice, SBA may include similar tasks as those used for internal exams and classroom assessments. The key difference, however, is that these results

contribute to calculating the final grade of an external examination. This is the approach CBC has adopted.

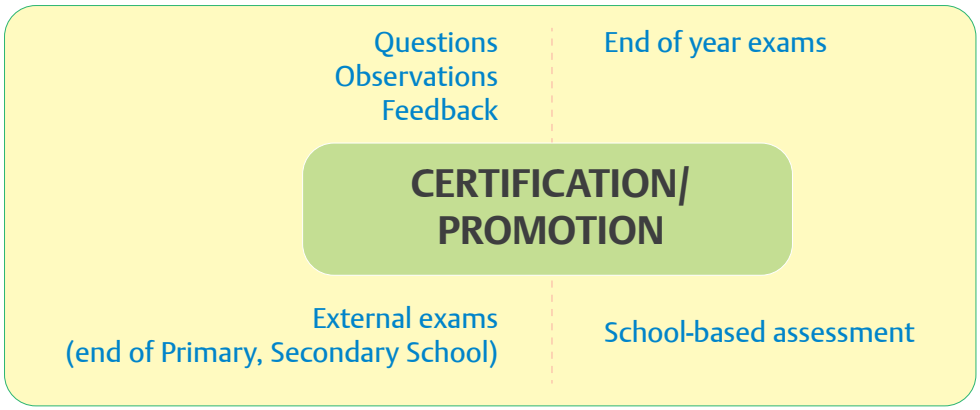


Figure 2.3: *Overview of examinations*

- External examinations are conducted by bodies outside the school to certify completion of a specific phase of education. In those countries where examinations are a feature of the education system, exams are always conducted at the end of schooling by an external agency, usually a national examination board. In addition, in many countries, especially those in Anglophone Africa, national examinations are also conducted at the end of primary schooling and/or end of lower secondary. Historically, examinations were introduced to ensure equitable distribution of educational and vocational benefits (Greaney and Kellaghan, 1995).

However, given the high stakes nature of external examinations, the use of exam results for accountability purposes, and the context of limited resources and facilities, the form and format of modern day examinations have taken a very different nature that has had a profound impact on equity within the education system in a number of different ways.

Assessment surveys

Assessment surveys refer to the process of obtaining evidence from an education system (or part thereof) on the performance of learners and other role-players (such as teachers, principals, education officials, parents among others) as well as on the functioning of structures and programmes within that system (Kanjee, 2007). The primary purpose of assessment surveys is to obtain information to evaluate various aspects of the education system; to make decisions about the need for interventions and for resource allocation; for enhancing public awareness and for accountability purposes (Braun & Kanjee, 2006). Assessment surveys are generally conducted at the county, national, regional or international level and comprises the administration of standardised tests and questionnaires to learners and/or teachers, and may include questionnaires, site visits and interviews with key education officials, including the school principal, ministry officials and other role-players in education. These surveys are usually conducted on samples of schools and learners. However, a number of countries have also conducted census-based

national surveys. In this instance, all learners within a particular grade level are surveyed in selected subject areas, thus information on performance levels is available to every single learner tested.

School evaluations

School evaluations refer to the process of gathering evidence about the effectiveness and efficiency of a school to develop and implement specific set of actions to improve learning and teaching (Kanjee, 2008). School evaluations comprise on-site visits, usually conducted over several days by education officials or their representatives, to review school policies and practices as well as the performance of learners, teachers, school leaders and where available, school governing bodies.

Within the context of most education systems, the use of assessment evidence to determine the performance of learners comprises a critical aspect of the school evaluation process. Thus, in practice, school evaluation may also involve the testing of learners, especially where learner performance data is not available. However, in most cases, available assessment evidence from internal and/or external examinations are used as a key aspect of the school evaluation exercise.

Figure 2.4: *School evaluation activities*

More importantly, findings and recommendations emanating from school evaluations can have a significant impact on how schools function. Specifically, school evaluations can impact on different assessment practices in schools, and how assessment evidence is used by school leaders, teachers and learners to improve learning and teaching. This includes the amount of funding provided as well as the nature, content and target audience of training and support within schools. In essence, the school evaluation system as currently implemented can serve as a key lever for enhancing assessment systems and practices within the school system.

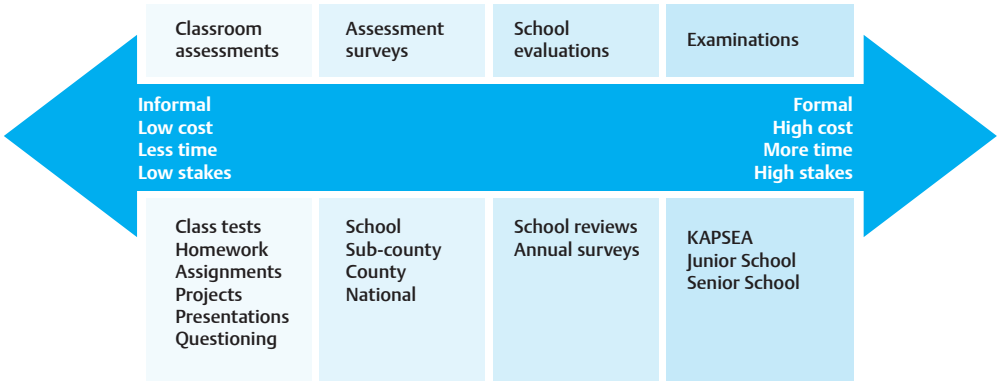


Figure 2.5: *Assessment systems continuum*

As noted in Figure 2.5, the practical implications for implementing different components of an assessment system vary widely depending on the purpose and use of the assessment evidence.

Competency Based Assessment

In any classroom context, it is important to note that assessing learning forms an important aspect of the teaching and learning process, and that assessment is integrated into teacher's pedagogical practice. The primary purpose for conducting any assessment is to obtain evidence about learning. Teachers need evidence on what learners know, understand and can do, in order to adjust their teaching to better support learners or to make decisions regarding learners' mastery of the content covered.

In CBC, there are three primary types of assessment:

- Assessment **OF** Learning
- Assessment **FOR** Learning
- Assessment **AS** Learning

The primary purpose of assessment is to obtain evidence of learning.

(a) Assessment OF Learning

Assessment OF Learning (AoL) is also referred to as summative assessment. It is defined as the:

> *"process by which teachers gather evidence in a planned and systematic way in order to draw inferences about their students' learning, based on their professional judgment, and to report at a particular time on their students' achievements" (Assessment Reform Group (ARG), 2002).*

Summative assessment is carried out at the end of the course to find out the sum total of the learning that has or has not taken place. Summative assessment is separated from teaching and is carried out when achievement has to be summarized and reported.

It includes oral, practical and written activities in as well as tests, examinations, assignments and projects.

Most summative assessments are conducted under standardised conditions so that the assessment instruments and conditions are the same for every learner. In practice, this requires the application of a formal process, hence AoL is sometimes referred to as formal assessment. Christodoulou (2016) notes that the purpose of summative assessment is to produce a shared meaning among all users.

In other words, teachers, learners, parents and school leaders will have the same understanding of what a specific score on a test or an assignment means. For example, it is understood that a score of 70% is a high score and that the learner performed well on the test. It also means that this learner knows most of the work on which they were tested. However, a critical limitation is that test scores **do not provide any information on what learners know, understand and can do**. Thus has limited value for assisting teachers and learners to identify specific learning needs of learners.

Within the context of schools, the results from summative assessments can be used to:

The primary purpose of summative assessment is to produce a SHARED UNDERSTANDING.

- determine what learners know, understand and can do
- monitor progress of learners
- report on learners' achievement
- select learners for progression purposes or awards
- identify content areas that need to be revised or re-taught.

In the CBC system of learning, there will be an overall summative assessment at the end of each level. There will be early years exams which will take place at the end of Grade 3 to enable learners transit to Grade 4. Another exam will be done at Grade 6 to enable learners transit to Junior School and a final one at Grade 9 to enable transition to Senior School.

The aim of the summative assessment is to find out if learners have acquired the expected competencies for their level before transition.

(b) Assessment FOR Learning

Research on Assessment FOR Learning (AfL) shows that teachers who effectively use this approach see considerable learning gains among all learners, irrespective of their socio-economic backgrounds (Kalinec-Craig, 2017). However, teachers are required to have high levels of expertise, experience, and appropriate content knowledge to successfully apply Assessment FOR Learning in the classroom. Assessment FOR Learning (AfL) is defined as:

"the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there" (Assessment Reform Group, 2002).

In the context of classrooms, Assessment FOR Learning is implemented in two ways:

(i) as formative assessment

(ii) as the formative use of summative assessments.

Assessment FOR Learning =

1. ***Formative assessment +***
2. ***formative use of summative assessment.***

What is formative assessment?

Formative assessment refers to all assessments undertaken by learners and teachers during the lesson to:

(a) identify what learners know and can do

(b) take appropriate steps to support learners to improve their knowledge, understanding or skills.

The primary purpose of formative assessment is to produce a consequence for teachers and learners (Christodoulou, 2017). That is, formative assessment information must lead to actionable steps to improve what learners know, understand, or can do. The characteristics that define formative assessment are that it:

- involves BOTH learners and teachers
- is conducted DURING the lesson
- is based on INFORMAL EVIDENCE, which is obtained using planned and/or spontaneous activities
- requires the teacher to provide FEEDBACK that learners can apply and leads to specific ACTIONS that address learners' learning needs.

The purpose of formative assessment is to produce ACTIONABLE next steps for learners AND teachers.

In practice, formative assessment is mainly based on teacher judgment. This process may be different for each lesson, and also different for each learner, depending on their needs. Hence, formative assessment is also sometimes referred to as *informal assessment*.

NOTE

Formative assessment involves both teachers and learners, occurs during the lesson AND leads to actionable steps to improve learning.

Formative use of summative assessments

The formative use of summative assessments refers to the use of summative assessment results to improve the teaching and learning process. In practice, this can only occur after the summative assessment results are available. For example, after marking a class test, the final exams or even a project, a teacher analyses the results to identify areas in which learners performed well or poorly and then uses this evidence to:

- identify what steps to take to improve their teaching
- take specific action to improve on learners' knowledge, understanding and skills.

(c) Assessment As Learning

Assessment As Learning (AaL) refers to the process where learners monitor their own learning to improve their knowledge, understanding and skills. In practice, Assessment As Learning is related to formative assessment. The main difference is that learners take greater responsibility of their OWN learning.

With the support of the teacher, learners determine for themselves where their strengths and weaknesses lie, plan for, and implement actionable steps to address any gaps in their knowledge, understanding and skills. Assessment As Learning is defined as:

> *"a process where learners personally monitor what they are learning and use the feedback from this monitoring to make adjustments, adaptation and even major changes in what they understand" (Earl, 2012).*

During this process, teachers support learners by:

- creating opportunities to review their work
- providing appropriate and specific feedback
- offering ideas and options to consider
- ensuring learners focus on the lesson objectives.

Assessment As Learning is where learners take primary responsibility to monitor and improve their OWN learning.

REMEMBER

In the classroom context, all types of assessment should be seen as complementary. Use formative assessment to support the learning process during lessons and to determine the extent to which learning has taken place. Enhanced and effective use of formative assessment can lead to improved performance on summative assessments.

Formative assessment strategies

The primary function of formative assessment is to obtain AND use evidence of learners' learning in order to improve teaching practices that better support learners and address their learning needs.

Wiliam and Thompson (2007) note that the use of formative assessment is based on answering three key questions:

- Where are learners in their learning? – Teachers get this evidence during lessons.
- Where are learners going? – Teachers get this information from curriculum designs.
- What should be done to get learners there? – Teachers facilitate and support learning.

To implement formative assessment during the lesson, the use of the following formative assessment strategies is proposed that teachers must know and be able to apply to better support learners to improve their learning:

- Planning and preparing lessons that focus on learning.
- Clarifying and sharing learning intentions and success criteria.
- Using questions, discussions and activities to obtain evidence of learning.
- Providing effective feedback to improve learning.
- Guiding learners to support each other's learning (peer assessment).
- Guiding learners to improve their own learning (self-assessment).
- Using assessment evidence to improve teaching.

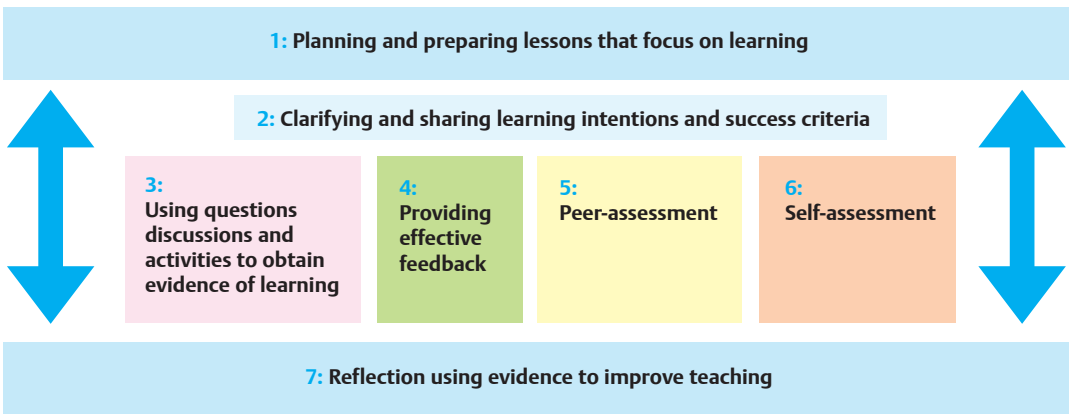


Figure 2.6: *The relationship between key formative assessment strategies*

Assessment tools

Competency Based Assessment (CBA) requires the use of a variety of assessment tools to address the different learning styles of the learners.

Assessment tools are used to:

- Collect information on acquisition of competencies by a learner.
- Determine the level of acquired competencies.
- Provide feedback to the learner and other stake holders.
- Inform improvements on instruction strategies.
- Offer relevant and appropriate interventions.

***An assessment tool** is an instrument used to determine the extent to which a learner has achieved specified learning outcomes.*

Examples of assessment tools which can be used in CBC are given below.

***Figure 2.7:** Examples of assessment tools*

Below are explanations and samples of the above assessment tools for your review.

- **Written tests** – These can be generated by the teacher based on content learnt in class or the teacher can use revision exercises and/or questions in the textbooks.
- **A portfolio** is a collection of samples of a learner's work over a period of time. It shows the effort, progress and mastery of the competencies. Portfolios can be physical or digital.

(a) Physical (b) Digital

***Figure 2.8:** Portfolios*

- Learner **journals** are learners' individual written accounts of their experiences during a lesson or a learning activity.

School	_____
Learner's name	_____
Grade	7
Date of entry	26 November 2023
Description of event	Setting up a simple electrical circuit
What did I learn?	How to connect dry cells, a bulb, an ammeter and a voltmeter to form a simple electrical circuit
Learner's feelings	• Making elecrical circuits is enjoyable. • I will help my friend, Peter, to make electrical circuits.
Feedback from other learners	My friend liked the electrical circuit I set up
Teacher's comment	_____
Teacher's name	_____

Figure 2.9: *Journal*

- An **observation schedule** is an outline of characteristics and behaviour to be observed as a learner performs specific tasks, individually and/or in a group.

School _____	**Strand:** Scientific Investigation
Learner's name _____	**Sub strand:** Introduction to Integrated science
Teacher's name _____	Date of assessment _____
Learning area: Integrated Science	
Indicators of knowledge, skills, attitude and values being assessed	
1. Identify the components of integrated science 2. _____	
Observations	
1. Learner is receptive to learning 2. _____	
Teacher's comments	
1. A focused learner and a team player with a big heart for helping others with classwork. 2. _____	
Learner's signature	**Teacher's signature**

Figure 2.10: *Observation schedule*

- A **checklist** is a list of characteristics of a learners' behaviour which is used to monitor the development of specific aspects.

Learning task											
	Competence (knowledge, skills, attitude, values) assessed (tick appropriately)										
Name	Assembling apparatus for experiments		Successfully carrying out experiments		Observing safety precautions during experiments		Showing respect and love during group work		Showing integrity when reporting observations		Teacher's comments
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Mary	✔		✔			✔	✔		✔		Good in most of the areas. Should always observe safety to avoid accidents.

Figure 2.11: *Checklist*

- A **project** is a set of activities implemented within a given timeframe with a clearly stated purpose and objectives. It gives an opportunity to the learners to apply their acquired knowledge and higher-order thinking skills to real-life situations
- A **rating scale** is a tool that a teacher can use to record observations against a list of criteria, such as skills. The teacher selects the option that describes the degree of the skills displayed by the learner.

Competence (knowledge, skills, attitude, values) assessed	**Always 4**	**Usually 3**	**Sometimes 2**	**Never 1**
Assembles apparatus correctly to form the set-up				
Observes safety for self and others				
Shows integrity by reporting results according to own observations				
Comments on the Learner's performance				
Learner's signature _____		Date _____		
Teacher's signature _____		Date _____		

Figure 2.12: *Rating scale*

- An **assessment rubric** provides criteria that the teacher can use to evaluate a learner's performance. It gives a detailed description of characteristics for each level of performance in terms of quality.

Performance level indicator	Exceeds expectations	Meets expectations	Approaches expectations	Below expectations
Ability to identify common hazards and their symbols in the laboratory	Correctly and consistently identifies hazards and accidents in the laboratory	Correctly identifies hazards and accidents in the laboratory	Correctly identifies some hazards and accidents in the laboratory	With help, identifies hazards and accidents in the laboratory

Figure 2.13: *Assessment rubric*

- A **learner's profile** gives a summary of the teacher's opinion on mastery of competencies by a learner. The information is derived from the other assessment tools such as learner journal, portfolio, written tests and projects.

Learner's name _____

Grade 7 _____

Teacher's name _____

Learning area _____

Strand _____

Sub strand _____

Criteria	Learner's strengths	Learner's weaknesses	Learner's preference
Identify basic skills in science	Excellent knowledge of the basic science skills	Has challenges sharing information with others	Enjoys doing research
Using the SI units for basic and derived quantities in science			
Applying methods of communicating science information			

Figure 2.14: *Learner's profile*

- A **questionnaire** is a list of questions used by the teacher to gather information from the learners.

- **Oral** or **aural questioning** is aimed at assessing learner's listening and observation skills. The teacher asks questions verbally and the learner responds with appropriate mode of communication.
- An **anecdotal record** is a detailed description of a learner that is recorded after a specific behaviour occurs. The information is factual and objective. The teacher uses anecdotal notes to record their observations of individual learners.

School: _____
Learner's name: _____ Grade 7
Observation date: _____ Observation time: _____
Description of the incident/event _____
Learner was carrying out an experiment when James accidentally cut his finger. Emily gave first aid before informing the teacher. James was then taken to the school nurse.
Description of location/setting
Science laboratory
Teacher's comments
Emily showed a great sense of responsibility. She applied the knowledge and skills learnt in class to give first aid to an accident victim.
Teacher's name _____ Signature _____

Figure 2.15: *Anecdotal record*

In the Competency Based Curriculum, the teacher is expected to continuously carry out formative assessment. The assessment should mainly focus on the skills acquired and how effectively the learner is able to apply those skills in their day-to-day lives.

Giving feedback to learners the CBC way

3

The provision of effective feedback to learners is one of the most important activities that teachers engage in during any lesson. Effective feedback is the use of assessment evidence by teachers and learners to modify the activities in which they are engaged, so as to improve learners' achievement of the learning outcome. While several definitions for what constitutes feedback exist (Hattie & Timperley, 2007; Shute, 2008; Tunstall & Gipps, 1996), the following definition is used:

> *Effective feedback refers to any oral and/or written information provided by teachers and/or peers to support learners attain the learning outcomes and success criteria for the lesson.*

In the context of the classroom, the primary purpose of providing feedback to learners is to reduce the gap between the learner's current level of understanding and/or performance and the desired curriculum or learning goal to be attained (MARS, 2012).

NOTE: Effective feedback can also be obtained from other learners.

Providing effective feedback

This is evident when teachers and learners use assessment information to support improvements in learning and teaching. Feedback which is designed to help learners understand strengths and weaknesses of their current performance is central to the learning process. Successful feedback will indicate to learners how and where they might improve on the specific learning outcome for any lesson. During each lesson, teachers must therefore first identify learner's current level of understanding, determine what assistance, if any, the learner requires and thereafter provide appropriate oral or written feedback to improve the learner's level of understanding.

Wiliam (2011) notes that the most useful feedback for improving learning is that which provides learners with detailed information on how to improve performance. In seeking an explanation for the results on feedback, Wiliam (2011) found that learners who were given comments demonstrated high levels of task-involvement; that is, they focused specifically on the tasks they were required to do. However, those learners who were given grades and/or written praise, showed high level of ego-involvement. In other words, giving praise or grades has no effect on achievement; their only effect is to increase the learner's ego.

Other key findings relating to effective feedback include:

- Effective feedback should relate to the learning goals and success criteria identified for the task (MARS, 2012).

- Feedback can be oral or written, depending on the context it is provided for (James, et al., 2006).
- The impact of any feedback provided to learners will depend on the type, delivery and timing of the feedback (Hattie & Timperley, 2007).
- Feedback is more effective if it focuses on the task rather than the individual (James, et al., 2006).
- Feedback affects learners' motivation to learn and their perceptions about their intelligence, and their ability to learn (Black & Wiliam 1998).
- Grades, marks, ticks, scores, etc. have little effect on subsequent performance (James, et al., 2006).

Principles for providing effective feedback

The primary purpose of providing feedback to learners is to support learners to identify and address learning gaps. Thus, any feedback that teachers provide must allow the learner to focus on what to do next rather than focusing on how well or how badly he/she has done.

Wiliam (2011) proposes three key principles for providing effective feedback;

1. *All feedback should relate to the success criteria*
2. *All feedback must provide a recipe for future action*
3. *All feedback should be focused on one or two key aspects of the work.*

Factors that impact an effective feedback

When providing learners with feedback, it is important for teachers to consider the following questions (Brookhart, 2008; Clarke, 2008; Hattie & Timperley, 2007):

- When was the feedback provided?
- How was the feedback provided?
- How much feedback should be provided?

Brookhart (2008) notes that four factors need to be considered when providing feedback. These factors are discussed in Tables 3.1 and 3.2.

Table 3.1: *Four feedback strategies and recommendations to consider*

Feedback can vary by	In these ways	Recommendations for good feedback
Amount	• How many points made? • How much about each point?	• Prioritise - pick the most important points. • Choose points that relate to major learning goals. • Consider the learner's developmental level.

Timing	• When given? • How often?	• Provide immediate feedback for knowledge of facts (right/ wrong). • Delay feedback slightly for more comprehensive reviews of learner thinking and processing. • Never delay feedback beyond when it would make a difference to learners. • Provide feedback as often as is practical, for all major assignments.
Mode	• Oral • Written • Visual or demonstration	• Select the best mode for the message. Would a comment in passing the learner's desk suffice? Is a conference needed? • Interactive feedback (talking with the learner) is best when possible. • Give written feedback on written work or on assignment cover sheets. • Use demonstration if "how to do something" is an issue or if the learner needs an example.
Audience	• Individual • Group/class	• Individual feedback says, "The teacher values my learning." • Group/class works if most of the class missed the same concept on an assignment, which presents an opportunity for re-teaching.

Table 3.2: *Questions to consider during feedback strategies and recommendations*

	Feedback	Oral	Written
1.	When?	Classroom discussions, tasks and activities	After written work handed in e.g. individual or group tasks, projects, assignment, tests
2.	How?	In whole class discussion, groups or individually	Written comments and/or symbols
3.	How much?	Focus on at least one positive aspect and one area that needs improvement	

Types of feedback

Feedback can be oral, written, descriptive or evaluative.

(a) Oral feedback

As previously discussed, one of the modes of feedback is oral feedback. Oral feedback refers to comments given verbally to learners in a lesson by teachers, regarding specific tasks or activities. According to Smith (2014), feedback is **"the lifeblood of learning"**. He states that if learners were asked what would help them most to learn better, the vast majority would say more immediate

feedback from the teacher as they are learning. He believes that teachers must find time for oral feedback.

Practical guidelines for providing effective oral feedback to learners

Smith (2014) suggests a number of ways of providing oral feedback to learners. Note that feedback should always help the learner progress in his or her learning.

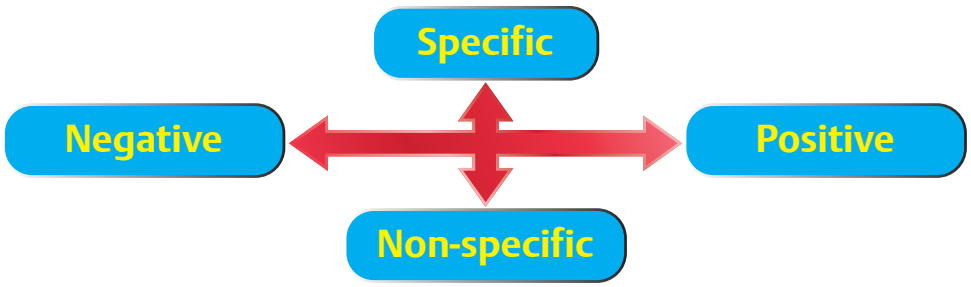


Figure 3.1: *Types of oral feedback (Adapted from DfES, 2004)*

NOTE

As you read these guidelines, think about the way you provide oral feedback to your learners.

(i) Focus on the task and not the learner

Making the person feel incapable of doing the task can be discouraging. Often teachers would say: "You're not coping, are you?" It is advisable for teachers to say something about the task being challenging, for example "This exercise is challenging, isn't it?" and then offer a suggestion on approaching it.

(ii) Recognise the learner's effort

When learners are criticised for being dull or bright, they are often made to believe that there is nothing that can be done about it. Intelligence is not "fixed at birth". Learners of all abilities will come across tasks that they will find challenging. Some learners will be frustrated because they now confront a task they are struggling to understand. Other learners will give up because they have already been conditioned to believe that they don't have the mental capacity for it. By focusing feedback on the effort they are making and the strategies they are using, it can help learners reinforce the view that their ability can improve. Encourage them to thrive on challenging tasks. So instead of saying: "You're a clever girl, aren't you?" your comment could be: "I can see you put a lot of effort into your project."

(iii) Make positive and specific comments

Learners need to be told what to improve but not shown how to do it. Encourage learners to find their own solutions to problems by making positive

but specific comments. In a comment such as: "You need to give more detail on the conclusion of the experiment you conducted" – give guidance as to what detail is required. An example of good feedback could be: "I liked how neatly your graph was drawn. Perhaps you need to think whether a line graph was suitable for this experiment. What about attempting a bar graph?"

(iv) Link feedback to the learning outcome and success criteria

Feedback linked to learning outcomes and success criteria keeps the learners focused on what they need to learn in that lesson. If the learning outcome was: We are learning about the different types of road transport. A comment such as "You really need to improve your writing" isn't helpful when the success criteria clearly states: "I can name the different types of vehicles that travel on land." An example of a good comment could be: "I see you have been able to list at least four types of vehicles that travel on land."

(v) Do not overpraise or give it when it is unwarranted

While giving positive feedback is important, beware of its drawbacks. Praise should be commensurate with the effort and should allow learners to reflect critically on their work. If the teacher gives gold stars often because they think everything the learner does is wonderful, it can do more harm than good. Praise what has been accomplished rather than the person. If learners believe they have achieved something because of who they are, it can lead to complacency. Persuade learners to work hard AND smart. Encourage them to overcome their challenges. Smith (2014) notes that "praise often comes at the end of a task", has to be earned and can be vague. Praise may lead to learners doing the work to please the teacher. However, according to Smith (2014) "encouragement can be given at any time". It is given for effort put into a task and is therefore clear and specific. A comment such as "I want you to not be afraid of trying a new idea" can encourage creativity. Genuine appreciation may be better to use than praise. It is based on fact and is not evaluative. So rather say "I appreciate how you keep putting effort into your work", instead of "You are the best in this class."

(vi) Judgments vs opinions

Teachers should guard against making judgments about learners too soon or based on past efforts. Don't judge the learner by suggesting that s/he is good or bad. It is important to value the effort that had been made. When giving an opinion use more "I" statements than "you" statements. Instead of saying: "Your spelling is really terrible. When are you going to get it right?" the teacher could say: "I am a bit disappointed with this essay. I know you have the potential to do better."

(vii) Respect the diverse abilities of the learners

No two learners are the same. Saying "Why can't you be more like Kamau?" has a negative effect on the self-esteem of the learner. Learners have a combination of different experiences and abilities.

Appreciate their endeavours to overcome challenges: "I know it was difficult for you to do this, but I am glad you made the attempt." Beware of gender-stereotyping learners by expecting girls to perform or behave one particular way and boys another. Girls can do as well in mathematics as boys.

(b) Written feedback

Written feedback is the teacher's written comments provided to a learner in response to tasks or activities completed. The type of feedback provided also impacts on whether and how learning takes place: specifically, whether the feedback is: procedural, evaluative, descriptive (showing) or descriptive (guiding).

Below are several teacher comments and some feedback criteria (A–C) to help you judge the helpfulness of the comments to the learners. Decide whether the comments:

A: Highlight one or more successes

B: Identify an area of improvement

C: Make a specific suggestion for improvement.

Table 3.3: *Examples of written feedback*

No	Written feedback	A	B	C
1.	You really did well with the first few questions but was challenged by the rest. Try the box method for multiplication.	✔	✔	✔
2.	Your rap song about poverty was profound. What do you think causes poverty?			
3.	3 for effort, 1 for spelling. Neat work and improve your spelling.			
4.	Again, you have not completed your work.			
5.	Good work - 7/10			
6.	Too many errors. Re-do!			
7.	You've identified all the 2D shapes. Excellent.			
8.	Your description uses a number of adjectives to make the topic interesting. Try writing more complex sentences.			
9.	This is a great project. Your presentation using the diagrams showed clearly why conservation is important.			
10.	Nice work. Your presentation grabbed our attention. What more do you think could be done to increase employment for the youth?			

(c) Descriptive feedback

Feedback that is descriptive is linked to the learning that is expected, specifically the success criteria, and highlights key issues like faulty interpretations and lack of understanding (Earl, 2012).

This type of feedback is intended to help learners to improve learning by providing information about their current achievement (Where am I now?) with respect to a goal (Where am I going?) and identifying appropriate next steps (How can I close the gap?) (Sadler, 1989). In addition to providing learners with visible and manageable next steps, Earl (2012) notes that this type of feedback should also provide examples of what good work looks like.

The difference between these two types of feedback is that for **descriptive-showing** feedback, the teacher shows or tells learners how to go about improving their work. That is, the teacher decides on the next steps that should be followed and informs learners on what to do next. For **descriptive-guiding**, the teacher guides and supports the learner with suggestions or ideas for the learner to decide that the next steps should be for their work.

(d) Evaluative feedback

Evaluative feedback may provide some information about learning but does not convey the information that learners can use to improve. For example, grades, marks and comments such as "well done", "excellent", "untidy". No information is provided about how to improve the work. It is important to note that evaluative feedback can have a negative impact on learning and motivation (Black & Wiliam, 1998), especially when this type of feedback focuses on characteristics of the learner rather than on the characteristics of the work (Dweck, 2007).

Other comments that focus on routine and/or irrelevant (in terms of the success criteria) practical aspects of the learners' work, for example, "Incomplete!", "Where are your answers?" "Not again", "Pull up your socks" are not necessary.

NOTE

Remember, ALL learners have the potential to learn and your role as a teacher is to use feedback positively to improve the way all learners learn.

4 Planning and preparing lessons in CBC

For teachers to plan and prepare effective lessons so that learners acquire the knowledge and skills specified in the curriculum, teachers must be clear on what learners need to learn, and what they need to teach. Therefore, teachers must be fully conversant with their subject content area(s) as well as the specifications of the national curriculum. With this understanding, teachers will be able to plan and prepare lessons that engage all learners to develop the important knowledge, understanding and skills on key concepts in the curriculum.

Research shows that many teachers spend limited time to plan and prepare their lessons (Kanjee, 2018). While some only use documents such as the Annual Teaching Plans, others use structured lesson plans provided by some publishers, while others teach directly from the textbook. Also, some teachers use one page monthly or weekly schedules that list topics to be taught and present lessons without any leson plans.

The limitation of these practices is that teachers are unable to clearly determine what learners need to learn, and thus the lessons they present are mainly focused on their teaching instead of learning. In practice, this means that only the teacher is aware of the learning outcomes for the lesson, the tasks to be completed during the lesson, and the assessment criteria required to demonstrate that learners have attained the lesson outcomes. Moreover, many teachers do not share this information with learners before the completion of the lesson. Thus, most learners participate in lessons with no prior knowledge about what they are going to learn, nor what evidence they have to show that they had learnt the concepts being taught.

The value of planning and lesson preparation

It is vital that teachers plan and prepare for all lessons because "planning provides structure and context for both teacher and learners, as well as a framework for reflection and evaluation" (Spencer, 2003). Preparation means spending time reading about and understanding the formative assessment strategies and techniques, how these can be used, and the resources required to effectively implement them during the lesson. Planning and preparation is also contextual, it is not done in isolation. Teachers need to consider their learners, the context of the school, the availability of resources, as well as how one lesson links to the next and if the different lesson activities are related.

There are distinct advantages to planning and preparation. These include:

- **It will improve teaching skills.** Teachers cast themselves as researchers. Teachers learn educational theory – in this instance the theory of formative assessment – and understand how it will impact

on teaching and learning. They then learn new practices that will change the way they think about teaching. Proper planning and preparation also require a clear understanding of the content that needs to be taught.

- **It saves time.** Planning and preparation, especially when using formative assessment strategies and techniques, allows for efficient and effective delivery of the lesson.
- **Learners will become more disciplined.** When used, formative assessment strategies and techniques allow for greater learner participation, whether in answering questions, contributing to discussions or in ownership of learning. This means that the teachers need to plan and prepare interesting lessons.
- **The confidence of the teachers are boosted.** Planning and preparation creates a positive attitude because teachers know the content of their subject area and are increasingly improving their pedagogy, in this instance the use of formative assessment. Confidence comes from teachers constantly reflecting on the way they teach, but more significantly on how learners are learning.
- **Teachers will earn respect.** Other stakeholders, but particularly the learners, will know which teachers are putting in an effort to make learning interesting and helping learners to perform better.
- **Learner performance will improve.** In addition to teachers mastering the content of their subject area, effective implementation of formative assessment makes learning interesting and helps to engage learners more effectively during lessons. Additionally, it enhances their understanding of the content presented. Using formative assessment in a classroom requires careful planning and preparation. In practice, this will mean:
  (i) Examining the revised curriculum to determine exactly what learners need to learn.
  (ii) Identifying the objectives and assessment criteria for the topic (this information may not always be stated).
  (iii) Specifying activities that will be used and how these will be applied.
  (iv) Writing the higher-order thinking questions that will be used in the lesson.
  (v) Listing the resources required and how these will be applied.
  (vi) Indicating which techniques and strategies will or will not be used for the lesson.

Lesson plans should be written with learners in mind. Therefore, the plans must first address the question:

- *What is it that learners must attain?*

  And only thereafter can teachers ask the question:

- *What must the teacher do to ensure that learners meet the lesson objectives?*

Below is an example of a lesson planning and preparation template to support teachers to plan and prepare for their lesson.

Sample lesson plans

Below are sample lesson plans for the various learning areas in Junior School.

Table 4.1 *Sample* ***Kiswahili*** *lesson plan*

Shule: Shule ya Tumaini	**Tarehe:**
Somo: Kiswahili	**Muda:** 8:40–9:20 (Asubuhi)
Mwaka: 2024	**Grade:** 8
Muhula: 1	**Idadi ya wanafunzi:** 40
Jina la mwalimu: Mrs Mawazo	

Suala kuu: Usafi wa sehemu za umma

Mada: Kuandika

Mada ndogo: Viakifishi: Alama ya hisi na ritifaa

Matokeo maalumu yanayotarajiwa

Kufikia mwisho wa kipindi; mwanafunzi aweze:

(a) kutambua matumizi ya alama ya hisi katika matini

(b) kutumia alama ya hisi ipasavyo

(c) kuonea fahari matumizi yafaayo ya alama ya hisi.

Swali dadisi: Je, alama hisi huonyesha hisia zipi?

Nyenzo: kifaa cha kidijitali, kadi maneno

Mpangilio wa ujifunzaji:

Uwasilishaji wa somo:

Hatua ya 1: _____

Hatua ya 2: _____

Hatua ya 3: _____

Hitimisho: Kazi ya ziada: _____

Tafakuri: _____

Tathmini endelevu

Mtaala wa umilisi unasisitiza sana tathmini endelevu ambayo inapaswa kufanywa wakati wa ujifunzaji ili kubaini iwapo wanafunzi wanapata umilisi uliokusudiwa. Iwapo utaizingatia tathmini hii katika kila hatua, itakuepushia hali ambapo unafunza dhana pana hadi mwisho bila kufahamu iwapo wanafunzi wako wanaelewa. Itakupa fursa ya kuchunguza mbinu zako za ufunzaji ili ziafiki matakwa ya wanafunzi wako. Ifuatayo ni mifano ya mbinu na vifaa vya kutathmini unavyoweza kutumia unapoitekeleza shughuli hii muhimu: ***jedwali la uchunguzi, jedwali la uchambuzi, jedwali la ukaguzi, orodha ya matukio, majarida ya wanafunzi*** pamoja ***na vigezo na viwango vya kutathmini vilivyopendekezwa katika silabasi***. Sampuli ya kila kifaa hiki imetolewa kwenye kila Mwongozo wa Mwalimu.

***Table 4.2** Sample **English** lesson plan*

School: Star High School	Date:
Learning area: English	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 48
Name of the teacher: Mr Abuga	

Strand: Reading

Sub strand: Polite language: Telephone etiquette

Specific learning outcomes

By the end of the lesson, the learner should be able to:

1. Conduct a telephone conversation using polite words and expressions,
2. Acknowledge the significance of etiquette in telephone conversations.

Key inquiry questions

1. Why should one be polite when speaking over the telephone?
2. How do we ensure politeness in a telephone conversation?

Learning resources: Learner's Book, oral literature books

Organisation of learning

Learning takes place inside the classroom and learners work in pairs, groups and as individuals.

Introduction (Engagement)

Learners listen to a telephone conversation and identify polite words and phrases.

Lesson development

Step 1: (Exploration) Learners role-play the conversation in the Learner's Book in pairs. Communication and collaboration is enhanced as the learners work in pairs.

Step 2: (Explanation) Learners answer the questions after the role-play. Effective communication is developed as the learners practise effective listening.

Step 3: (Evaluation) Learners prepare a telephone conversation and make a call. Digital literacy is enhanced as the learner uses the telephone to make calls under the guidance of the teacher. Unity is promoted as learners work together.

Extended activity

Learner is encouraged to make calls to friends and relatives while at home in order to enhance the competencies, knowledge and skills learnt.

Lesson reflections

The learning outcomes were achieved. The learning activities were appropriate and the resources were effective.

Table 4.3 *Sample* ***Business Studies*** *lesson plan*

School:	Date:
Learning area: Business Studies	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 40
Name of the teacher: Ms. Asiyo	

Strand: Business and money management

Sub strand: Financial goals

Specific learning outcome

By the end of the lesson, the learner should be able to analyse the meaning of goal setting in financial management.

Key inquiry questions

1. What is the meaning of financial goals?
2. What is the meaning of goal setting in financial management?

Learning resources

(a) Digital devices with Internet connection
(b) Approved reference books
(c) Dictionaries

Organisation of learning

Learning takes place in the classroom, where learners work individually and in pairs.

Introduction

Learners are asked to state whether or not they know the meaning of goal setting.

Lesson development

Step 1: Learners are guided to carry out the **Warm-up activity** on page 1 of the Learner's Book as an Introduction to the concept of goal-setting in financial management.

Step 2: Learners are guided to revisit the meaning of personal goals, which they learnt in Grade 7. They are directed to search for the meaning of financial management using the Internet, dictionaries and approved reference books. Learners are guided to discuss the meaning of goal setting in financial management.

Step 3: Using oral questions, the teacher finds out if learners have understood the concept of goal setting in financial management.

Reflections/Self-evaluation

Learners conclude the lesson by explaining the meaning of goal setting in financial management.

Extended activity

Learners differentiate between short-term and long-term financial goals.

Reflection of the lesson

The teacher reflects on whether or not the learning outcome was achieved, whether the learning activities were appropriate, and if the resources were effective. If necessary, plan a remedial lesson.

***Table 4.4** Sample **CRE** lesson plan*

School:	**Date:**
Learning area: Christian Religious Education (CRE)	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 40
Name of the teacher: Ms Veronica	

Strand: Christian living today

Sub strand: Leisure

Specific learning outcome:

By the end of the lesson, the learner should be able to outline ways in which they use their free time.

Learning resources:

1. CRE Learner's Book 8 pages 186–187
2. The Good News Bible

Preparation

Teacher:

- Researching on leisure
- Organising learners into groups

Learners:

- Researching on the meaning of 'leisure'
- Making presentations

Introduction

Do a recap of what learners learnt in the previous lesson.

Lesson development

Step 1

1. Review the previous lesson orally through the question-and-answer method. The learners' **communication** and **collaboration** skills are enhanced as they give their responses.
2. Give the learners some time to brainstorm on the meaning of 'leisure'.

Step 2

Explain the following to the learners.

1. The free time they have from regular duties is known as leisure.
2. After work, we need to rest just as God rested.
3. We should create some time in which we are free from all duties.
4. Leisure is a gift from God and we should use it wisely.

Step 3

1. Guide the learners to talk about how they spend their leisure time and how they benefit others and themselves through leisure activities.
2. Ask the learners to draw timetables in their journals to show their work time and leisure time. Allow them some time to share their timetables. The value of **responsibility** is instilled in the learners as they develop their journals.
3. Encourage the learners to emulate God by taking time to rest after work.
4. Tell the learners that they should rest after they are satisfied that they have done their best work.

Conclusion

Give the learners some time to individually read the notes on page 187 of the Learner's Book to reinforce the understanding of the meaning of 'leisure'.

Explain ways in which you can apply the lessons you learn from the heading of blind Bartimaeus.

Reflections on the lesson

Evaluate the lesson's effectiveness by assessing:

- Learner's responses to oral and written questions
- Learner's participation in the lesson.

***Table 4.5** Sample **Social Studies** lesson plan*

School:	Date:
Learning area: Social Studies	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 40
Name of the teacher: Mr Ochieng'	

Strand: Political developments and governance

Sub strand: Governance

Specific learning outcome:

By the end of the sub strand, the learner should be able to illustrate the organisational structure of the UN in enhancing global governance among countries.

Learning resources:

1. Social Studies Learner's Book 8 pages 362-363
2. Digital devices and the Internet
3. Charts
4. Colour crayons, pencils, rubbers, marker pens or any other locally available resources

Organisation of learning:

Teacher:

- Preparing digital devices for research
- Organising learners into groups

Learners:

- Drawing the UN structure
- Presenting their diagrams in class

Introduction

1. Start by helping the learners to find out about the organisational structure of the UN on the Internet or from relevant materials.
2. Distribute drawing materials to the learners and give them some time as they draw.
3. Encourage peer assessment by asking the learners to move around the class and observe the organisational structures drawn by other groups.
4. Display the chart you had drawn earlier or draw one on the chalkboard and ask the learners to compare with theirs as a form of self-assessment.
5. Discuss with the learners how the organisational structure of the UN enhances global peace and governance among countries.

Reflections/Self-evaluation

Evaluate the lesson's effectiveness by assessing:

- Learner's responses to oral and written questions
- Accuracy of learner's diagrams
- Learner's participation in the lesson

Table 4.6 *Sample* ***Computer Science*** *lesson plan*

School:	Date:
Learning area: Computer Studies	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 40
Name of the teacher: Mr Njoroge	

Strand: Foundation of computer science

Sub strand: Computer case

Specific learning outcome:

By the end of the lesson, the learner should be able to outline the procedure for disassembling and assembling a computer case.

Key enquiry question

What is the importance of a computer case?

Learning resources
Grade 8 Learner's Book, the Internet, digital devices, video clip on disassembling and assembling a computer case.

Organisation of learning:

Learning takes place inside the classroom where the learners are organised into groups. Groups are well-balanced in terms of gender and ability.

Introduction

The learners are probed to explain the meaning of computer case.

Lesson development

1. **Step 1: (Exploration)** In groups, the learners discuss and come up with the meaning of computer case. The learners in groups to find out the meaning of computer case then identify the computer case of an actual computer, or the pictures provided in the learner's book.
2. **Step 2: (Explanation and elaboration)** The learners present their ideas. Learners are led to understand that the computer case encloses and protects the internal components of a computer. The learners then watch a video demonstrating how to disassemble and assemble a computer case and watch as a resource person disassembles a computer. They are then allowed to disassemble a computer case to develop a sense of **self-efficacy**, **communication**, and **collaboration**. The activity also promotes learning the value of respect to each other during group work. Learners also observe safety during the activity.
3. **Step 3: (Evaluation)** Through question-and-answer method and observation the teacher finds out if the procedure has been internalised.

Conclusion

The teacher guides the learners to summarise the procedure of disassembling a computer case safely.

Extended activity

Learners to write notes on the procedure for disassembling and assembling a computer case and the safety measures for future reference.

Lesson reflection

The teacher reflects on whether the learning outcome was achieved, whether the learner activities were appropriate, and effectiveness of the resources used. If necessary, plan for a remedial.

***Table 4.7** Sample **Agriculture** lesson plan*

School: Malezi Junior Secondary School	Date:
Subject: Agriculture	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 40
Name of the teacher: Mr Ouma	

Strand: Conserving agricultural environment

Sub strand: Soil conservation measures

Specific learning outcomes:

By the end of the lesson, the learner should be able to:

1. explain the importance of soil conservation in an agricultural environment
2. search for information on soil conservation practices in an agricultural environment
3. appreciate conservation activities in an agricultural environment.

Key enquiry question: Why should we conserve soil in the environment?

Learning resources: The Learner's Book, print media and digital devices connected to the Internet.

Organisation of learning: Learning takes place inside the classroom where the learners are organised in pairs. Learners sit in pairs based on gender and cognitive abilities.

Introduction: Introduce the sub strand and guide the learners to discuss the questions in the introductory section on page 1 of the Learner's Book.

Lesson development:

Step 1: (Exploration) Allow the learners, in pairs, to observe the photograph provided on page 2 of the Learner's Book. Let them discuss why conserving soil in the agricultural environment is important. This promotes **communication and collaboration**.

Step 2: (Explanation and elaboration)

Guide the learners to use their digital devices connected to the Internet to search for information on the importance of soil conservation. As learner's use their digital devices, they promote digital literacy.

Step 3: (Evaluation) Through oral questions, for example 'Why should we conserve soil in the environment?'' find out if the concept was well understood.

Conclusion: The teacher guides the learners to summarise the importance of soil conservation in an agricultural environment.

Extended activities: Learners to compose a poem emphasising the need to conserve soil in an agricultural environment.

Reflection on the lesson: The learners were able to explain the importance of soil conservation, but some groups did not make class presentations due to shortage of time. Opportunity to be availed in the next lesson.

*Table 4.8 Sample **Integrated Science** lesson plan*

School:	Date:
Subject: Integrated Science	**Time:**
Year: 2024	**Grade:** 7
Term: 1	**Roll:** 40
Name of the teacher: Mr Cleophas	

Strand: Mixtures, elements and compounds

Sub strand: Mixtures

Specific learning outcomes

By the end of the lesson, the learner should be able to:

- identify mixtures that can be separated by use of a magnet
- separate mixtures by use of a magnet
- appreciate the application of separation of mixtures by use of a magnet in daily life.

Key enquiry question: How are magnets used to separate mixtures?

Learning resources: The Learner's Book, iron filings, maize flour, a magnet, a small piece of wood and a piece of paper.

Organisation of learning: Learning takes place inside the classroom where the learners are organised into groups. Groups are well-balanced in terms of gender and ability.

Introduction: The learners are probed to explain how magnets can be used to separate mixtures.

Lesson development

Step 1: In groups, guide the learners to prepare a mixture of iron filings and maize flour and separate the mixture using a magnet. Group work enhances communication and collaboration.

Step 2: Guide the learners to discuss the questions in the Learner's Book and present the answers to their classmates. Respect is promoted as the learners respect each other's opinion during the discussion. Correct any wrong responses and reinforce the correct ones.

Step 3: Refer to the key points in the Learner's Book and clarify the facts.

Step 4: Ask oral questions to find out if the concept has been understood.

Conclusion: Emphasise the principle behind the separation of mixtures using a magnet.

Extended activity: Ask the learners to research on the applications of the use of a magnet in separating mixtures in daily life.

Reflection on the lesson: Reflect on whether the learning outcome has been achieved, whether the learning activities and resources were appropriate and effective. Plan for a remedial session if necessary.

***Table 4.9** Sample **Pre-Technical Studies** lesson plan*

School: Msingi Junior School	Date:
Subject: Pre-Technical Studies	**Time:** 8.40 – 9.20 a.m.
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 40
Name of the teacher: Mr Ondieki	

Strand: Drawing

Sub strand: Freehand sketching

Specific learning outcome:

By the end of the lesson, the learner should be able to draw freehand sketches of horizontal, vertical and oblique parallel lines.

Key enquiry question:

How can we sketch accurate lines freehand?

Learning resources:

A soft lead pencil (HB or HB1), sharpener, eraser and sketchpad or drawing paper.

Organisation of learning:

Learning takes place inside the classroom where the learners work as individuals.

Introduction:

The learners are probed to explain the meaning of freehand sketching and lines.

Lesson development:

Step 1: (Exploration) In groups, the learners research the meaning of freehand sketching and types of parallel lines.

Step 2: (Explanation and elaboration) The learners present their findings. Learners are led to understand that freehand sketching is drawing without use of instruments and explain the three types of lines. Teacher demonstrates correct way to sketch.

Step 3: (Evaluation) The learners practice sketching horizontal, vertical and oblique parallel lines.

Conclusion:

The teacher uses observation to check work done.

Extended activities:

Learners can carry out extra practice to perfect as much as possible.

Reflection on the lesson:

The teacher reflects on whether the learning outcome was achieved, appropriate, and effectiveness of the resources used to thoughtfully modify the approach and resources. If necessary, plan for a remedial.

Table 4.10 *Sample* ***Mathematics*** *lesson plan*

School:	**Date:**
Subject: Mathematics	**Time:**
Year: 2024	**Grade:** 8
Term: 1	**Roll:** 50
Name of the teacher: Mr Mrisho	

Strand: Numbers

Sub-strand: Integers

Specific Learning outcomes

By the end of the lesson, the learner should be able to:

- state how to use a number line to represent integers
- represent integers on a number line in different situations
- reflect on the use of integers in real-life situations.

Key enquiry question: How do we represent integers on a number line?

Learning resources: Pieces of sticks or chalks, number lines and cards.

Organisation of learning: Learning takes place outside the classroom.

Introduction/Engagement: Learners to discuss how they drew number lines in primary school.

Lesson development

Step 1: Exploration

Learners to represent integers on number lines in Activities 2A and 2B on pages 4 to 5 of the Learner's Book. Learners will develop *learning to learn* as they gain new knowledge when representing integers on the number line.

Environmental education will be addressed as learners use available spaces on the ground to draw number lines and jump steps in Activity 2B.

Unity will be instilled among the learners as they work together to create and play the game of identifying integers in Activity 2B.

Step 2: Explanation

Learners to present their findings from the activities. Harmonise their findings by guiding them through Worked Example 2 on page 5 of the Learner's Book.

Step 3: Elaboration

Enhance learners' understanding of representing integers on a number line by asking them to individually work out question 1(a) in Assessment 2 on pages 5 to 6 of the Learner's Book.

Step 4: Evaluation

Learners to individually work out the questions in Assessment 2.

Conclusion: Learners to discuss the question in the Reflect Section on page 6 of the Learner's Book.

Further activity: Learners who finish the assessment ahead of others can be doing the Further activity on page 6 as the time-takers work out the questions in Assessment 2. The activity can also be given as a home assignment.

Reflection on the lesson: Identify what went well and what didn't and put down measures to rectify the same in the next lesson.

Choosing the best CBC coursebook

There are two important aspects to consider when choosing the best coursebook to use:

- The content of the Learner's Book and the Teacher's Guide.
- The information and guidelines on planning, methodologies, assessment and subject-related tools.

The checklist below can be helpful in selecting the best CBC Course Book for your class.

(a) Activities and learning experiences

Table 4.11 *Checklist for activities and learning experiences*

Learner's Book	Teacher's Guide
• Are the activities clear? • Are the activities sufficient for differentiation and inclusion for all learning styles? • Are there enough activities for each lesson for each day? • Do the activities show progression beyond the classroom? • Is there a variety of activities? • Are there activities designed for the time takers (slow learners)? • Are the learning experiences appropriate for the grade? • Do the activities exclude any bias? • Do the activities stimulate critical thinking and problem-solving skills?	• Are there sufficient additional activities for those learners that struggle with difficult concepts? • Do the teaching guidelines give you new ideas for your teaching? • Are there additional information that can help to reinforce learning?
(b) Structure and layout • Does it have a contents page? • Is it visually attractive? • Is it appealing to the learners? • Is the font size appropriate for the grade? • Is it easy to find concepts in the book? • Does it have headings and sub-headings?	**(c) Curriculum conformity and mainstreaming of PCIs and values** • Does content conform to the syllabus requirements? • Are PCIs highlighted and mainstreamed? • Does the material promote positive values and attitude change in learners?

(d) Language and content • Is the level of language used appropriate? • Can the weaker learners understand the language? • Is the level of language appropriate for the gifted learners? • Does the language support the learning process? • Are all of the main content, concepts and skills included? • Is the content structured from the known to the unknown? • Is the content written in an interesting way? • Does the content encourage learners to apply concepts and skills in different situations?	• Are there guidelines on teaching methodologies? • Are there planning guidelines? • Is there ease in progression from one term to the next? • Are there sufficient guidelines for the teacher on how to complete the assessment tasks? • Are there sufficient guidelines for assessment? • Is the assessment aligned to the CBC? • Are there model or suggested answers for all the questions?
(e) Illustrations • Are the illustrations clear? • Do they enhance understanding of the concepts covered? • Do the illustrations support the text?	**(f) Extras** • Are there additional ideas that can be used in your teaching? • Are there additional formal assessment tasks included that could save you time setting your own?

Checklists for CBC preparedness

For effecting learning process, the teacher is required to develop a **'to-do-list'** that will help them to decide on what is priority, urgent and important or even important but not urgent items. This will give the teacher confidence and direction on what to prioritize. Some items to include on the list are:

- Design strategies to guide the process and achievement of the goals.
- Understand your focus.
- Create a planner for your students.
- Develop your expectations.
- Make sure all the equipment in your classroom work properly.
- Develop a list of classroom management solutions.
- Create your class rules and procedures.
- Put together materials in case you need a substitute resource.

Competence is not simple addition of knowledge, skills and attitude. It is the proven ability to use them in context to achieve the desired results. A competency-based curriculum teacher ought to desire to go beyond knowledge delivery to proficiency.

Checklist 1.

Teacher's proficiency in modelling competency

A needs assessment checklist will help you to know where you are. An example is given below.

Teacher individual competency skill area with learners	Competency rating score				Training required		
	Excellent	Good	Average	Below average	Yes	No	Not sure
Communication and collaboration							
Creativity and imagination							
Critical thinking and problem solving							
Learning to learn							
Self-efficacy							
Citizenship							
Digital literacy							

Checklist 2.

Ask yourself: Have I created a warm learning environment?

A successful classroom invites students to question and to explore. Below are some of the questions you may wish to ask yourself about the kind of learning environment you wish to create:

- How will I arrange the desks to foster classroom discussion (communication) and collaboration?
- How have I selected the groups and in-group roles and responsibilities?
- Where will I display my learners' work?
- Are important announcements and notices clearly displayed?
- Are there books on display to stimulate student interest and curiosity?
- Where do I store other learning materials?
- How do I maintain a clean hygienic environment that is learner-friendly?

Checklist 3.

Planning and delivery: What items will I need in order to plan a successful lesson?

I will need to have:

- The curriculum designs
- A scheme of work

- A monitoring tool to cross-check a balanced delivery of the competency, PCI and values
- Reference materials
- Learner's workbooks
- Teacher's Guide
- Learning activities and learning experiences
- Lesson plan
- Attainable learning outcomes
- Other teaching resources
- Templates for assessment
- Class rules of engagement
- Journal for reflections.

Checklist 4.

Audit tool to check quality

Quality evidence to embed competencies, PCIs and values. An example is given below.

Lesson	Competencies, PCIs and values	What does the teacher do?	What does the learner do?	What does the learner's work look like?
Lesson 3: Spelling	**Competencies:** Communication & collaboration **PCI:** Learning to live together **Values:** Responsibility and unity	• Distributes materials • Guides the learners • Assesses to gauge understanding • Probes • Provides feedback	• Learners in their groups select and spell out words from the materials given • Learners pair up for peer assessment and support.	• Word spell displayed in groups or classroom walls. • Presented to the rest. • Entered in the portfolio of learning.

Checklist 5.

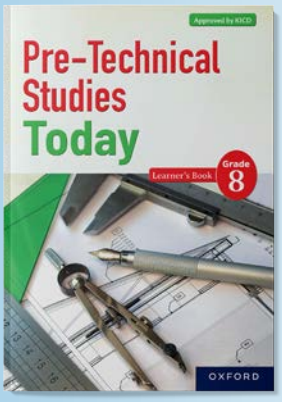
Assessment processes

- Know what assessment to give at every level
- Develop and design a rich toolkit with a variety of assessment
- Understand the modes of assessment to use for:
  - assessment AS learning
  - assessment FOR learning
  - assessment OF learning.

5 Oxford University Press East Africa Junior School coursebooks' features

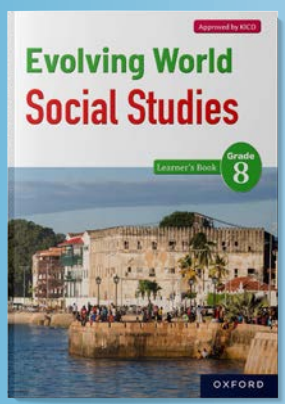
Oxford Junior School Coursebooks

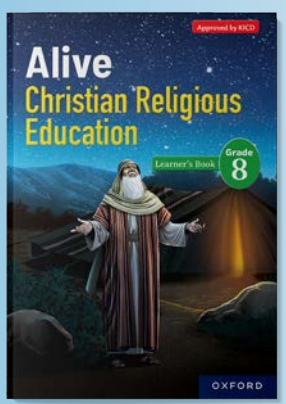
Grade 8

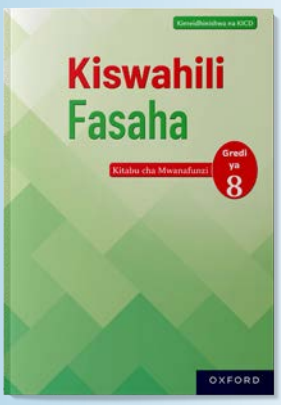


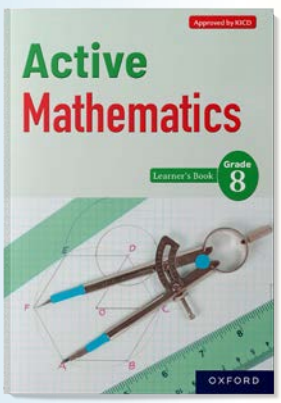
100% APPROVAL

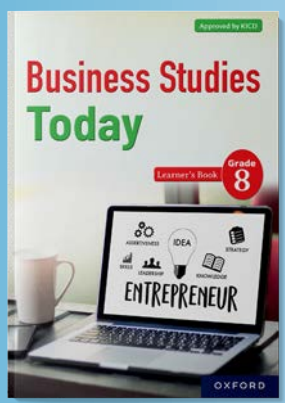
IN THE CORE LEARNING AREAS

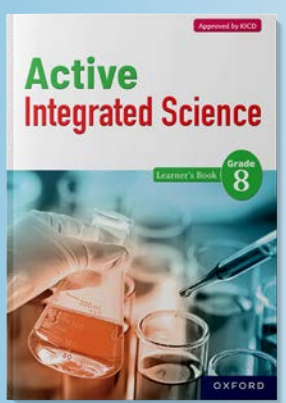


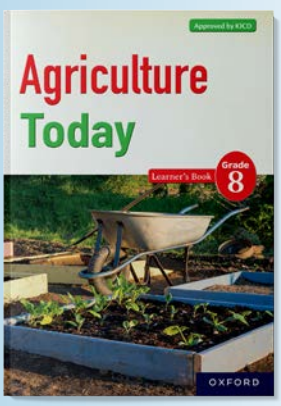


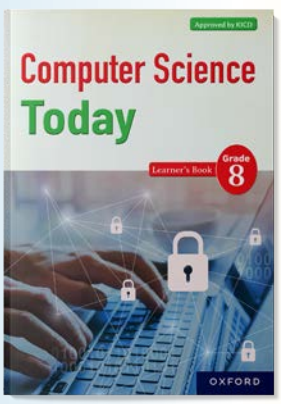












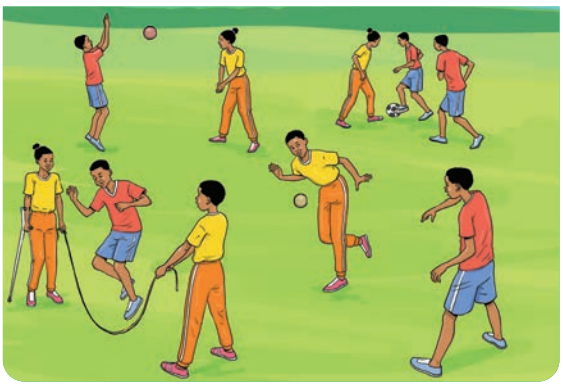
Head Start English

- Covers the four language skills: listening, speaking, reading and writing.
- Offers a chance to practise grammar in context.
- Develops skills and competencies, PCIs and values required in the CBC curriculum.
- The content is covered in five strands – Listening and speaking, Reading 1, Grammar in use, Reading 2, Writing.
- Language used is simple, clear and precise.
- Has stimulating stories, dialogues and poems.
- Contains interactive activities and authentic tasks.
- Known to unknown content presentation.
- Has full colour and stimulating illustrations.

Main features of the Learner's Book

The **Introduction page** contains an image depicting the theme, discussion questions and a short introduction to the theme. This is to give learners context for the activities in the theme.

2 Science and health education



Discussion questions

1. How do the activities in the picture above help one to stay healthy?
2. Mention some activities that can endanger your health.
3. Mention some activities that can improve your health.

Introduction to the theme

Science and health education relate to the education that promotes an understanding on how to maintain our health. We should involve ourselves in those activities that are helpful to our bodies and avoid those activities that hurt our bodies and weaken our systems. Taking part in activities such as physical exercises and eating a balanced diet contributes to a healthy and long life.

In this unit, you will listen to oral narratives, read poems, learn about nouns, study the class readers and learn about end-of-sentence punctuation.

Listening and speaking covers the Listening and speaking sub-strand in the curriculum design. It has activities that equip learners with skills to listen effectively and speak fluently, e.g. group discussions, role-play and debates. It also guides the learners to practise sounds, stress and intonation.

A Listening and speaking

Oral presentations: Oral narratives

Activity 2.1 **Oral narrative performance**

1. Watch as your teacher performs an oral narrative and answer the following questions.
   (a) What did you enjoy about the performance?
   (b) Which body movements and gestures did the teacher use?
   (c) What facial expressions did the teacher use?

Writing contains various writing activities ranging from spelling to functional writing. Sample texts have been provided to guide learners. Learners plan, draft, edit and publish texts.

E Writing

Mechanics of writing: Punctuation marks

Activity 2.14 **Identifying punctuation marks**

You learned about the full stop, question mark and exclamation mark in primary school.

1. Read the paragraph below. In groups, identify the full stop, question mark and exclamation mark in the sentences.

Our class teacher took us to the field for the Physical Education lesson. He gathered us together and asked, "Do you want to play football?"

"Yes!" we all shouted.

He divided us into two teams and he became the referee. I was placed in Team A. Our team was the best; we scored three goals during the first half. During the second half of the match, we almost lost to our opponents. They managed to equalise the score. We were about to settle for a draw, when our striker, Mugendi, kicked the ball towards our opponent's goal post.

"Goal!" we all shouted just as the final whistle was blown.

It was a win for Team A with four goals to three. What an exciting match it was!

The **Challenge** section presents real-life situations where the learners use the skills and knowledge they have learnt. It calls for critical thinking and problem solving. It appears at the end of every theme.

Challenge

You have realised that your peers do not have a sense of personal responsibility. Write a trickster narrative of about 350 words that brings out the importance of personal responsibility. Use different types of nouns in your narrative and make sure your handwriting is neat and legible.

Reading 1 covers extensive and intensive reading as suggested in the curriculum design. It provides a variety of reading texts such as passages (fiction and non-fiction), dialogues and poems. It has activities that help learners acquire extensive and intensive skills such as selecting reading materials and comprehension.

B Reading 1

Intensive reading: Simple poems

Activity 2.4 **Differences between poetry and other types of texts**

1. (a) In pairs, mention poems you enjoyed reading.
   (b) Discuss what made the poems interesting to read.
2. Read the following texts.

Text A – Poetry

The unwelcome guest

You landed on the planet,
Came without a welcome,
And stuck like a magnet,
Pain you brought into our home.

You invited your wicked friends,
And acquired a scary name,
HIV and AIDS you became,
And many lives you claimed.

At first you were mysterious,
And it was hard to be victorious,
But not any more,
For to fight you, we now know.

Reflection section lets learners carry out self-assessment against the outcomes provided in the design. It appears at the end of every sub-strand.

Reflection

Can you do the following tasks?
1. Give the differences between poems and other types of literature.
2. Recite simple poems for fun.

If you find it difficult to do any of the tasks above, consult your teacher or ask another learner for help.

Out of class provides simple and doable activities that can be done out of class. These activities provide a chance for non-formal learning and parental empowerment and engagement

Out of class

1. In your Reading Club, select a reader by looking at the cover and reading the blurb. Read the reader you have selected and identify and describe the setting in terms of time and place.
2. Describe to your parent or guardian the features on the cover page of your class reader.

The **QR Code** is at the back cover of both the Learner's Book and Teacher's Guide. It contains the audio recordings.

Grammar in use section addresses the grammar elements and sentence structures in English that are suggested in the curriculum design. The activities are organised from simple to complex. They include identification of words, filling in the blanks, substitution tables and construction of sentences.

C Grammar in use

Word classes: Nouns

Activity 2.7 **Count and non-count nouns**

1. In pairs, read the sentences below. Pay attention to the words in red.
   (a) The learners were given bread by the visiting priest.
   (b) When we breathe in polluted air, we are likely to suffer from lung diseases.
   (c) They gave us some mangoes.
   (d) He washed his hands with liquid soap and water.
2. The words in red in the sentences in 1 above are nouns. Identify the ones that can be counted and those that cannot be counted.

Reading 2 covers intensive reading of literary texts as suggested in the curriculum design. Learners analyse literary texts such as poetry, prose and oral literature. There are excerpts, short stories or poems based on each theme.

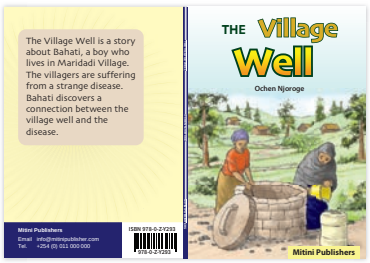
D Reading 2

Intensive reading: Class reader

Activity 2.11 **The cover page**

In groups, study the following covers of the readers and answer the questions that follow.

A



Digital spot Suggests digital activities for research and further learning. This promotes and enhances digital literacy.

Digital spot

Search the internet for more information about the author of the class reader. The following questions will guide you:
1. When was he or she born?
2. Where did he or she grow up?
3. What is his or her educational background?
4. What is his or her professional background?
5. What other books has he or she written?

Make short notes and present the information you gather in class.

Teacher's Guide

Features

The introduction contains:

- Detailed notes on the Competency Based Curriculum.
- Sample schemes of work and lesson plan.
- Notes on teaching methods.
- Notes on differentiated learning and handling learners with special needs.

Guidelines provided per theme:

- Specific learning outcomes per sub-strand.
- Key inquiry questions.
- Suggested teaching and learning materials.
- Lesson preparation.
- Link to other subjects.
- Catering for learners with special needs.
- Teaching instructions as per the activities in the Learner's Book. The instructions outline how the core competencies, PCIs, values and skills are developed in each activity.
- Answers to the activities in the Learner's Book.

Assessment

- Provides suggestions on Competency Based Assessment methods at the end of each sub-strand.
- Different sample assessment tools are provided.
- Elaborate notes on Competency Based Assessment methods and tools are provided in the Appendix.

Active Mathematics

Active Mathematics is a series specially designed to provide practical experiences that support the acquisition of skills for the Competency Based Curriculum. Books in this series have diverse activities that are aimed at acquisition and appreciation of core competencies, values, and Pertinent and Contemporary Issues (PCIs).

Key features of the Learner's Book

Numerous **interactive activities** to enable learners acquire practical skills to solve real-life problems.

Activity 8 Work in pairs

What you need: Place value charts and number cards.

Explore

1. Make number cards like the ones shown below.

0	1	2	3	4
5	6	7	8	9

2. Use the cards to form several 7-digit and 8-digit numbers.
3. Write the numbers you have formed on a place value chart.
4. Round off each number to the nearest million.

Activity 7 Work in pairs

What you need: Circular paper cut-outs and geometrical instruments.

Explore

The table below shows the number of animals in Kariara's farm.

Type of animal	Sheep	Camels	Cattle	Donkeys	Goats
Number of animals	9	6	18	3	12

1. Write the number of each type of animal as a fraction of the total number of animals.
2. **(a)** Multiply each fraction obtained in step 1 by 360° to get the angle representing each animal.
   (b) Which angle represent each type of animal?

Activity 6 Work in pairs

Explore

The signboards below show distances from Nairobi to various destinations.

Gichaga took 7 hours 30 minutes to drive from Nairobi to Isiolo. Omar took 5 hours to drive from Nairobi to Eldoret. At what speed, in kilometres per hour, did each of them drive?

Activity 2 Work in groups

What you need: Writing materials.

Explore

Ochieng is a trader who deals with school attires in Ol Kalou Market. One day, sweaters, games kits and shorts were out of stock. He bought x sweaters, y pieces of games kits and $2p$ pairs of shorts. On the same day, he sold p pairs of shorts.

1. Write an expression for the total number of sweaters, games kits and pairs of shorts that were in the shop by the end of the day.
2. Share the expression you have formed with the other groups.

Activity 6 Work as a class

What you need: A shopping centre.

Explore

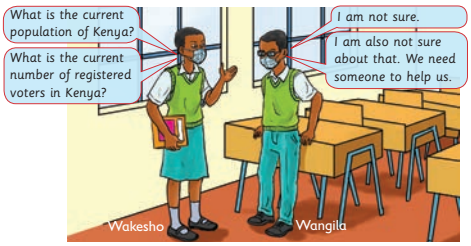
1. Together with your teacher, visit the nearest shopping centre.
2. **(a)** Identify five different trading activities in the market.
   (b) Count the number of traders doing each of the trading activities.
3. Represent the data on a bar graph.
4. From the graph, answer the following questions.

Activity 3 Work in groups

What you need: Place value charts.

Explore

1. Two Grade 7 learners, Wangila and Wakesho, had the following conversation. Study the conversation.

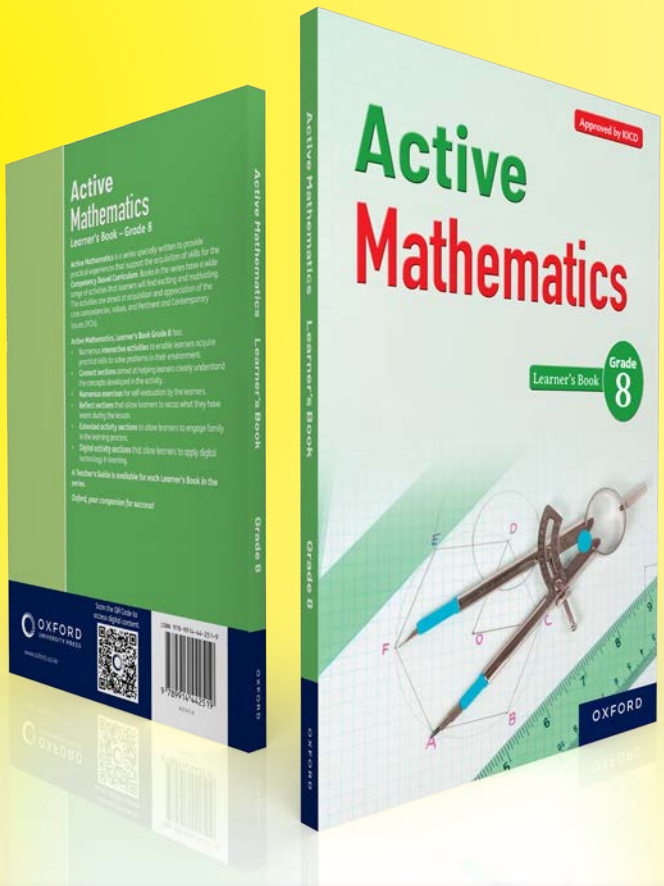


QR code provided at the back cover of the books. The code gives access to digital videos and interactive exercises by scanning the code using a QR code scanner that can be installed on a smart phone.

Digital activity section that allows learners to apply digital technology in learning. It creates awareness in ICT.

Digital activity

1. Scan the QR code on the back cover of this book.
2. Open the Length folder.
3. Watch the video.



Reflect section is aimed at helping learners to recap the learning outcome achieved in each lesson.

Reflect

What steps do you follow to add:

1. fractions with the same denominators?
2. fractions with different denominators?
3. mixed numbers?

Think back section is aimed at helping learners connect what they learnt in the previous grades or sub-strands with what they are about to learn.

Think back

In primary school, you determined squares of whole numbers and fractions.

(a) What is a square number?

(b) In pairs, discuss the strategies you used to determine the squares.

Connect section is aimed at helping learners understand what they should have discovered during the activities.

Connect

A number is divisible by 3 if the sum of the digits in the number is divisible by 3.

Extended activity section allows learners to engage family in learning, i.e. it promotes parental engagement in learning.

Extended activity

☞ **Do this activity at home.**

Discuss with your parents or guardians how to determine the exact length of items they buy to ensure they are within the right measurements.

Agriculture Today

Key features of the Learner's Book

The following are the key features of Agriculture Learner's Book. The book:

- has an **entry point activity** at the beginning of each strand to stimulate learner's interest.
- is **well designed** and the **illustrations are in full colour** to make the book learner-friendly.
- is written in a **simple and clear** language making it easy for learners' understanding of the concepts.
- has **summary notes** in form of **key points** aimed at enabling learners to quickly revise and reflect on the sub strand.
- has **self-check questions** at the end of each sub-strand to enable learners evaluate their understanding of the concepts covered.
- has **wrap-up activity questions** to prompt learners to think about real-life issues and find practical solutions to the problems.
- covers all the **core competencies**, **PCIs**, **skills**, and **values** as required by the curriculum design.

Strand opener appears at the start of each strand. It is aimed at stimulating learners' interest.

Entry point

1. Describe what is shown in each of the pictures below.
2. Why should we conserve soil in an agricultural environment?
3. How can we harvest and store water in the school environment for farming purposes?

Introduction provides information regarding what will be covered in the strand.

Introduction

In Grade 7, we learnt about soil pollution control methods and their effects on farming activities. In this strand, we shall discuss the methods of soil conservation and their importance in the agricultural environment. We shall also learn how to harvest and store water for farming purposes.

Fun spot section makes learning interesting and enjoyable. It also promotes creativity and imagination among learners.

Fun spot

Using locally available materials, make a spinning wheel as shown alongside.

Spin the wheel. Where the pointer stops, mention the type of market outlet for the vegetable crop produce, (for example **physical market outlet** or **digital market outlet**).

Figure 2.30: A spinning wheel

Reflect section provides an opportunity for learners to do self-assessment based on the section covered.

Reflect

How can we conserve soil in an agricultural environment?

Activities enable learners to develop their creativity, cognitive, psychomotor and affective skills.

Activity 1.1 **Discussing the importance of soil conservation in an agricultural environment**

Work in pairs

Requirements

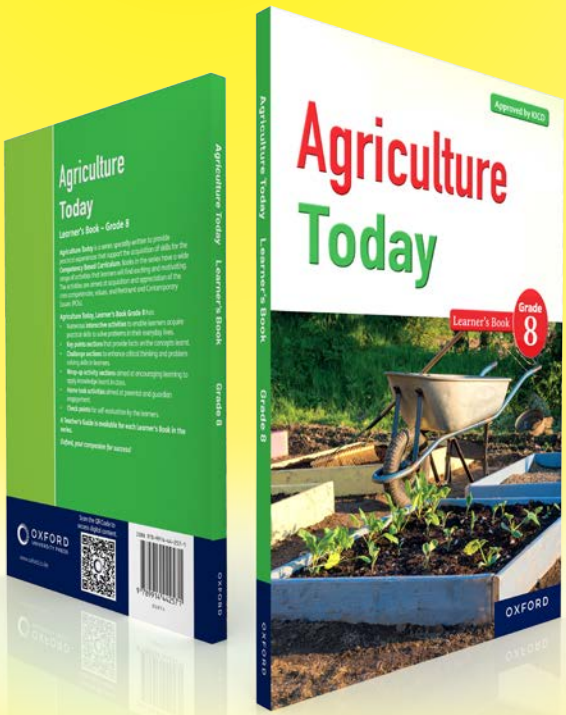
Writing materials, digital devices connected to the internet and print media.

What to do

The picture below shows Mr Amani's crop garden. Mr Amani practises soil conservation on his farm.

Figure 1.1: A crop garden

1. Why is conserving soil in the agricultural environment important? Discuss with your deskmate.
2. Using a digital device connected to the internet, search for information on the importance of soil conservation. Write your points down. You may also use textbooks and other print media.
3. Summarise your points and share with the rest of the class in a plenary.



Know more provides a platform for interesting facts.

Know more!

Common injuries when **handling domestic animals** result from **bites**, **scratches**, **kicks** and **falls**.

Digital corner section enables learners to search for information using digital devices.

Digital corner

Use print media or a digital device connected to the internet to find out how vegetables such as cucumbers, pumpkin and cauliflower can be established in a square foot garden.

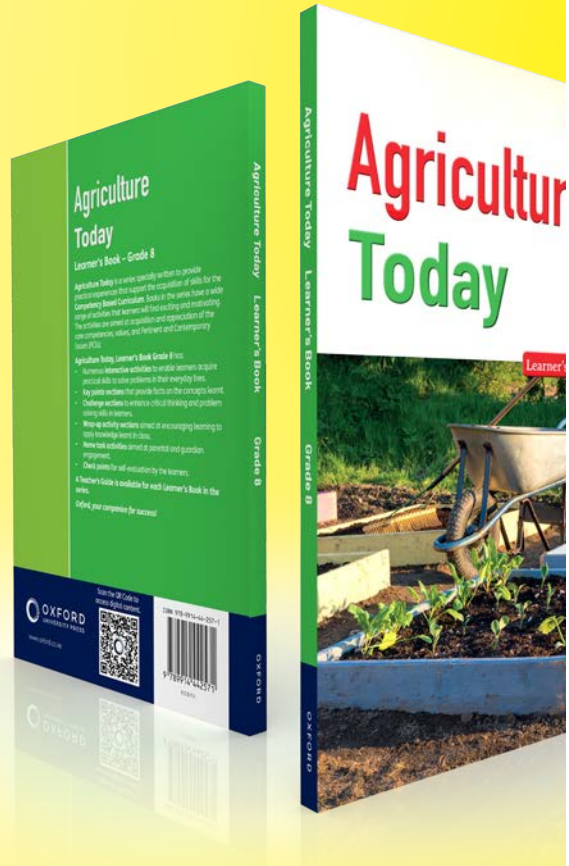
Further activity provides additional activities learners will engage in to enhance their learning.

Further activity

1. Write a poem or song to emphasise the importance of soil conservation activities in your locality.
2. Make your presentation to the class.

Did you know? section provides learners with new knowledge based on what they will learn about.

Did you know?
We celebrate World Water Day on the 22nd of March every year. On this day, people are sensitised on the importance of fresh water.



Wrap-up activity section contains questions related to real-life issues. It enables learners to provide practical solutions to the problems.

Wrap-up activity

Most farmers suffer losses due to heavy rains which cause soil erosion. This results to low soil fertility and sometimes crops are washed away. This poses a great threat to food production in the country that may lead to food insecurity.

You have been chosen by your classmates to talk to the local community about how they can address such a problem. Write summary points you will use to:

(a) explain the need for farmer education in this region on soil conservation measures.

(b) advise farmers on the most appropriate soil conservation methods they would use to solve the problem.

(c) explain how various soil conservation methods will help solve the problem in the agricultural environment.

Figure 1.12: Crops washed away by surface runoff

Key points section provides learners with an opportunity to quickly revise and reflect on the learning outcome.

Key points

- Different crop pests are controlled using **different methods** as shown in the figure below.

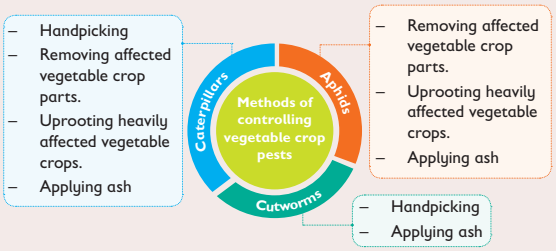


Figure 2.15: Methods of controlling vegetable crop pests

- **Cutworms** and **caterpillars** are big in size compared to **aphids**. Thus, they can be easily controlled by handpicking.
- **Dispose of affected vegetable crops or their parts** by:
  - burying them deep into the ground to decompose
  - using them to prepare compost manure.
- Ash is used in **controlling many crop pests**.

Self-check contains questions that enables learners test their understanding on the sub strand covered.

Self-check 1.1

1. The picture alongside shows one of the methods of soil conservation Mr Tanui practises on his garden.
   (a) Identify the method of soil conservation shown.
   (b) Explain how the method conserves soil in an agricultural environment.

Interactive activity enables learners develop their digital literacy skills.

Interactive activity 1

1. Scan the QR code on the back cover of this book.
2. Open Strand 1 folder.
3. Answer the questions in the interactive exercise.

New word section provide meaning to new words.

New word
Cyberbullying is the sharing, sending, or posting of negative or harmful information about someone using digital technology.

Home task enables learners to work independently and develop mastery of specific skills. It also reinforces learning among learners.

Home task
1. Ask your parent or guardian if you can visit a water conservation project around your home.
2. Visit the place and observe how water conservation is carried out.
3. Educate the community in your locality during World Water Day about the importance of water conservation project.

Challenge section has questions that promote critical thinking among learners.

Challenge
Think of other pests that attack vegetable crops. List them down.

Safety tip, **Environmental tip**, **Life skills tip**, **Financial tip**, **Health tip** and **Animal welfare tip** sections address the PCIs

Environmental tip!
Avoid using treated wood when preparing a square foot garden. Treated wood contains chemicals that may contaminate your square foot garden and pollute the soil.

Health tip!
Always ensure you wash your hands with soap and clean water before and after preparing vegetable crop produce for marketing.

Life skills tip!
We should always pay taxes to the government after selling our crop produce.

Financial tip!
We can sell surplus vegetables, spices and herbs to earn income.

Safety tip!
Be careful when placing big stones to avoid injuries.

Animal welfare tip!
The Kenyan constitution prohibits cruelty towards animals. Avoid committing violence on animals, overworking animals, denying them food and water and hunting them.

Key features of the Teacher's Guide

The following are the key features of Agriculture Teacher's Guide. The book:

- comprehensively covers all the learning outcomes as guided by the curriculum design.
- covers all the core competencies, PCIs, skills, and values as required by the curriculum design.
- has answers to self-check questions and wrap-up activities to enable teachers to teach more effectively.
- has guidelines on how to manage learners with special needs when conducting various activities.
- has a sample lesson plan, schemes of work and learner's progress record to enable the teacher to prepare effectively during teaching.

Active Integrated Science

Learner's Book at a glance

- Covers all the strands, sub-strands and learning outcomes as per the curriculum design.
- Develops the seven core competencies, addresses the PCIs and instils the core values.
- Encourages learning by discovery with the teacher or technician acting as a facilitator.
- Language used is simple, clear, scientific and precise.
- Experiments in the book have been practically done and hence, they are all workable. The procedures given are accurate.
- Has interesting stories and conversations to break the monotony of learning science through the old methods.
- It links up science with life and practice. It guides the learners on how to apply the knowledge and skills acquired in everyday life.

Note: Integrated Science covers topics from the three science subjects (Physics, chemistry and biology). These subjects will be studied separately at Senior School.

Key features of the Learner's Book

Active Integrated Science Learner's Book has certain unique features that make it the most user-friendly science instructional material for learners in Junior School. These include:

New word sections give the meanings of new terminologies used to explain a concept at the exact place they have been used.

The menstrual cycle refers to the monthly series of changes that a woman's body goes through in preparation for a possible pregnancy. The cycle is regulated by **hormones** and runs from the first day of a menstrual period to the first day of the next period.

Table 3.1 shows what happens in a normal menstrual cycle.

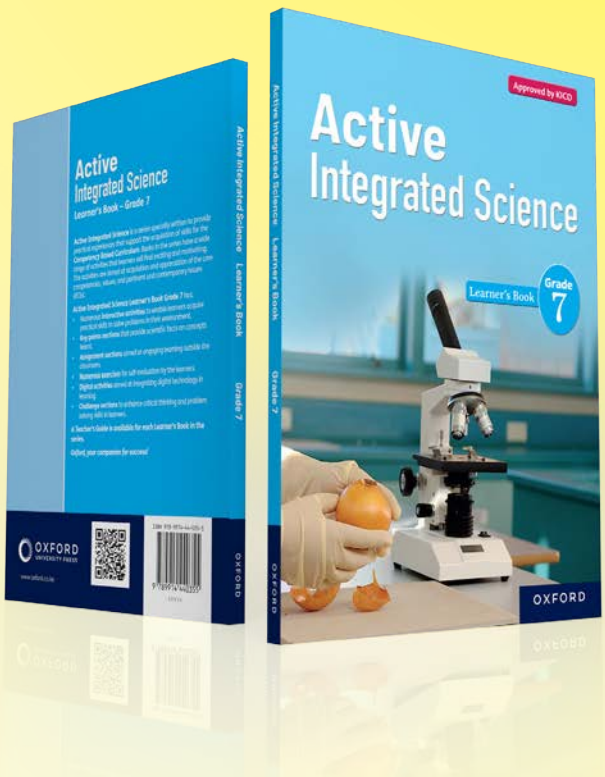
Table 3.1: Processes during the menstrual cycle

NEW WORD
Hormone – *chemical messengers transported in the blood that regulate different body processes.*

Digital activities promote digital literacy (a core competency) among the learners. If digital devices and/or internet are not available, you can use your smartphone to help the learners carry out these activities. You can also guide learners to search for some of the information from other relevant science textbooks.

Digital activity

1. In groups, use a digital device with internet connection to find out the safety precautions to observe when handling apparatus and instruments in the laboratory.
2. Note down your findings.
3. Present them to your classmates.



Self-assessment questions at the end of every sub strand. Use them to assess if the learners have understood the content in the sub strand. Organise remedial sessions for learners who have difficulties in all or certain areas.

Self-assessment 2

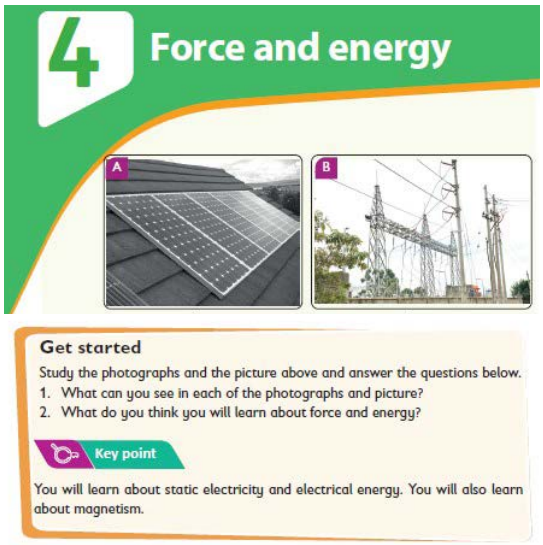
1. State four common hazards in a science laboratory.
2. Identify and state the meaning of the following hazard symbols.

3. Copy the following table in your exercise book and complete it.

Accident	Cause
Burn	
Slip or fall	
Cut	
Poisoning	

4. Write six precautions you will observe any time you are in the laboratory to ensure your safety and that of other laboratory users.
5. A learner accidentally burnt her hand on a flame while experimenting. Describe the first aid for the accident.
6. Explain why solid waste should not be disposed of in water sinks.
7. Why is it necessary to open the laboratory windows when you want to use the laboratory?

The strand opener comes at the beginning of every strand. Use the pictures or photos and questions in this section to introduce the strand to the learners. This will create curiosity about what they expect to learn in the strand.



Key point sections have brief notes on the concept or learning outcome that is to be achieved after carrying out an activity. Use the sections to summarise the concept developed in the activity.

Key point

Area is a derived quantity of length. It is calculated by multiplying the length by width.

Therefore, Area = Length × Width.

The SI unit of area is the **square metre** (m^2).

Activities that promote learning by discovery is an approach where learners are guided to construct own knowledge rather than being fed with ready information. This approach of learning promotes learner engagement, motivation, independence, retention and life-long results.

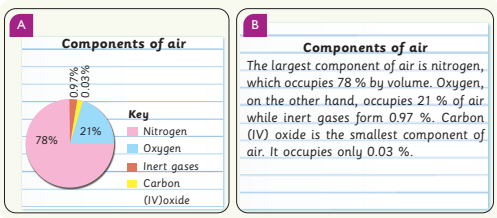
Guide the learners to carry out the various activities as instructed in the Learner's Book and discuss the questions in every activity to understand the concept in question.

Activity 3 To identify methods of communicating information in science

Two Grade 7 learners, were asked to explain the percentage composition of air by their teacher. The presentations below show how the learners communicated their answers.

What to do

Study the two presentations and discuss the questions that follow.



Discussion questions

1. How did each of the learners present their information?
2. In which other ways can science information be communicated?

Reflect sections contain sections that promote self-assessment. Encourage the learner to consult other learners or yourself in case they have difficulties answering the questions.

Reflect

1. Which are the components of Integrated Science?
2. How does Integrated Science relate to career opportunities?

If you have challenges answering the above questions, seek the help of the teacher.

QR code is provided on the back cover of the Learner's Book. Download and install a QR code scanner on your smartphone. Scan the QR code to access videos, animations and interactive digital exercises in the book.

Learn more sections provide the learner with additional information that is relevant to the concept in question, hence a better understanding.

Learn more!

In some cases, the zygote may fail to reach the uterus and therefore implantation takes place in the fallopian tube. This is called an **ectopic pregnancy** and it is dangerous to the mother. It is therefore removed using medication or through surgery.

An introduction to the sub strand section introduces the sub strand. In some cases, the section has questions to make the learners curious to find out more.

Introduction to Integrated Science

Introduction

Integrated Science is a broad area of study that involves the study of various branches of science together. Which branches of science are these?

Assignments sections provide extension activities to be done outside the normal lesson time. These help the learners to own and apply the knowledge acquired in class.

Assignment

1. Find out more reasons why studying Integrated Science is important.
2. Look for someone who is practising a career related to Integrated Science that you would like to pursue. Seek information about the career from that person.
3. Inform your parents or guardian about the career you would like to pursue.

Teacher's Guide at a glance

- Provides a summary of core competencies, PCIs and values that are key pillars in CBC.
- Gives a summary of different methods of teaching and learning science.
- Guides the teacher on how to handle learners with special needs.
- Provides guidance on how to conduct both formative and summative assessment.
- Provides sample assessment tools at the end of every sub strand.
- Provides sample professional documents; lesson plan, scheme of work and learner's progress record.
- Provides clear guidelines on how to handle every activity in the Learner's Book.
- Guides the teacher on how to improvise various apparatus using locally available materials.
- Guides the teacher on how to approach Community Service Learning (CSL).

Kiswahili Fasaha

Vitabu vya Kiswahili Fasaha Gredi ya 7, 8 na 9 vina masuala makuu **kumi na matano (15)** kila kimoja. Masuala kuu hayo ndiyo yaliyotumika kama sura katika vitabu hivyo.

Vipengele muhimu vya Mtaala wa Kiumilisi:

1. **Umilisi** – Mtaala umebainisha aina saba za umilisi ambazo kama mwalimu unapaswa kuwasidia wanafunzi wako kukuza katika mchakato wa ujifunzaji. Umilisi huu ni **mawasiliano na ushirikiano**, **kujiamini na kujithamini**, **ubunifu, uwazaji kina na utatuzi wa matatizo**, **uraia**, **ujuzi wa kidijitali na kukuza hamu ya ujifunzaji**.
2. **Maadili** – Hakikisha shughuli unazowapa wanafunzi zinachangia ukuzaji wa maadili kama vile **upendo**, **ushirikiano**, **kujiamini**, **uzalendo**, **uadilifu** na **umoja**.
3. **Masuala mtambuko** – Mtaala umependekeza masuala mbalimbali ambayo yanahusiana na maisha yetu ya kila siku. Masuala haya ni kama vile **afya kwa jumla**, **afya ya akili**, **sayansi na teknolojia**, **utunzaji wa mazingira**, **haki za binadamu**, **haki za watoto**, **haki za wanyama** na **utunzaji wa maliasili**. Tafuta jinsi ambayo unaweza kuwapa wanafunzi wako nafasi ya kutangamana na masuala haya.

Tanbihi: Hupaswi kuwatajia wanafunzi kuwa wanajenga umilisi au maadili yoyote. Panga shughuli utakazowapa wanafunzi kiasi kwamba wanapoitekeleza shughuli fulani, mwishowe watakuwa wamekuza umilisi fulani au maadili fulani. Kwa

mfano, unapowapa kazi za vikundi, bila shaka watahitajika kushirikiana ili kuzifanikisha kazi hizo. Katika kufanya hivyo, bila wewe kutaja, watakuza umilisi wa mawasiliano na ushirikiano na pia maadili ya heshima, ushirikiano, upendo na umoja.

Mtaala wa Kiswahili wa Shule ya Awali una masuala kuu kumi na tano. Kila suala kuu lina mada kuu nne, yaani **Kusikiliza na Kuzungumza**, **Kusoma**, **Kuandika** na **Sarufi**. Mada ya Kusoma inaangazia Kusoma kwa mapana na Kusoma kwa kina. Fasihi simulizi na Fasihi Andishi imeangaziwa katika mada ya Kusoma kwa kina. Tanzu za fasihi Andishi zimeangaziwa katika viwango vyote vitatu kama ifuatavyo:

- Gredi ya 7 - Novela
- Gredi ya 8 – Tamthilia
- Gredi ya 9 – Ushairi

Tanbihi: Wizara ya Elimu haijapendekeza kitabu cha fasihi kinachopaswa kufunzwa katika kiwango hiki. Ni jukumu la mwalimu mwenyewe kuwateulia wanafunzi wake kitabu cha fasihi ambacho anafikiri kitawasaidia kupata umilisi uliokusudiwa kwenye mtaala.

Nyaraka za kitaaluma/Vitendea kazi

Mwongozo wa Mwalimu katika kila gredi umeonyesha mifano na sampuli za nyaraka za kitaaluma ambazo mwalimu anapaswa kujiundia mwenyewe ili kuweza kufanikisha shughuli nzima ya ujifunzaji. Mifano ya nyaraka hizi ni **rekodi ya maendeleo ya mwanafunzi**, **rekodi ya kazi ya mwalimu**, **azimio la kazi na andao la somo/mpangilio wa somo**.

Vipengele muhimu vilivyoangaziwa katika msururu wa vitabu vya Kiswahili Fasaha G7 - G9

Ukurasa tangulizi

Kila suala kuu (sura) linaanza kwa picha inayohusiana moja kwa moja na suala kuu husika. Picha hiyo inaandamana na maswali ya jumla ambayo yanalenga kuwapa wanafunzi nafasi ya kupata uelewa wa juujuu kuhusu suala kuu lenyewe. Tazama mfano huu kutoka Kiswahili Fasaha Gredi ya 8.

Maswali ya jumla

1. Je, michoro iliyo hapo juu inaashiria matumizi yafaayo ya dawa kwa namna gani? Jadilini kama darasa.
2. Je, unafikiri matumizi yafaayo ya dawa yanaweza kuchangia vipi katika afya ya mtu binafsi pamoja na ya jamii nzima? Jadilini kama darasa.

Shughuli jumuishi inapatikana popote palipo na dhana zaidi ya moja katika mada fulani. Ni zoezi ambalo linashirikisha dhana zote kwa pamoja.

Shughuli jumuishi

1. Mwalimu atawasomea vitenzi vilivyo katika kauli mbalimbali. Vibadilishe vitenzi hivyo viwe katika kauli atakazowaeleza.
2. (a) Linakili jedwali hili daftarini mwako.

tenda	tendea	tendwa
(i) chana		
(ii)	shonea	
(iii)		kunwa
(iv)	pangia	
(v) vaa		
(vi)		limwa
(vii) fumba		
(viii)	fagilia	
(ix)		songwa
(x) pangusa		

Kiangaza ni sehemu iliyo na maswali yanayomdadisi mwanafunzi ili aweze kuwa tayari kuhusu dhana atakazokumbana nazo katika mada husika. Waongoze wanafunzi wayajadili maswali haya. Kumbuka si lazima wapate majibu pale mwanzoni lakini ni muhimu kuhakikisha kuwa wanaweza kuyajibu kikamilifu baada ya ujifunzaji wa mada husika.

Kiangaza

(a) Je, insha ya kubuni ni insha ya aina gani? Mweleze mwenzako.
(b) Je, unazingatia mambo gani unapoandaa vidokezo vya kuandika insha ya kubuni? Jadilini kama darasa.

Dijitika ni sehemu yenye shughuli zinazompa mwanafunzi nafasi ya kutumia vifaa vya kidijitali ili kujifunza dhana mbalimbali. Ili kukuza umilisi wa ujuzi wa kidijitali, wape wanafunzi nafasi ili watagusane na vifaa hivyo katika kufanya shughuli husika.

Dijitika

(a) Mwalimu atawachezea wimbo ufuatao katika kifaa cha kidijitali. Usikilize kwa makini.

Oooooyo, mwana alale
Usingizi, unaomliza
Mama akija, kutoka sokoni
Apate umelala, atafurahi sana
Akupe maziwa, akupe maziwa.

Tathmini binafsi ni sehemu inayompa mwanafunzi nafasi ya kujitathmini iwapo amepata uelewa wa yale yaliyokusudiwa na pia anachostahili kufanya iwapo ana tatizo.

Tathmini binafsi

1. Kwa makadirio yako, onyesha ni kwa kiwango gani unaweza:

	Viwango		
	Ninaweza kabisa	Ninaweza kidogo	Bado siwezi
kutambua wahusika katika wimbo.			
kuchambua wahusika katika wimbo.			
kueleza mafunzo kutokana na wahusika katika wimbo.			

2. Je, utafanya nini ili kujiimarisha pale usipoweza? Shauriana na mwalimu ili akuelekeze.

Elimujamii ni sehemu inayompa mwanafunzi nafasi ya kumshirikisha mzazi au mlezi wake katika shughuli ya ujifunzaji. Hakikisha shughuli ambazo unataka wanafunzi kuwashirikisha wazazi/walezi ni zile ambazo haziwahitaji kuwa na uelewa wa ndani wa dhana zinazofunzwa.

Elimujamii

1. Muulize mzazi au mlezi akuimbie wimbo wa kazi katika jamii yenu.
2. Shirikiana naye kuuimba huku mkizingatia hisia na ishara za mwili zinazokubalika.
3. Mshirikishe kujadili ujumbe unaojitokeza katika wimbo huo.

Tafakari ni sehemu inayompa mwanafunzi nafasi ya kuwazia kile alichojifunza kuhusiana na suala kuu katika sura husika na kumpa changamoto ya kuyatekeleza katika maisha ya kila siku.

Tafakari

Je, ni mambo gani uliyojifunza katika suala kuu hili kuhusu maadili ambayo utazingatia katika shughuli zako za kila siku? Yaorodheshe mambo hayo kisha ueleze umuhimu wa wanajamii kuzingatia maadili katika shughuli zao za kila siku.

Zinduo ni sehemu yenye taarifa za kina kuhusu dhana zinazofunzwa. Chukua muda kuwaelekeza wanafunzi wasome yaliyo hapa ili wapate uelewa zaidi wa dhana husika.

Zinduo

Fasihi ni sanaa **inayotumia lugha** kuwasilisha masuala yanayohusu jamii na mazingira yake. Kuna aina tofauti za sanaa kama vile *uchongaji*, *ususi*, *uchoraji* na *ufinyanzi*. Kuna tanzu mbili za fasihi: **fasihi simulizi** na **fasihi andishi**.

Computer Science Today

Learner's Book at a glance

- Covers all the strands, sub-strands and learning outcomes as per the curriculum design.
- Develops the **seven core competencies**, addresses the **PCIs** and instils the **core values**.
- Encourages **learning by discovery** with the teacher or technician acting as a facilitator.
- Uses a simple language that is **free of jargon** and helps to explain concepts in a **clear** and **precise** manner.
- Activities given in the book have logical and easy to follow steps.
- It guides the learners on how to **apply the knowledge** and **practice the skills** acquired in everyday life.
- It uses visual programming for coding and walks learners through several fun projects to establish a good grasp of programming.
- Gives the learners an idea of ways that coding can be used to solve everyday problems and come up with stories, games and animations.
- It gives **coping skills** and **builds the confidence** of learners when facing challenges such as cyberbullying, computer addiction and navigating pitfalls when using computers.
- Has activities and exercises that **promote higher-order thinking.**

Key features of the Learner's Book

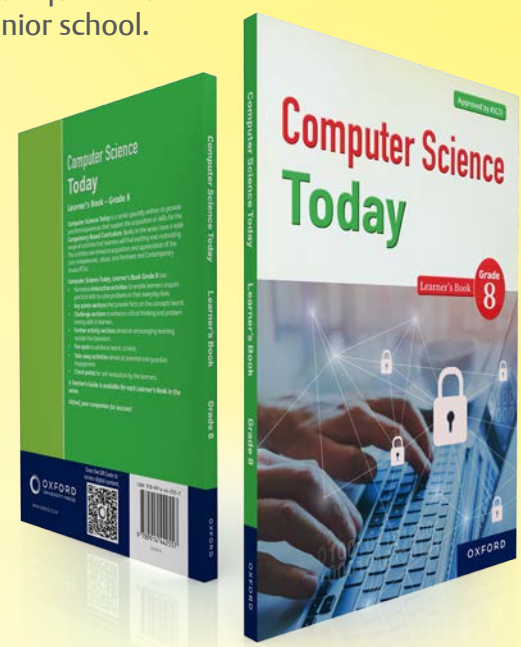
Computer Science Today Learner's Book has certain unique features that make it the most ideal Computer Science book for learners in Junior school.

These include:

Take away activities sections promote parental involvement and awareness by giving activities that learners can do at home with their families.

Take away activity

1. Discuss with your parents or guardians what you have learnt about cyberbullying.
2. Initiate a talk with your parents or guardians about any incident on cyberbullying you have encountered.
3. Ask them to tell you any incidences of cyberbullying they have experienced.
4. Discuss ways in which you can control cyberbullying as a family.



Key points sections have brief notes on the concept or learning outcome that is to be achieved after carrying out an activity. Use the sections to summarise the concept developed in the activity.

Key points

Some fixed storage devices of a computer such as the hard disk and solid-state drive are usually located in the drive bay of the computer case or on the underside of a laptop as shown in Figure 1.38 alongside.

Some solid state drives are embedded on the motherboard. Internal flash drives are mostly found in small portable devices such as mobile phones and cameras.

Figure 1.38: Open laptop showing the location of a hard disk drive

Activities that promote learning by discovery. Learning by discovery is an approach where learners are guided to construct their own knowledge rather than being fed with ready information. This approach of learning promotes learner engagement, motivation, independence and knowledge retention.

Adaptive technologies that improve computer accessibility

Activity 2.11 **Brainstorming and discussing adaptive technologies that improve computer accessibility**

In groups:

1. Discuss what you think is the meaning of **adaptive technology**.
2. Use a digital device connected to the Internet or textbooks and other available resources to search the meaning of:
   (a) adaptive technology. (b) computer accessibility.
3. Research on examples of adaptive technology that improve computer accessibility such as:
   (a) Text-to-speech technology (b) Speech-to-text technology
   (c) Adapted mouse (d) Ergonomic keyboards
   (e) Virtual keyboard (f) Sticky keys
   (g) Colour contrast (h) Image magnifier
   (i) Font control
4. Discuss your findings within the group and write summary notes.
5. Present your findings in class.

Guide the learners to carry out the various activities as instructed in the Learner's Book and discuss the questions in every activity to understand the concept in question.

The strand opener comes at the beginning of every strand. Use the pictures or photos and questions in this section to introduce the strand to the learners. This will create curiosity about what they will learn in the strand.

1 Foundation of computer science

Warm-up activity

1. Study the picture above.
2. What are the learners doing?
3. Identify and briefly describe the things you see in the picture.
4. From the picture, what do you think you are going to learn?

Introduction

As a computer user, you need to have basic skills on how to handle computer components effectively. It is also important to know the functions of different computer components and how they all work together to process data and output information.

Digital activities in the book promote digital literacy (a core competency) among the learners. If digital devices and/or internet are not available, you can use your smartphone to help the learners carry out these activities.

Activity 3.29 **Setting cookies to store the browsing history**

1. Use the available digital devices to open a browser.
2. Click on Chrome **menu** (three dots at the top right corner).
3. Click on setting then **Privacy and security**.
4. Select **Cookies and site data**.
5. Select the type of cookies you want to be blocked, restricted or accepted under each level.
6. Customise the site's data and permissions from the options given.

Wrap up activities are activities given after every concept to encourage higher-order thinking. They give the learners real-life scenarios and require them to apply what they have learnt to solve problems.

Wrap up activity 1.2

Revisit the **Wrap up activity 1.1** on page 48. You decided on some of the hardware components you need to assemble computers for your business.

1. Write a list of storage devices you will need to set up the computers.
2. Considering that high performance computers are required, what do you need to consider when selecting primary storage devices?
3. Write a list of specifications for:
   (a) primary storage devices (b) secondary storage devices
4. Do you think it is necessary to incorporate cloud storage to your storage options? Give reasons for your answer.

An **Introduction** to the sub strand. Use this section to introduce the sub strand.

1.5 Printers

Introduction

In Grade 7, you learnt that printers are computer hardware devices which produce output in hardcopy. You are now going to learn about printers and how they function in detail. You will also be able to select appropriate printers for different situations and use them to perform various tasks.

Further activities sections provide activities to be done outside the normal lesson time. These help the learners to apply the knowledge acquired in class, engage and pass on acquired knowledge to their peers and members of their community.

Further activity

1. In groups, choose a topic of your own for a story, animation and a game.
2. Come up with characters and scripts for each and create the projects using coding blocks. Make the projects interesting, realistic and educative.
3. During club meetings, invite your fellow learners from other classes to come and enjoy the stories, games and animations you have created.
4. Encourage them to use coding blocks to help people solve problems in the community.

QR code is provided on the back cover of the Learner's Book. Download and install a QR code scanner on your smartphone. Scan the QR code to access videos, animations and interactive digital exercises in the book.

Checkpoint activities are questions at the end of every sub strand. Use them to assess if the learners have understood the content in the sub strand. Organise remedial sessions for learners who have difficulties in all or certain areas.

Checkpoint 4.3

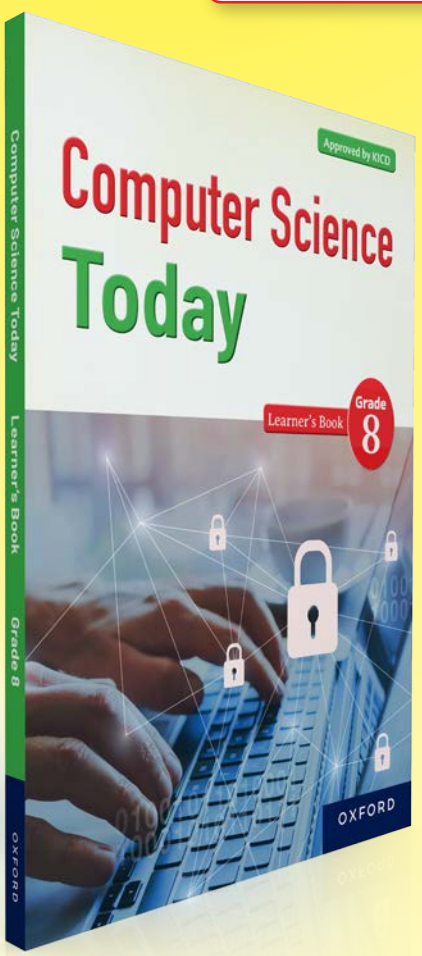
1. Explain the characteristics of robots.
2. How are robots used in real life situations?
3. Why do you think robotics is an important technological development?
4. Draw a robot and label its components.
5. If the end-effector is like the human hand, which part of a human is represented by the following?
   (a) Sensors (b) CPU (c) Actuators
6. Where would you classify the following robots?
   (a) A robot that delivers goods to people's homes
   (b) A robot that sorts farm products according to colour and weight
   (c) A robot that moves around the ocean floor and sends back data to a research center

Did you know? sections provide the learner with additional information that is relevant to the concept in question, hence a better understanding.

Did you know?

You can report cyberbullying through the following steps:

1. Type the link: https://ke-cirt.go.ke/ in your browser and press **Enter**.
2. Click on **Report** next to **Report an Incident** option.
3. Fill in the form provided with details about your case then click **Submit**.
4. The team at Communications Authority of Kenya will reach out to you after investigating your incident.



Teacher's Guide at a glance

- Provides a summary of **core competencies, PCIs** and **values** that are key pillars in CBC.
- Gives a summary of different **methods of teaching and learning computer science.**
- Guides the teacher on how to handle **learners with special needs.**
- Provides guidance on how to conduct both **formative and summative assessment.**
- Provides **sample assessment tools** at the end of every sub strand.
- Provides sample **professional documents;** lesson plan, scheme of work and learner's progress record.
- Provides **clear guidelines** on how to handle every activity in the Learner's Book.
- Guides the teacher on how to **improvise** various materials using locally available materials.
- Guides the teacher on how to approach **Community Service Learning (CSL).**

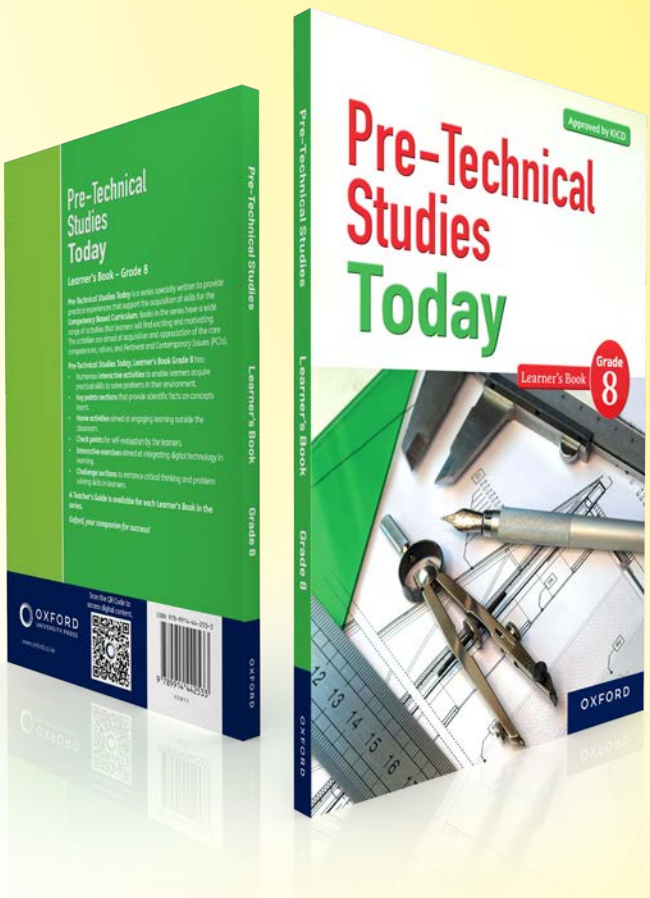
Pre-Technical Studies Today

Key features of the Learner's Book

- Covers all the strands, sub strands and learning outcomes as outlined in the curriculum design.
- Develops all the core competencies, addresses PCIs, and instills core values in the learners as stipulated by the curriculum design.
- It guides the learners on how to apply the knowledge and skills acquired in every day-to-day life.
- Has theme pictures and key questions at the beginning of each strand to stimulate learner's interest.
- Written in a simple and clear language making it easy for learners to understand concepts.
- The book is well designed with clear illustrations to make it learner friendly.

Organisation of the Learner's Book

The Pre-Technical Studies Today Learner's Book is organised into five strands. Each strand has the following features.



Strand opener appears at the start of each strand. It has theme pictures and key questions to create curiosity on what the learners will learn in the strand.

Key points sections have brief notes on the concept or learning outcome that is achieved after carrying out an activity. It summarises the concept developed in the activity and provides learners with an opportunity to quickly revise and reflect on the learning outcome.

Key points

Safety is the state of being safe and protected from danger or harm. It is a state whereby hazards and conditions that can lead to physical, psychological or material harm are controlled. This is to preserve the health and well-being of individuals and the community. Personal safety in general is recognition and avoidance of possible harmful situations or persons in our surroundings. It is important for everybody in everyday life to be safe.

A hazard is a potential source of harm. Substances, events, or circumstances can constitute hazards.

Fun spot section makes learning interesting and enjoyable. It also promotes creativity and imagination among learners.

Fun Spot

A poster competition on safety

1. You will design a poster in this activity. Work with a partner.
2. Think about the poster you want to make.
3. Come up with a list of requirements and think about the design of the poster. An example is given below.
4. Select a topic on safety. Some examples are given below:
   (a) Road safety (b) Laboratory safety
   (c) Classroom safety (d) Safety in a swimming pool
   (e) Workshop safety (f) Office safety
   (g) Library safety (h) Safety in the home
   (i) Safety in the community (j) Air safety
5. Make the poster. Make it as attractive as possible.

Figure 1.3 Sample poster

Safety tip, **Environmental tip**, **Life skills tip**, **Health tip** and **Career tip** sections address the PCIs.

Safety tips!

Remember to always be responsible for your personal safety.

- Be alert to potential dangers.
- Trust your instincts.
- Be aware of your surroundings.
- Avoid anything or any place that does not feel safe.
- Anticipate possible problems.
- Be vigilant and prepared for anything.
- Report suspicious activity to trusted individuals.

Also, always walk along well-lit, busy streets. Do not walk in high-risk areas if you can avoid it at any time of the day.

Checkpoint sections contain questions that enables learners test their understanding on the sub strand covered.

Checkpoint 1.1

1. Why is safety important?
2. Describe three careers related to safety.
3. Explain why you may not be allowed to operate machines when ill and on certain medication.
4. When carrying sharp or pointed objects such as knives or screwdrivers, hold them _____
   A. away from your body.
   B. facing down.
   C. both down and away from the body.
   D. facing up.
5. Why should exits and stairways stay unblocked?
6. Tick the correct word or words:
   (a) You (should/should not) play with matchsticks.
   (b) You (should/should not) always stand in a queue while waiting for the bus.
   (c) You (should/should not) touch chemicals, insecticides or any unknown substance in a bottle.

Digital corner section enables learners to search for information using digital devices.

Digital corner

1. Using digital devices connected to the internet, search for videos that demonstrate safe handling of tools and equipment. Watch the videos.
2. Take note of and record how the different tools are handled and stored safely. Discuss your findings.
3. Refer to what you learnt on safe use of hand tools to handle and store tools safely.

Introduction provides information on what will be covered in the strand.

Introduction

It is important that we all feel safe where we live, work, go to school, or spend our leisure time. However, every year, thousands of injuries occur in our homes, schools, workplaces and other outdoor areas. In many cases, these injuries end up in serious long-term consequences to the affected. Because of this, learning about safety and potential causes of injuries in our environment is important.

Challenge section has questions that invoke critical thinking among learners.

Challenge

Think about other potential hazards not mentioned above.

List them in your notebook.

Think back reminds learners of what they covered before and enables them to relate to what they are going to cover now.

Think back

Think of what you learnt in primary school about personal safety. List various methods of ensuring safety that you learnt. Discuss with your classmates.

Activities are structured in a way that enables learning through discovery and hands-on approach. This approach of learning promotes learner engagement, motivation and independence. It also enables learners to develop their creativity, cognitive, psychomotor and affective skills.

Activity 1.8 Identifying careers related to safety

What you need

A chart with different safety-related careers.

What to do

1. Study the chart provided by your teacher. Also, study the pictures in figure 1.2.

Activity 1.1 Finding out about safety and hazards

What you need

Relevant books, digital devices with connection to the internet, notebooks, pens.

What to do

Work in groups.

1. Using books and the internet, find out the meaning of the terms 'safety' and 'hazard'.
2. Note down your findings and let one member of your group present your findings to the rest of the class.
3. Discuss the findings to come up with a clear explanation of each term.

New words provide meaning of new words.

New words

Falls – to suddenly lose your balance and land on the ground.

Sports injuries – injuries that occur during sports, exercise or athletic activities.

Home task enables learners to work independently and develop mastery of specific skills. It also reinforces learning among learners.

Take away activity

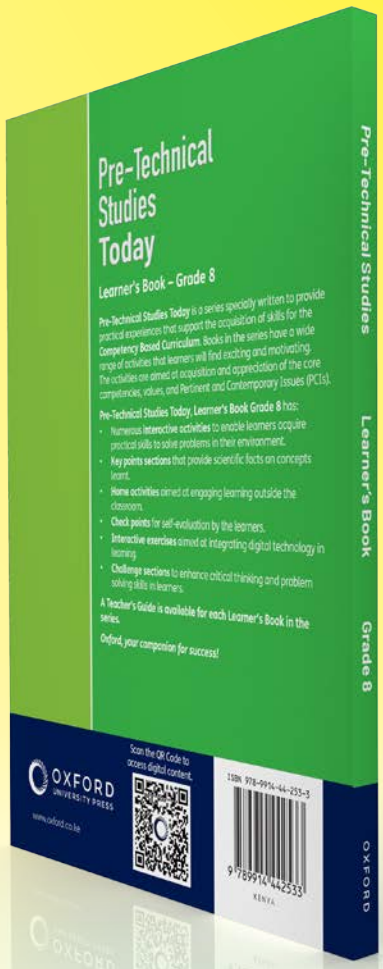
1. Look around your home and identify any potential hazards.
2. Mention what you can do to ensure safety of all members in the family.
3. Also list areas or situations where safety has been maintained.
4. Share your findings with the rest of the class.

Know more provides a platform for interesting facts.

Know more!

There are three types of burns:

1. **First-degree burns:** These are red and painful. They swell a little. They turn white when you press on the skin. The skin over the burn may peel off after 1 or 2 days.
2. **Second-degree burns:** These are thicker burns. They are painful and typically become blisters on the skin. The skin is very red or with large, irregular spots.
3. **Third-degree burns:** These burns cause damage to all layers of the skin. The burned skin looks white or charred. These burns may cause little or no pain because the nerves and tissue in the skin are damaged.



QR code is provided on the back cover of the Learner's Book. It provides access to videos, animations and interactive digital exercises in the book. It enables learners develop their digital literacy skills.

Digital exercise 1

1. Scan the QR Code on the back cover of this book.
2. Open the **Safety** folder.
3. Answer the questions in the interactive exercise.

Reflect section provides an opportunity for learners to do self-assessment based on the content covered.

Reflect

1. Explain why one should not operate workshop tools and equipment when unwell.
2. Why is it necessary that a workshop technician should be present before you can be allowed into a workshop?
3. Why is it important that learners who wear eye glasses also have to put on goggles while handling workshop tools?

Further activity provides additional activities learners will engage in to enhance their learning.

Further activity

What you need

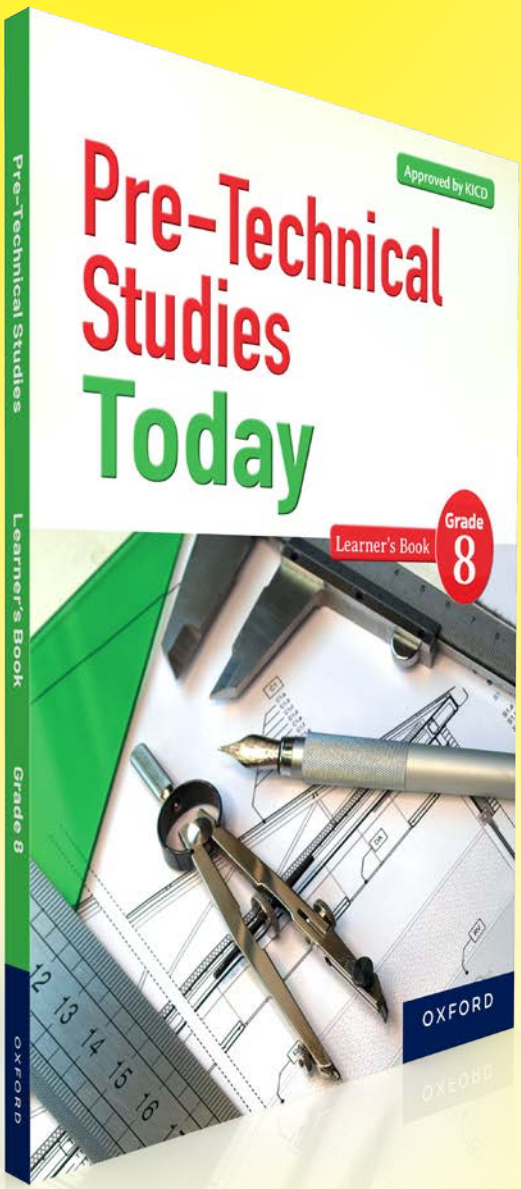
Newspapers, pens, notebook.

What to do

1. Your teacher will give you different articles on, or stories involving accidents. Article could be reporting on an incident that led to injury. This could be a car accident, workplace injury (e.g. construction crane) or a sports accident. For each incident, answer the following questions:
   (a) what caused the injuries?
   (b) how could they have been prevented?
2. Discuss your report with the rest of the class.

Discussion questions

1. What are the common causes of injuries in your locality?
2. Apart from the injuries discussed in this chapter, which other injuries do you know?
3. Is nosebleeding an injury? Why do you think so?
4. How would you avoid back injuries?

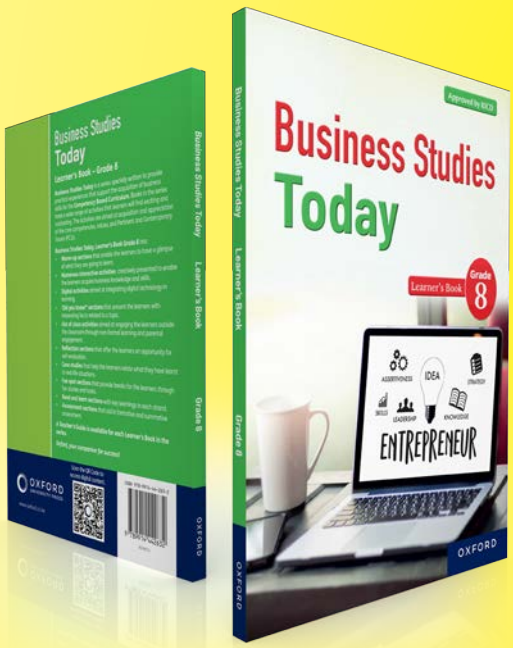


Key features of the Teacher's Guide

- Covers all the learning outcomes, core competencies, PCIs, skills and values as outlined in the curriculum design.
- Gives a summary of different methods of teaching.
- Guides the teacher on how to manage learners with special needs when conducting various activities.
- Provides guidance on how to conduct both formative and summative assessment.
- Provides sample assessment tools at the end of every sub strand.
- Provides sample professional documents, lesson plan, scheme of work and learner's progress record.
- Provides clear guidelines on how to handle every activity in the Learner's Book.
- Guides the teacher on how to improvise locally available materials.
- Guides the teacher on how to approach Community Service Learning (CSL).
- Has answers to Checkpoint questions to enable teachers to assess learners more effectively.

Business Studies Today

Business Studies Today is a series that is designed to help the learner gain relevant experience and practical skills for the business world. The content in the book is strictly in line with the Competency Based Curriculum. The activities throughout this series are tailored to help the learner acquire and appreciate the core competencies, values, and Pertinent and Contemporary Issues (PCIs).



Key features of the Learner's Book

Reflection section comes after all the content in a sub strand. It is presented in form of questions to help the learner self-assess. It helps the learner to check if they have covered all the concepts in the learning outcomes.

Reflection

Am I able to:

(a) identify the types, advantages and disadvantages of communication channels used in business?
(b) examine the factors considered when selecting communication channels?

Assessment questions or tasks that help to evaluate what the learner has learnt in a sub strand. This section is aimed at helping the learner identify their weak areas and look for support.

Assessment

1. Explain the meaning of the term **communication channels**.
2. (a) Explain the meaning of the following forms of communication channels and give examples of each.
   (i) Oral
   (ii) Written
   (iii) Audio-visual
   (b) Highlight the advantages and disadvantages of the forms of communication channels in (a) above.

Did you know appears in some parts of the book. It provides the learner with facts or some important information about the topic or concept.

Did you know?

Without balancing income with expenses, one may accumulate debts.

Warm-up activity comes at the beginning of each sub strand. It helps to jog the learner's mind on what they already know about the concepts in a sub strand. As the learners answer the questions or carry out the tasks in this activity, they are helped to create a mental picture of what they are expected to learn in the sub strand.

Warm-up activity

1. Recall the last time you shopped. Did you prepare a shopping list?
2. Why do you think preparing a list of things to buy before going shopping is important?

QR code is provided at the back cover of the book. The code gives access to digital content such as videos and interactive exercises by scanning using a QR code scanner that can be installed in a smart phone.

Scan the QR Code to access digital content.

You are going to section highlights the specific learning outcomes for a sub strand. It prepares the learner for the concepts to be covered in the sub strand.

You are going to:

(a) explore the meaning and importance of budgeting in day-to-day life

(b) analyse ways of spending money wisely in day-to-day life

(c) prepare a simple budget for personal finance management

(d) identify ethical issues in budgeting and spending money in the community.

This will enable you to appreciate the importance of budgeting and spending money wisely for personal development.

Read and learn section provides summary notes for what the learner is expected to learn. This comes at the end of every learning outcome. The notes help the learner to understand the concepts in the learning outcomes.

Read and learn

Value Added Tax and Excise duty are usually calculated as a percentage of the monetary value of the products for which they are being charged.

The rate of Value Added Tax varies for different products. In Kenya, Value Added Tax is calculated at a standard rate of 16%.

Some products are zero-rated, meaning they are charged VAT at 0%. For such products, a person can claim a refund for any taxes incurred in producing and supplying them.

The rate of Excise duty varies from time to time, depending on the prevailing economic conditions in the country.

Numerous **interactive activities** to enable learners acquire practical skills to solve real-life problems.

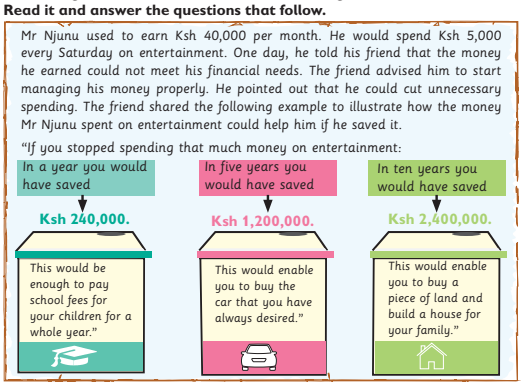
Importance of setting financial goals

Activity 3 **Group work**

One day, Njeri was reading an article on the importance of setting financial goals. She came across the following scenario in the article. Read it and answer the questions that follow.

Mr Njunu used to earn Ksh 40,000 per month. He would spend Ksh 5,000 every Saturday on entertainment. One day, he told his friend that the money he earned could not meet his financial needs. The friend advised him to start managing his money properly. He pointed out that he could cut unnecessary spending. The friend shared the following example to illustrate how the money Mr Njunu spent on entertainment could help him if he saved it.

"If you stopped spending that much money on entertainment:



Digital spot is aimed to help the learner to acquire digital literacy through interacting with digital devices in the learning process. If a learner cannot access a digital device for the activity, an alternative is given on using what is locally available.

Digital spot

Carry out the task below individually.

Use a digital device to download pictures showing various government projects in your locality. Paste the pictures on a Manilla paper to make a poster showing the importance of paying taxes in Kenya.

If you cannot access digital devices or the internet, you can cut out the pictures from old newspapers and magazine. Display your posters in class.

Out of class activity supports informal learning. This is learning that takes place outside the normal lesson time. It helps the learner to engage and interact with other people in the learning process other than teachers, for example parents, guardians, siblings and community members.

Out of class activity

While at home, discuss with your parents or guardians how to make a family budget for the next one month. Write down the budget and follow up to make sure it is implemented.

Fun spot allows the learners to learn or revise what they have learnt through fun activities. Such activities help the learners to have a better understanding as they interact with one another. Some difficult concepts could be easily understood if learnt through fun activities.

Fun spot

Read and practise the poem below on the benefits of entrepreneurship. Recite it during a school function.

Entrepreneurship, oh! entrepreneurship,
What a wonder you are!
What good gifts you bring to the entrepreneur.
Profits to them you bring.

Entrepreneurship, what a wonder you are.
Entrepreneurship, oh! entrepreneurship,
What a wonder you are!
You bring great gain to consumers,
Different and useful products you bring.
Entrepreneurship, what a wonder you are!

Entrepreneurship, oh! entrepreneurship,
What a wonder you are!
You bring great gain to the government,
Tax money you bring.
Entrepreneurship, what a wonder you are!

Entrepreneurship, oh! entrepreneurship,
What a wonder you are!
You bring much happiness to the country,
The economy you help to grow.
Entrepreneurship, what a wonder you are!

Evolving World Social Studies

Learner's Book at a glance

1. All learning outcomes in the curriculum design are covered.
2. Well-developed concepts.
3. Creatively presented activities.
4. Relevant and colourful illustrations.
5. Large and clear maps.
6. Accompanying digital component.

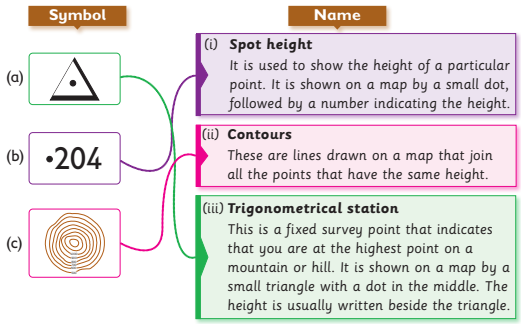
Key features of the Learner's Book

Evolving World Social Studies Learner's Book has certain unique features. These include:

Activities are well researched, relevant, creative, fun, engaging and intended to bring out the various competencies, values and PCIs. They can be done individually, in pairs, in groups or as a whole class.

Activity 22 Pair work

1. Follow the strings to match some symbols used to show relief in topographical maps with their names.



The **Summary** section provides key points on concepts learnt. They appear at the end of every substrand.

Summary

- Hindrances to empathy include mistrust, poor communication skills, being judgmental and unresolved conflicts.
- We encounter different situations that require empathy. While some situations will need us to offer material or financial support, others may require that we offer emotional or spiritual support.
- We can overcome the barriers to empathy by exercising values such as love, unity and responsibility.

Learning spot are summaries that reinforce the learner's understanding of the concept. They mostly appear after an activity.

Learning spot

The **scientific theory** on human origin differs from other theories of human origin in that it is based on the study of remains of past forms of life and climate. The information on this theory can be verified using scientific methods.

The scientific theory explains that human beings, like other creatures, started as simple creatures living in water. As living conditions changed over time, the creatures kept changing to more developed states. This change or evolution from simple creatures to fish, reptiles and finally mammals eventually led to the emergence of the **ape family**. From these came the modern intelligent human beings. These modern beings can survive under different conditions.

What about you? is a self-evaluation section that helps the learners to understand themselves better and deal with the challenges.

What about you?

How do unresolved conflicts affect you and the people you relate with?

Digital spot is a section where the learners get to interact with technology. They are guided to use digital devices such as computers, tablets, cameras, radio and to perform the various tasks.

Digital spot

1. In pairs, search the internet, dictionary or other printed materials for the meaning of the term **life goals**.
2. In your own words, write down the meaning of the term **life goals** and present it to the class.

The **Assess yourself** section comes at the end of each sub strand. They test the learner's acquisition and retention of knowledge.

Assess yourself

1. Which of the following is **most likely** to be a source of conflict in a family?
   A. Failure to own land
   B. Members working too far away from home
   C. Failure to plan family finances well
   D. Failure to interact with neighbours
2. Describe three characteristics of a peaceful family.
3. Why is it important to encourage dialogue and negotiation as methods of resolving conflicts in the family? Give two reasons.
4. You are unhappy about your parent or guardian because they spend too much time with friends or at work. He or she has no time for you, and this is affecting your performance at school. Suggest what you could do so that your parent or guardian can know about the situation.
5. How can respecting family rules and agreements help maintain peace in the family?

Out of class activities are non-formal or informal activities that the learners do outside their class but within the school compound. Examples include cleaning the school compound or reciting a poem during a prize-giving day.

They appear as necessary across the book, guided by the suggested learning experiences in the curriculum design.

Out of class activities

School activity

Do this activity as a class.

Prepare notes on the effects of relationships and how to discern healthy and unhealthy relationships. Elect two learners to give a talk to other learners during school assembly.

Home activity

Discuss with your parents, guardians or siblings how you can enhance healthy relationships with them.

The **Discuss section** prompts the learners to discuss some of the emerging issues related to the substrand. It also gives them a chance to apply some of the skills and knowledge they have learnt from the substrand.

Discuss

Work as a class.

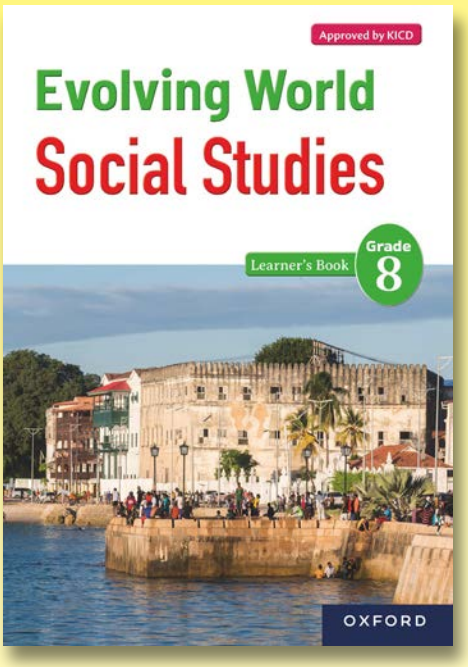
Addressing the effects of climate change requires political goodwill.

Do you agree with this statement? Give reasons for your answer.

The **How can you help?** section aims at encouraging learners to be peer educators and to serve their communities as they give advice on how to solve problems.

How can you help?

Lut thinks that he is not smart enough. As a result, he avoids making contributions during class activities for fear of making mistakes. At home, he avoids family gatherings because he thinks that he is not as important as his more talented cousins. How can Lut enhance his self-esteem?



QR code is provided at the back cover of the book. The code gives access to digital content such as videos and interactive exercises by scanning using a QR code scanner that can be installed in a smart phone.

Scan the QR Code to access digital content.

Out of school activities are activities that engage parents, guardians or other members of the community in the learning process of the learner.

Out of school activity

Work with your parent or guardian.

1. Take **selfies** or draw pictures of members of your family.
2. Show your selfies or pictures to your classmates back in school.

Alive Christian Religious Education

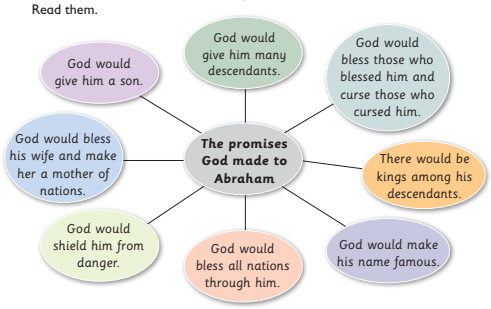
Alive christian Religious Education is a series specially written to provide practical experiences that support acquisition of skills for the Competency Based Curriculum. Books in this series have a wide range of activities that learners will find exciting and motivating. The activities are aimed at acquisition and appreciation of the core competencies, values, and Pertinent and Contemporary Issues (PCIs)

Key features of the Learner's Book

Activities are well researched, relevant, creative, fun, engaging and intended to bring out the various competencies, values and PCIs.

Activity 10 **Group work**

1. The chart below shows some of the promises that God made to Abraham. Read them.



2. Discuss how God fulfilled each of the promises listed in the chart.

Fun spot activities offer the learners a break from the normal class or coursework. They include puzzles, word searches and mazes. Their appearance is guided by the suggested learning experiences in the curriculum design. They appear at the end of every sub strand.

Fun spot

Work individually.
Copy the table below in your exercise books. Cancel out all the lower-case letters in each box to find out a lesson that you have already learnt about life. One word has been done for you.

~~zeOfgUxRdf~~	aserLfInfVhtEgSt	tyAxxvRnmhEuw	zScqAvChRtEeDs
OUR			

Read and learn notes serve to reinforce the learner's knowledge on the various concepts in the book. They appear after an activity and are presented creatively across the book.

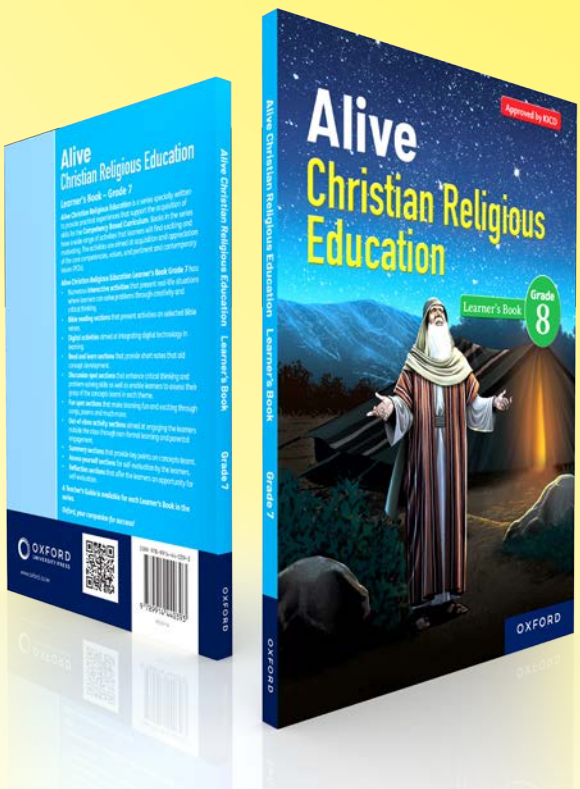
Read and learn

An ungodly covenant occurs when people engage in agreements without engaging God in the process. Ungodly covenants involve acts that harm the people involved. Examples of ungodly activities are:

1. Piercing or cutting of the body for ritual, protection or religious purposes
2. Having a sexual relationship outside marriage
3. Believing in false prophets
4. Engaging in witchcraft and believing that it has more power than God.

Most ungodly covenants are made in secret. Such covenants are usually manipulative and involve threats on one of the parties involved. Ungodly covenants are usually one-sided, favouring only one of the parties. In such covenants, one of the parties involved ends up getting hurt, losing something or suffering.

QR code provided at the back cover of the books. The code gives access to digital content such as videos and interactive exercises by scanning the code using a QR code scanner that can be installed in a smart phone.



Bible reading and Bible stories present activities on selected Bible verses. Learners are expected to find and read the specific Bible verses from the Bible. The Bible stories have been retold in a simpler and interesting way. They appear as necessary across the book, guided by the suggested learning outcomes in the curriculum design.

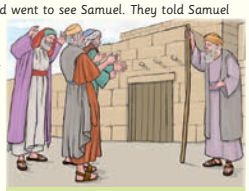
Activity 2 Group work

1. In turns, read **1 Samuel 8:1–9**. Make notes on what you learn from these Bible verses.
2. Read the story below and answer the questions that follow.

The Israelites were a very special people. Their leaders were chosen by God. At some point, their leader was Prophet Samuel. Samuel obeyed God and led them faithfully.

When Samuel grew old, he made his two sons judges over Israel. The elder son was Joel and the younger one Abijah. They were judges in Beersheba. The two sons did not follow their father's example. They were only interested in making money. They accepted bribes and judged cases unfairly.

All the elders of Israel got together and went to see Samuel. They told Samuel that he was old and that his sons were not good judges like he was. They asked Samuel for a king. Samuel was not happy when they asked for a king. He prayed to God. God told Samuel to listen to the people. They had not rejected Samuel, but they had rejected Him. God said that ever since He had delivered the Israelites from the Egyptians, they had rejected Him and had served idols. God told Samuel to grant the people their request. God also told Samuel to make sure they knew all that the king who would rule over them would do to them.



The elders of Israel speaking to Samuel

Case study stories are short, interesting stories that allow the learners to relate the concepts in question, with real-life experiences.

Story 2

Tabitha recently stopped going to church. Members of her Bible study group got concerned and decided to reach out to her. They visited and found out that Tabitha was experiencing a lot of stress. She had started using drugs.

The members of the Bible study group reminded Tabitha of the love that God has for her. They also reminded her of the dangers of using drugs. After the visit, they committed to visit Tabitha every day until she got better and returned to church.

1. How have Cephas and Tabitha strayed from God?
2. How are the people in the stories showing concern for Cephas and Tabitha?
3. Discuss ways in which Christians can reach out to those who have strayed from God.
4. How can you show love for the lost as a Christian?
5. Explain how you can exemplify God's love by serving all people.

The **Discussion spot** section prompts the learners to discuss some of the emerging issues related to the sub strand; or apply some of the skills and knowledge they have learnt from the sub strand.

Discussion spot

Work in pairs.

Based on media reports, it has been noted that suicide cases among the youth in Kenya have been on the rise over the last two years.

1. Discuss the possible reasons why the youth are committing suicide today.
2. Explain how the following can help in reducing suicide cases among the youth today.
   (a) The Government of Kenya (b) Parents or guardians

The **Digital spot** lets the learners get to interact with technology. They are guided to use digital devices such as computers, tablets, cameras, radio and TV to perform the various tasks.

Digital spot

Work in groups.

1. Using a digital device, search the internet to find out the effects of bullying on:
   (a) the youth who bully others
   (b) the youth who are bullied
   (c) those who witness bullying.
2. Using a digital device, write down messages urging your classmates not to bully others because of its negative effects.

The **Summary** section provides key points on concepts learnt. They appear at the end of every sub strand.

Summary

- Bartimaeus was healed because he had faith in God.
- We should call on God when we are faced with challenges. We should have faith that He will help us to overcome the challenges.
- The story of blind Bartimaeus reminds us that Jesus cares for all people, regardless of social status or physical ability.
- We should never give up when we are looking for solutions to the challenges that we face in life.

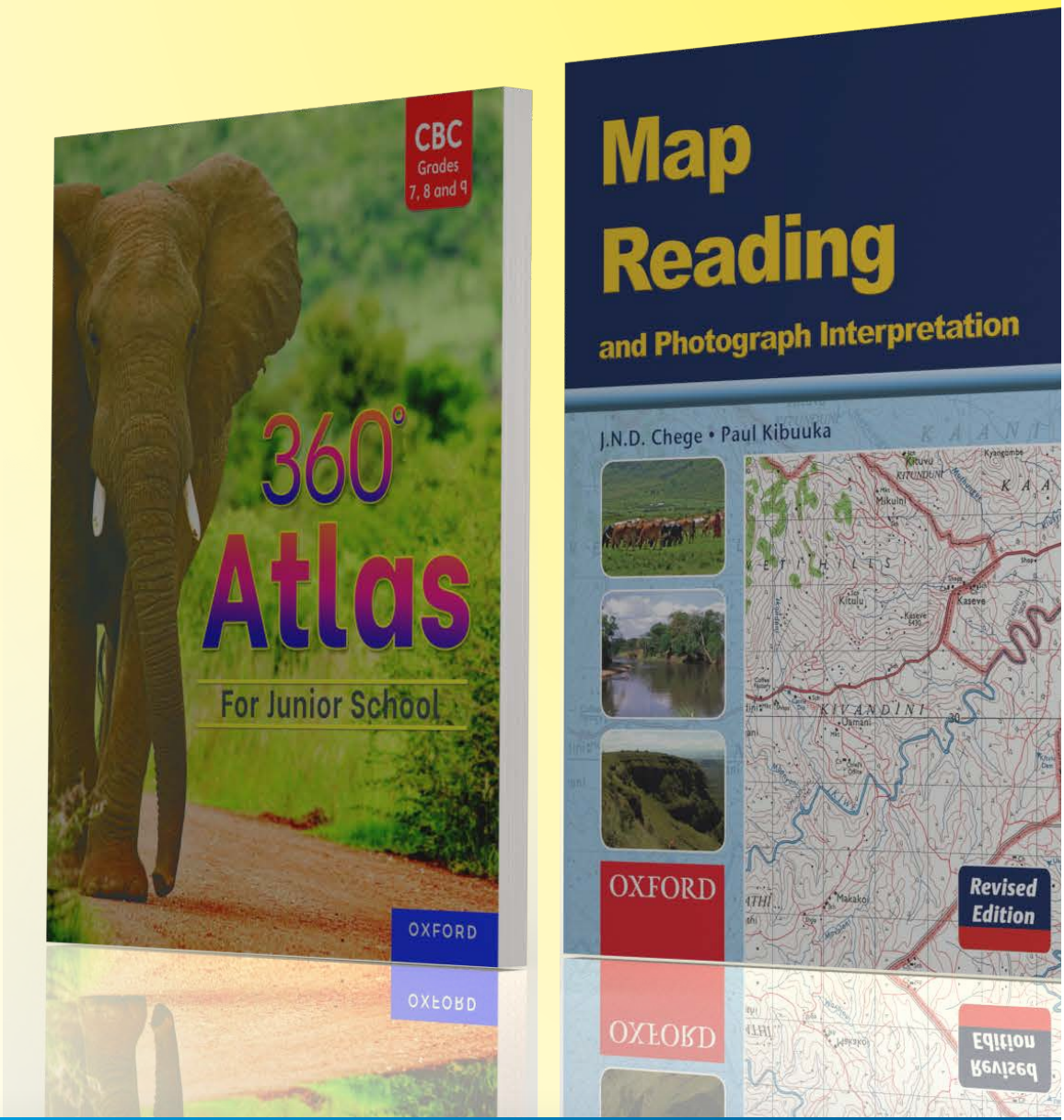
Out of class activity are non-formal or informal activities that the learners do outside their class but within the school compound. Examples include cleaning the school compound or reciting a poem during the school assembly or prize-giving day. They appear as necessary across the book, guided by the suggested learning experiences in the curriculum design.

Out of class activity

Your teacher will guide you.

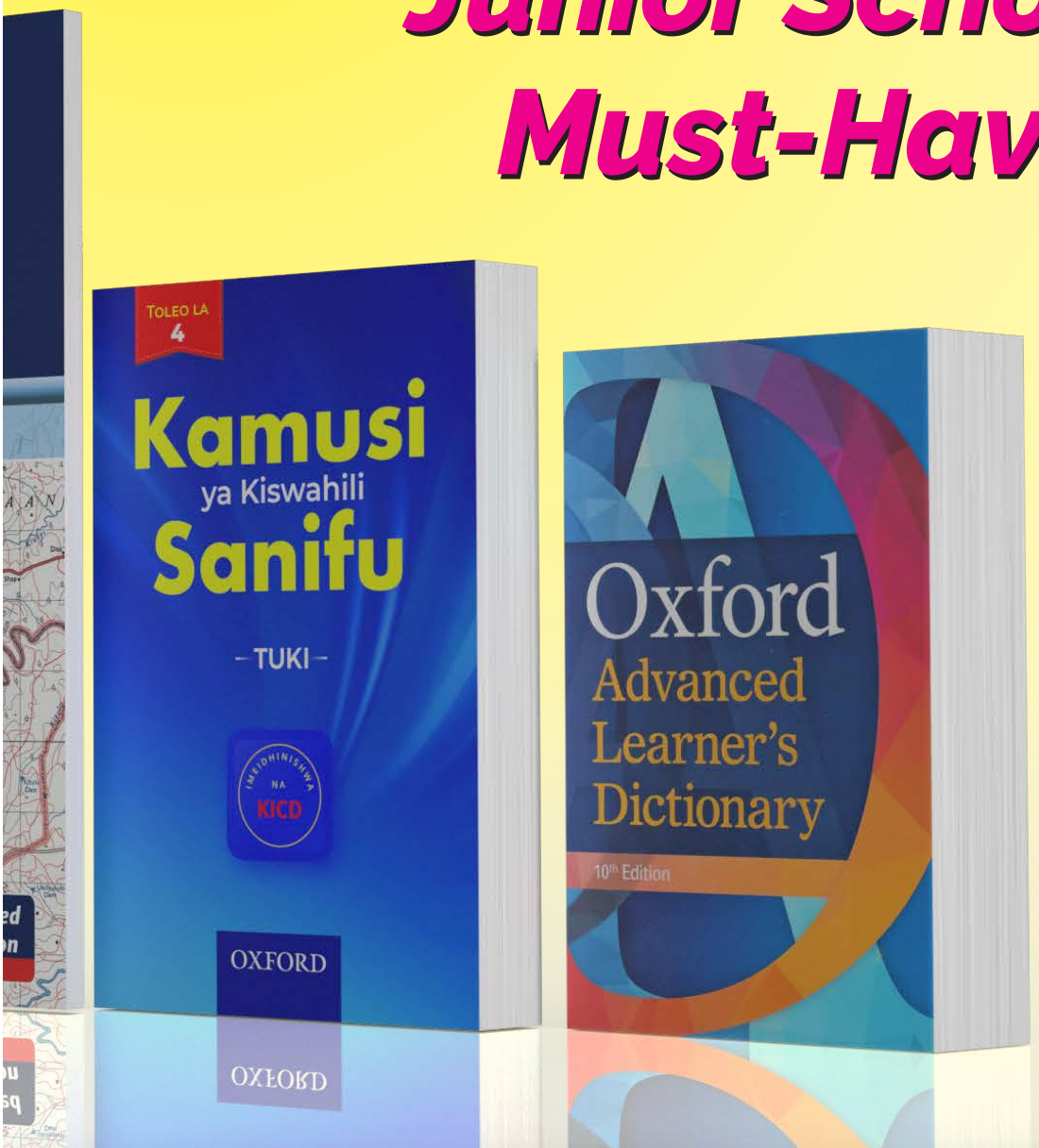
1. Plan to visit a person who is facing a health challenge within the school neighbourhood.
2. During the visit, do the following:
   (a) Tell him or her about the importance of seeking God's help when faced with a health challenge.
   (b) Encourage him or her to trust in God at all times.
   (c) Pray for the person, asking God to help him or her overcome the health challenge.

6 Must-haves for Junior School



Available in all leading bookshops.

Junior School Must-Haves



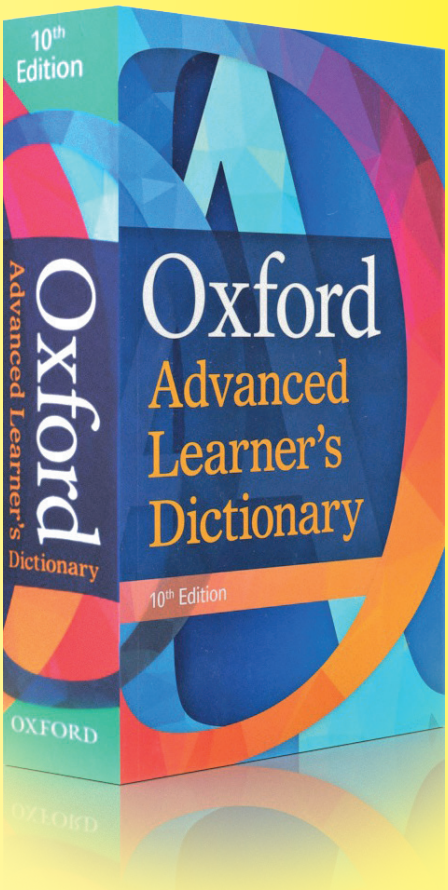
Call 0722 202 179, 020-273 2015/21/23/28, **Fax** 273 2011/12 or **eMail** orders.ke@oup.com to place an order.

Oxford Advanced Learner's Dictionary

During English lessons in Junior School, learners will build their language skills; that is listening, speaking, reading and writing. They will also expand their vocabulary and their knowledge of grammar. The use of the dictionary in class is an integral part of this. The curriculum designs specify the use of the dictionary to achieve learning outcomes such as using digital and print dictionaries to check the meanings of words, confirming the meaning of words and phrases as inferred from the context, articulating sounds correctly in words, pronouncing words correctly, distinguishing classes of words on the basis of stress, spelling and pronouncing synonyms and antonyms correctly, searching for meaning and examples of phrasal verbs and confirming the meaning of idioms.

The ***Oxford Advanced Learner's Dictionary***, the world's bestselling advanced-level dictionary for learners of English is an important tool for use, during the lessons where outcomes such as those above are addressed.

For the learners, we recommend the print dictionary which is available in all major bookstores countrywide at a pocket friendly price. Teach the learners how to use the dictionary and guide them to understand how to find the information they need in the dictionary navigating to the right word, the right part of speech and the right section of the entry. The keywords of the Oxford 3000 and Oxford 5000 – clearly marked with key symbols in the entries – also help the learners understand which words they should spend time learning, because they are likely to encounter them again.



For the teacher, we recommend the online dictionary and app which are quick reference tools that you can use in class from your mobile phone or laptop. If the learners have digital devices, they can also use the online dictionary or app.

Go to https://www.oxfordlearnersdictionaries.com/definition/english/ for the online dictionary or download the Oxford Advanced Learner's App from Google Play or App Store.

Read more about the Oxford Advanced Learner's Dictionary from the brochure at https://oxelt.gl/3f4TGSc

Synonyms notes
Also 190 synonyms comparing and contrasting groups of synonyms.

▼ SYNONYMS

intelligent
smart • clever • brilliant • bright

These words all describe people who are good at learning, understanding and thinking about things, and the actions that show this ability.

intelligent good at learning, understanding and thinking in a logical way about things; showing this ability: *He's a **highly intelligent** man.* ◇ *She asked a lot of intelligent questions.*

smart (*especially NAmE*) quick at learning and understanding things; showing the ability to make good business or personal decisions: *She's smarter than her brother.* ◇ *That was a smart career move.*

clever (*sometimes disapproving, especially BrE*) quick at learning and understanding things; showing this ability: *How clever of you to work it out!* ◇ *He's **too clever by half**, if you ask me.* NOTE People use **clever** in the phrase: *Clever boy/girl!* to tell a young child that they have learnt or done sth well. When used to or about an adult **clever** can be disapproving.

brilliant extremely intelligent or showing a lot of skill: *He's a brilliant young scientist.*

bright intelligent; quick to learn: *She's probably the brightest student in the class.* NOTE **Bright** is used especially to talk about young people. Common collocations of **bright** include *girl, boy, kid, student, pupil.*

PATTERNS
- clever/brilliant **at** sth
- a(n) intelligent/smart/clever/brilliant/bright **child/boy/girl/man/woman**
- a(n) intelligent/smart/clever/brilliant **thing to do**

ob·liga·tory /əˈblɪgətri; *NAmE* -tɔːri/ *adj.* **1 ~(for sb) (to do sth)** (*formal*) that you must do because of the law, rules, etc. SYN **compulsory**: **~for sb to do sth** *It is obligatory for all employees to wear protective clothing.* OPP **optional** **2** (*often humorous*) that you do because you always do it, or other people in the same situation always do it: *In the mid-60s he took the almost obligatory trip to India.*

antonym

synonym

Synonyms and antonyms are clearly signalled throughout the dictionary using SYN and OPP signs – over 6,000 synonyms and over 2,000 antonyms.

limb C1 /lɪm/ *noun* **1** C1 an arm or a leg; a similar part of an animal, such as a wing: *an artificial limb* ◇ *For a while, she lost the use of her limbs.* **2 -limbed** (in adjectives) having the type of limbs mentioned: *long-limbed* ◇ *loose-limbed* **3** a large branch of a tree ➲ VISUAL VOCAB page V12

IDM **out on a limb** (*informal*) not supported by other people: *Are you prepared to **go out on a limb** (= risk doing sth that other people are not prepared to do) and make your suspicions public?* **tear/rip sb limb from limb** (*often humorous*) to attack sb very violently ➲ more at RISK *v.*

▼ VOCABULARY BUILDING

Objects you can use

It is useful to know some general words to help you describe objects, especially if you do not know the name of a particular object.
- A **device** is something that has been designed to do a particular job: *There is a new device for cars that warns drivers of traffic jams ahead.*
- A **gadget** is a small object that does something useful, but is not really necessary: *His kitchen is full of gadgets he never uses.*
- An **instrument** is used especially for careful or scientific work: *'What do you call the instrument that measures temperature?' 'A thermometer.'*
- A **tool** is something that you use for making and repairing things: *'Have you got one of those tools for turning screws?' 'Do you mean a screwdriver?'*
- A **machine** has moving parts and is used for a particular job. It usually stands on its own: *'What's a blender?' 'It's an electric machine for mixing soft food or liquid.'*
- An **appliance** is a large machine that you use in the house, such as a washing machine.
- **Equipment** means all the things you need for a particular activity: *climbing equipment.*
- **Apparatus** means all the tools, machines or equipment that you need for something: *firefighters wearing breathing apparatus.*

Vocabulary building

Idioms are in a clearly marked section at the end of the entry, introduced by an IDM symbol. In the online dictionary, type in the whole idiom and it takes you there. Grammar reference page R13 explains how idioms are presented in the dictionary.

Example sentences of them in print, over 230,000 online – show learners how to use words in context.

Pronunciation: The IPA transcriptions of headwords. IPA transcriptions are supported by the audio pronunciations online and in the app.

Stress for the **noun**

Stress for the **verb**

Phrasal verbs are in clearly marked sections introduced by a PHRV sign at the end of verb entries. In the online dictionary each phrasal verb is a separate entry and can be found instantly by typing in verb and particle. Grammar reference pages R8-9 in the back of the dictionary clearly explain what phrasal verbs are and how the meanings and grammar work.

pro·hib·ition·ist /ˌprəʊɪˈbɪʃənɪst/ *noun* a person who supports the act of making sth illegal, especially the sale of alcoholic drinks

pro·hibi·tive /prəˈhɪbətɪv; *NAmE also* prəʊˈh-/ *adj.* **1** (of a price or a cost) so high that it prevents people from buying sth or doing sth SYN **exorbitant**: *prohibitive costs* ◇ *The price of property in the city is prohibitive.* **2** preventing people from doing sth by law: *prohibitive legislation* **3** (*NAmE*) (of a person taking part in an election or a competition) extremely likely to win: *Miami began the day a prohibitive Super Bowl favorite.* ▶ **pro·hibi·tive·ly** *adv.*: *Car insurance can be prohibitively expensive for young drivers.*

pro·ject A1 W *noun, verb*

■ ***noun*** /ˈprɒdʒekt; *NAmE* ˈprɑːdʒ-/

- SCHOOL/COLLEGE WORK **1** A1 a piece of work involving careful study of a subject over a period of time, done by school or college students: *a history project* ◇ **~on sth** *My class is **doing a project** on medieval towns.* ◇ *The final term will be devoted to project work.*
- PLANNED WORK **2** B1 a planned piece of work that is designed to find information about sth, to produce sth new, or to improve sth: *We **worked on** various **projects** together.* ◇ *to **fund/finance a project*** ◇ *to **undertake/complete a project*** ◇ *a **building/construction project*** ◇ **~to do sth** *They've set up a **research project** to investigate the harmful effects of air pollution.* ◇ *a **project manager/team***
- SET OF AIMS/ACTIVITIES **3** a set of aims, ideas or activities that sb is interested in or wants to bring to people's attention: *The party attempted to assemble its aims into a focused political project.*
- HOUSING **4** (*NAmE*) = HOUSING PROJECT: *Going into the projects alone can be dangerous.*

■ ***verb*** /prəˈdʒekt/

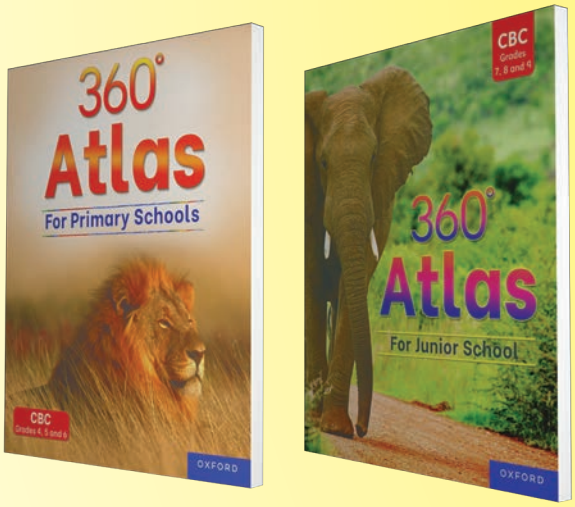
- ESTIMATE **1** B2 [T, usually passive] to estimate what the size, cost or amount of sth will be in the future based on what is happening now SYN **forecast**: **be projected** *A growth rate of 4 per cent is projected for next year.* ◇ **be projected at sth** *The overall cost is projected at $11 billion.* ◇ **be projected to do sth** *Unemployment is projected to rise to over 5 per cent next year.* ◇ **it is projected that …** *It is projected that the unemployment rate will fall.*
- PLAN **2** B2 [T, usually passive] to plan an activity, a project etc. for a time in the future: **be projected** *The next edition of the book is projected for publication in March.* ◇ *The projected housing development will go ahead next year.*
- LIGHT/IMAGE **3** B2 [T] **~sth (on/onto sth)** to make light, an image, etc. fall onto a flat surface or screen: *They **projected the** digital **image** onto the model's surface.*
- STICK OUT **4** [I] **+ adv./prep.** to stick out beyond an edge or a surface SYN **protrude**: *a building with balconies projecting out over the street*
- PRESENT YOURSELF **5** [T] to present sb/sth/yourself to other people in a particular way, especially one that gives a good impression: **~sth** *They sought advice on how to **project** a more positive **image** of their company.* ◇ **~sb/sth/yourself (as sb/sth)** *He projected himself as a man worth listening to.*
- SEND/THROW UP OR AWAY **6** [T] **~sth/sb (+ adv./prep.)** to send or throw sth up or away from yourself: *Actors must learn to project their voices.* ◇ (*figurative*) *the powerful men who would project him into the White House*

PHRV **pro'ject sth onto sb** (*psychology*) to imagine that other people have the same feelings, problems, etc. as you, especially when this is not true

Kamusi ya Kiswahili Sanifu 4

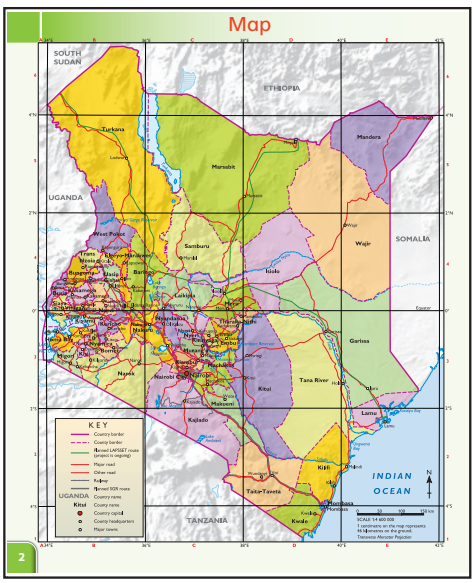
Wanafunzi wanahitajika kutafuta **maana za maneno**, **nahau** na **misemo** katika kamusi. Pia, wanapaswa **kutamka maneno** ipasavyo, **kueleza maana za methali**, **kuchambua vipera vya fasihi**, **kujifunza ngeli na upatanisho wa kisarufi** pamoja na **mnyambuliko wa vitenzi**. ***Kamusi ya Kiswahili Sanifu Toleo la 4*** itawasaidia sana kupata taarifa hizi.

360⁰ Atlases



Maps

Many rich, varied and updated thematic maps aligned to specific topics in the Social Studies curriculum design. They have comprehensive keys that make it easy to relate features and draw linkages between various regions of study.



Notes

Brief notes that aid the understanding of Social Studies concepts. The notes also address topical concerns such as climate change and desertification.

Climatic zones of Eastern Africa and their characteristics

Climatic zone	Characteristics
Highland	• Temperatures are modified by altitude • Lower slopes are warmer than higher slopes • Rainfall varies with altitude, as well as position of the slope on the mountainside • Windward slopes receive more rainfall than leeward slopes
Tropical wet	• Average annual temperature of about 28° C • Heavy rainfall ranging between 1 100 and 1 600 mm experienced throughout the year
Tropical wet-dry	• Two rainy seasons in a year with annual rainfall of between 850–1 500 mm • Average annual temperature of 26° C
Semi-arid	• Rainfall averages between 250 mm and 750 mm annually • Average annual temperature of 28° C
Arid	• Very little rainfall, averaging less than 250 mm annually • High temperatures sometimes reaching 40° C degrees

Photographs

Relevant quality photographs that aid the learning of concepts.

Cashew nuts are grown in Kwale, Kilifi, Tana River and Lamu counties. The raw nuts are exported mainly to India.

Worksheets

Have numerous test item to aid revision of Social Studies topics while interacting with the content in the atlas.

Part A **Map reading**

Worksheet 1

1. Fill in the table below correctly. One has been done for you.

	Scale	Type of scale
(a)	1 cm represents 10 km	Statement scale
(b)	0 10 20 30 km	
(c)	1: 25 000	
(d)	1 cm to 100 km	
(e)	$\frac{1}{10\,000}$	

2. Write if the sentence is **true** or **false**.

(a) A small-scale map represents a big area with few details.

(b) A large-scale map represents a small area of land. It shows a lot of information.

3. Study the topographical map of Nkubu (Sheet 122/1) on **page 8** and its key on **page 9**. Do the following tasks.

(a) State the distance, in kilometres, of the road from the southern end near Erimbene up to the junction near the Sub-Chief's Camp.

(b) Calculate the area under forest cover in the western area of the map. State your answer in square kilometres.

(c) What is the bearing of Kithangari School from Gaatia School?

(d) Give the four-and six-figure grid references for the church at Igandene.

Self-check section

Numerous activities that aid the study of Social Studies concepts while interacting with the content in the atlases.

Self-check

1. Using the points of the compass, give the direction of Nairobi from the following places:
   (a) Kajiado (b) Bura
   (c) Kapenguria (d) Voi.
2. Using latitudes and longitudes, give the location of the following places:
   (a) Cairo (b) Accra (c) Johannesburg.

Fact sheet

These give vital statistics for counties and other areas of study.

Nairobi County fact sheet

County Headquarters: City Hall

Area: 703.9 km^2

Population*: 4 397 073*

Population density*: 6 247 people per km^2

Major trading centres: The Central Business District (CBD) popularly referred to as 'Town', Eastleigh, Dandora, Muthurwa, Mutindwa, Adams Arcade, Westlands, City Park Market, Nairobi West, Kangemi, Dagoretti, Kawangware, Gikomba, Kariokor, Burma, Ngara, Githurai

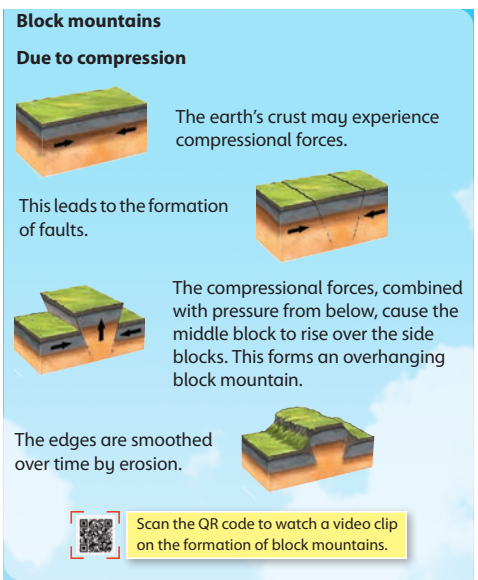
Main economic activities: Information and communication technology, food and beverage processing, glass manufacturing, textile making, steel processing, leather processing, tourism, finance

Main attractions: Nairobi National Park, Nairobi National Museum, Bomas of Kenya, Karen Blixen Museum, Giraffe Centre

*2019 National Census

Digital accompaniment

The atlases have selected digital content to aid in the understanding of Social Studies concepts.



Map Reading and Photograph Interpretation

The Map Reading and Photograph Interpretation resource book offers an in-depth exploration of the various concepts in the Social Studies Junior School curriculum. The resource book contains the following.

1. Notes relevant to the outcomes of Junior School Social Studies Curriculum Designs.
2. Topographical maps - 16 full colour.
3. A mix of coloured and black and white photographs.
4. Assessment activities questions relevant to Junior School.
5. Large and clear maps.
6. Accompanying digital component.

Key features of the resource book

Notes: Well researched, relevant to the concept and accompanied by diagrams and sketches to enable the learners understand the concepts. The notes are also written in simple language.

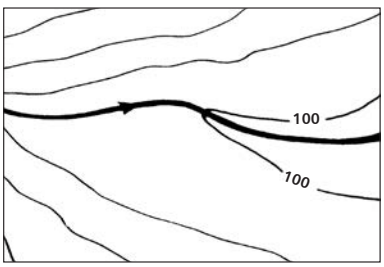


Fig. 6.9 (b) Mature valley

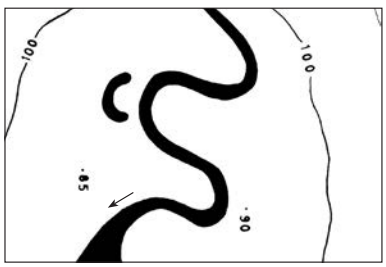


Fig. 6.9 (c) Old-age valley (flood plain)

Spurs

A spur is a prominent projection of raised land from higher ground, such as a hill or mountainside, into lower land.

Hills

A hill is an upland that rises above the general relatively low ground but is of less height compared to a mountain.

Their shape varies from regular to irregular.

Regular hills look evenly shaped and tend to be conical shaped. On topographical maps, they are depicted by concentric contours that give the hill a rounded shape.

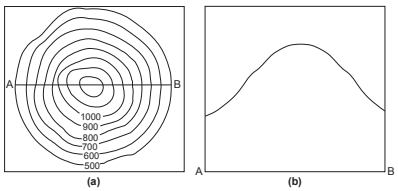


Fig. 6.11 A regular- shaped (conical) hill

Some hills are irregularly shaped due to erosion, the shape of the rock outcrop or due to other geomorphological processes.

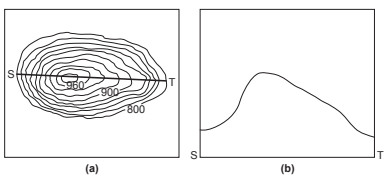
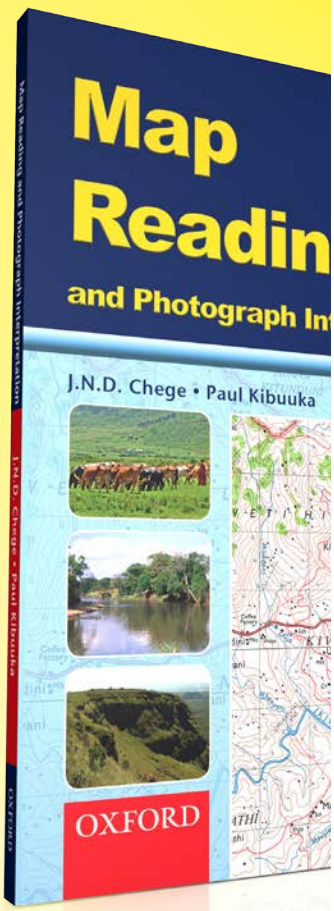


Fig. 6.12 An irregularly shaped hill



Practise questions which serve as summative assessment and are in two sets: one set for map reading and another set for photograph interpretation. Each set of questions appears at the end of its respective strand.

Photograph A

Using Photograph A alongside Map No. 1 of Nairobi, answer the following questions.

1. (a) What type of photograph is this one?
   (b) Draw a frame, the same size as that of the photograph. On the frame, mark and name:
   (i) Nairobi Dam
   (ii) A railway line
   (iii) The major roads
   (iv) Kenyatta and Nairobi Dam estates
   (v) Kibera settlement
   (vi) Wilson Airport.
2. Compare the settlements in Kenyatta estate with those of Kibera area.

Photograph B

With reference to the photograph and Map No. 2 of Naivasha:

1. Explain the distribution of settlements in the area shown on the photograph.
2. Explain the relationship between relief and communication lines.
3. Describe the distribution of vegetation in the area covered by the photograph.
4. Give reasons why the area to the left hand side on the photograph is suitable for farming.

Photograph C

1. Using photograph C and with reference to Map 3 of Machakos, draw a rectangle the same size as that of the photograph. On the rectangle, mark and name:
   (a) the main all-weather roads
   (b) three dry-weather roads
   (d) Kyandani hill
   (e) a sports track
   (f) a hospital
   (g) The D.C.'s office.
2. Explain the influence of relief on the siting of Machakos town.

Photograph D

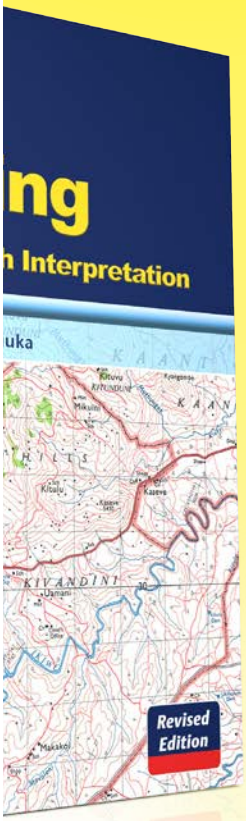
Photograph D shows part of the area shown on Map No. 4 of Nakuru.

1. What type of photograph is this?
2. Draw a rectangle the same size as the photograph. Using both the photograph and the map, mark on the rectangle and name the following features:
   (a) Lake Nakuru
   (b) A forest
   (c) A river
   (d) A railway line
   (e) Bondeni, Race Track and Freehold estates
   (f) The show ground
   (g) Menengai Forest.
3. Describe the siting of Nakuru town.
4. Photograph D was taken in January 1969 while Map No. 4 is 1997 edition. Identify on the map changes that have taken place on the actual ground since 1969.

Photograph F

Photograph F shows part of Mombasa island and the west mainland. Using this photograph and with reference to Map No. 5 of Mombasa, answer the following questions.

1. Draw a rectangle to represent the photograph. On the rectangle, mark and name the following



Formative exercises that appear after every concept and give the learners a chance to gauge their understanding of the concepts.

Exercise 6

Study Map No. 10 of LUMBWA and answer the following questions.

1. (a) Identify and state the methods used to represent relief on this map.
   (b) Describe the relief of the area shown by the map extract.
2. (a) Name three types of vegetation shown on the map.
   (b) Describe the distribution of vegetation in the area represented by the map extract.
3. Describe the drainage of the area shown in the map extract.

Exercise 1

1. Categorize all the photographs appearing in this book.
2. Study Photograph 1.2. Describe the vegetation shown.
3. Explain the uses of aerial photographs.

7 QR code usage guide

8 How to find us

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