

SENIOR SCHOOL CATALOGUE



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Feeling a little lost with the Competency-Based Education (CBE)?

Don't worry — you are not alone! At Oxford University Press, we're here to guide and support you every step of the way. Whether you are a teacher, a student, or a parent, we are committed to making your CBE journey clear, confident and successful.

As you step into Grade 10 under the Competency-Based Education, we understand that this stage brings new expectations, deeper learning and greater opportunities for growth. At Oxford, we are proud to walk you every step of the way.

The **Oxford Grade 10 series** has been thoughtfully developed to align with the CBE framework, equipping learners with the knowledge, skills and values they need to thrive in school and beyond. Each book is designed to be clear, engaging and practical, helping students connect what they learn in class to the world around them.

To our **learners**, we believe in your potential. These books are more than just pages, they are your companions in discovery, creativity and achievement.

To our teachers, we recognize your vital role in shaping young minds. Our resources are crafted to support your teaching with structured content, assessment tools, and real-life applications that make learning meaningful and manageable.

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Learner's Book – Grade 10

Oxford Head Start English is a series specially written to provide practical experiences that support the acquisition of skills for the Competency Based Education. Books in the 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).

Oxford Head Start English, Learner's Book Grade 10 has:

- **Numerous interactive activities** to enable learners acquire the four language skills – listening, speaking, reading and writing – as well as use grammar in use.
- **Read and learn sections** that provide explanations for different language concepts.
- **Extensive and intensive reading activities** to help the learner acquire reading skills such as comprehension and fluency.
- **Knowledge quest** aimed at engaging the learners outside the class through non-formal learning, digital activities and parental engagement and empowerment.
- **Assess yourself sections** that offer the learners an opportunity for self-evaluation.

Knowledge quest is aimed at engaging the learners outside the class through non-formal learning, digital activities and parental engagement and empowerment.

Knowledge quest

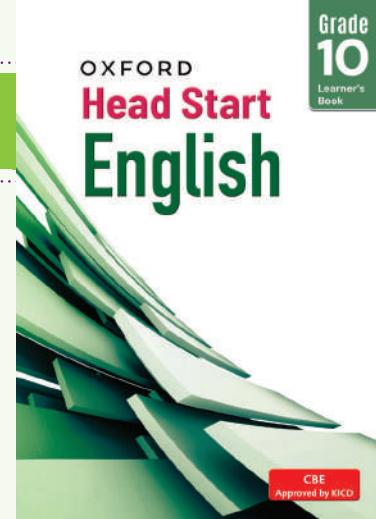
Search the internet for a video clip on table etiquette. Watch it and retell the information in your own words.

Read and learn sections that provide explanations for different language concepts.

Read and learn

The primary difference between the vowel sound in the word **port** and the one in word **pot** is mainly length. The vowel in **port** has a long vowel sound; it is prolonged when pronounced. The vowel sound in the word **pot** is shorter; it is pronounced more quickly.

Another pronounced difference is that in saying the vowel sound in **port**, the lips are more rounded compared to when pronouncing the vowel sound in **shot**.



Numerous interactive activities

Enable learners acquire the four language skills – listening, speaking, reading and writing – as well as use grammar in use.

(A) Listening and speaking

Extensive listening

Activity 1.1 Listen and describe

1. Listen as your teacher plays a recording of a dialogue and then answer the following questions.
 - What is the title of the dialogue?
 - What is the name of the guest?
 - Where does the conversation take place? Give a reason for your answer.
 - What event caught your attention in the recording?
 - Describe the characters in the dialogue.
 - Which of the characters do you admire? Give a reason.
 - What do you think the guest should have done differently?
2. Discuss why it is important to be polite even when you are disappointed.
3. Dramatise the dialogue you have listened to. You do not have to use the exact words used by the characters.
4. Summarise the events in the dialogue.

Speaking – Etiquette

Activity 1.5 Appropriate meal etiquette

1. In groups, role-play the conversation below.

Food manners	
Njamba:	Excuse me, Nameyan.
Nameyan:	Yes, what can I do for you?
Njamba:	I just wanted someone to chat with as I wait for the food queue to move.
Nameyan:	(chuckling) I am all yours.
Njamba:	I am so happy that many of our cousins were able to attend the family meeting this year.
Nameyan:	Me too. However, it makes me worried that we might run short of food and drinks.
Njamba:	Your concern is valid but there is no need to worry, Nameyan. There is enough food for us all.



Pronunciation

Activity 1.4 Practise pronunciation

1. Say the pairs of words below after the teacher. What do you notice about the pronunciation of the vowel sounds?

caught – cot	sought – sot	stalk – stock
court – cot	forks – fo	cork – cock

2. Say the tongue twisters below.

(a) They caught a dog in a cot by the port.

(b) Short shorts were sought but they were not in stock.

Assess yourself sections that offer the learners an opportunity for self-evaluation.

Assess yourself

For each of the statements below, respond with Yes or I have a challenge.

- I can identify key information from a listening text.
- I can describe characters, places and events from a recording.
- I can recount a story or a dialogue.
- I can listen to texts for general understanding.

Where you have challenges, seek help from the teacher or your classmates. You can also use the reference materials to search for more information.

Grammar in use

This 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.



Grammar in use

Common and proper nouns

Activity 1.11 Language in context

1. Read the passage below and note how the highlighted words are used.

Visiting and thanking **people** is **key** to social **etiquette**. When **Emma**, for **example**, visits her **grandmother** in **Samburu** in **December**, she always remembers to buy her a **gift**. Every year in **April**, **Emma's** **cousin**, **Ahmed**, visits her in **Meru**. Last year, their **uncle**, **Majid**, drove them through the **Aberdare National Park**. They saw many **animals** and **waterfalls**. When they got **home**, **Emma's** **mother** gave them **fruits** to take to their uncle and thank him. She told them, "These simple **courtesies** every **day**, help build good **relationships**."

2. Group the highlighted words into those that name:
(a) specific people, days and places,
(b) general people, places, things and ideas.

Teacher's Guide – Grade 10

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- a clear introduction to the Competency Based Curriculum,
- sample professional documents,
- supportive strategies for including learners with special needs,
- practical tips on classroom management, group work and differentiated instruction,
- in-depth guidance on implementing Competency Based Assessment
- step-by-step teaching guidelines for every activity,
- answers to the activities.

Together with the Learner's Book, this guide equips both teachers and learners with the tools they need to thrive under the CBC.

Oxford, your companion for success!

Kukuza Uwezo wa Lugha kwa Njia ya Kina na Shirikishi

Oxford Kiswahili Fasaha ni mfululizo wa vitabu vilivybuniwa kwa ufanisi ili kukuza ujuzi wa lugha ya Kiswahili kwa njia ya kina, ya kuvutia, na inayozingatia mtaala wa msingi wa umahiri (CBE).

Vipengele Muhimu

1. Uendelezaji wa Ujuzi wa Lugha

- Hukuza stadi za kusikiliza, kuzungumza, kusoma, na kuandika.
- Sarufi inafundishwa kwa muktadha unaoeleweka na kutumika katika maisha halisi.

2. Sehemu ya Zinduo

- Hutoa maelezo ya wazi ya dhana kuu kabla ya kuanza shughuli.
- Husaidia wanafunzi kuelewa misingi ya mada husika.

3. Shughuli za Elimujamii

- Huchochea ujifunzaji nje ya darasa.
- Huhusisha jamii na mazingira ya mwanafunzi katika mchakato wa kujifunza.

4. Dijitika (Teknolojia ya Kidijitali)

Shughuli za kidijitali huimarisha uelewa wa teknolojia na ujuzi wa karne ya 21.

5. Mchoro na Rangi

Picha za kuvutia na rangi kamili husaidia kuelewa dhana kwa urahisi.

6. Tathmini ya Mwanafunzi

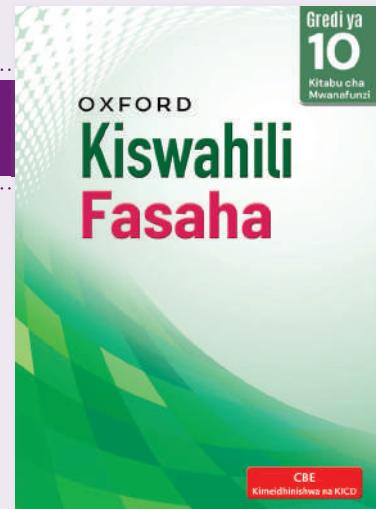
Sehemu za kujitathmini huwezesha wanafunzi kufuutilia maendeleo yao binafsi.

7. Sehemu ya Tafakari

Huchochea mwanafunzi kutumia maarifa alijoifunza kuboresha maisha yake na jamii.

8. Mwongozo wa Mwalimu

Kila kitabu cha mwanafunzi kinaambatana na mwongozo wa mwalimu kwa ajili ya kupanga na kuendesha masomo kwa ufanisi.



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

Tathmini binafsi

- Kwa makadirio yako, sema iwapo **unaweza** au **bado** **unahitaji** **usaidizi** kwa kurejelea vigezo vifutatavyo.
 - Ninaweza kueleza maana ya ujumbe na fani katika matini simulizi.
 - Ninaweza kutabirii ujumbe wa matini simulizi kwa kuzingatia anu au picha.
 - Ninaweza kutambua ujumbe katika matini simulizi niliyosikiliza.
 - Ninaweza kuchambua vipengele vya fani katika matini simulizi niliyosikiliza.
- Kama bado kuna mambu usiyoweza kuyafanya katy ya 1(a) – (d), basi shauriana na mwalimu wako ili akuelekeze.

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

Zingatio

Kusoma kwa ufasha ni kusoma matini kwa namna ambayo wasikilizaji wanawea kupata ujumbe jinsi uliyokusudiwa na mwandishi. Kusoma kwa ufasha hujumuishwa vifutatavyo.

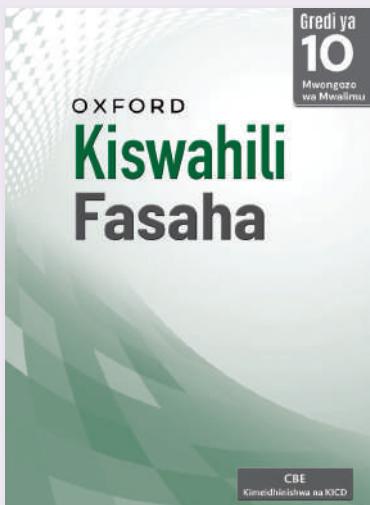
(a) **Matamshi bora:** Msomaji ayatanki maneno yote kwa usahili. Matamshi bora humsida misikilizaji kupata ujumbe uliyokusudiwa. Kwa mfano, iwapo msomaji atamka neno 'babu' badala ya 'papa' katika sentensi 'Mvuu alimvua papa mkubwa baharini', ujumbe uliyokusudiwa utakuma umepotoka.

(b) **Kiwango kiafacho cha sauti:** Msomaji asome kwa sauti inayosikilika vyema na wasikilizaji. Sauti inayofanu na wastani. Ni lazima sauti inayotumika iwfikie wote wainao lengwa. Sauti kiwango ya juu sana itawakera wasikilizaji na ikiba ya chini sana hataksikila na kila mtu anayelengwa.

(c) **Kasi Ifaayo:** Msomaji asome kwa kasi ya wastani. Kusoma kwa haraka sana kunawea kumfanya misikilizaji asipate ujumbe unoakusudiwa. Aidha, kusoma polepole sana kunawea kumfanya kuchoshwa misikilizaji. Katika kiwango hiki, kasi ya kusoma ifaayo ni ya maneno sahihi yasiyopungua mia moja na ishirini (120) kwa dakkila moja.

(d) **Kiimbo:** Kiimbo ni kupanda na kushuka kwa sauti wakati wa kutamka sentensi ili kubainisha maana yake. Alama za uakifishaji zilitotumika mwishoni mwa sentensi huelekeza kiimbo kitakachotumiwa. Sentensi moja inaweza kuwa na maana tofauti kutegeemea kiimbo. Sentensi 'Amenuna simu', kwa mfano, inaweza kuwa swali, mshangao au taarifa kutegeemea kiimbo kinachotokana na uakifishaji wake.

(e) **Vizitada lugha:** Hizi ni ishara ambazo hutumika kusaidia ujumbe kueleweka. Hivi hujumuishwa ishara za uso na mikono.



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

Shughuli ya 1

- Mkiba wawiliwawili, someaneni sentensi zifuatazo kwa zamu.

A	B
(a) Majirani wale wanapendana kama chanda na pete.	(a) Majirani wale wanapendana sana.
(b) Mzee Kiriori ni kobe safarini.	(b) Mzee Kiriori hutembea polepole.
- Kati ya sentensi zilizo katika safu ya A na safu ya B, ni zipo ambazo zimetumia lugha yenyi mwuto? Elezaneni huku mktioa sababu za majibu yenu.
- Elezaneni mbini za lugha zilitozumia katika sentensi zilizo katika nambari ya 1.
- Mkiba katika vikundi, fanyeni mambo yafuatayo.
 - Elezaneni maana ya fani katika matini simulizi. Mnaeweza kutafuta katika vitabu vya marejoleo au kwenye mtandaola salama.
 - Tajanieni vipengele vya fani mnavyovivjia.

Tudijitike ni sehemu yenyeye 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.

Tudijitike

Mwalimu atawachezea rekodi ya matini. Isikilizeni kwa makini.

- Jadilini vipengele vya fani vifuatavyo kama vinavyoitokeza katika matini mliyoisikiliza katika nambari ya 1.
 - msuko
 - wahusika
 - mandhari
 - matumizi ya lugha



Mwongozo wa Mwalimu – Gredi ya 10

Kiswahili Fasaha ni msururu ulioandikwa kwa njia ya kipekee na unaokidhi mahitaji yote ya Mtaala wa Kiumilisi. Vitabu katika msururu huu vina shughuli anuwai ambazo zinalenga kumsaidia mwanafunzi kupata umilisi, maadili na masuala mtambuko yanayokusudiwa katika mtaala.

Mwongozo huu wa mwalimu una:

- Utangulizi kuhusu Mtaala wa Kiumilisi
- Muhtasari wa umilisi, maadili na masuala mtambuko yaliyoratibiwa kukuzwa
- Mifano ya vifaa vya kutathmini na jinsi ya kuviardaa vifaa hivyo
- Mapendekezo kuhusu mbinu bora za ufunzaji na ujifunzaji
- Jinsi ya kuwashudumia wanafunzi wenyewe mahitaji maalumu
- Nyaraka za kitaaluma
- Maelekezo kuhusu jinsi ya kuwashusisha wanafunzi katika shughuli za kijamii.

Mwongozo huu pamoja na Kiswahili Fasaha Kitabu cha Mwanafunzi

Gredi ya 10 ni nyenzo muhimu zitakazokuwezesha wewe na wanafunzi wako kufaulu katika Mtaala wa Kiumilisi.

Oxford, mshirika wako katika ufanisi!

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. Watagusane na vifaa hivyo katika kufanya shughuli husika.

Kiangaza

Je, ni mambo gani ambayo unazingatia ili kutambua ujumbe katika matini simulizi unayoisikiliza? Jadilini kama darasa.

Learner's Book – Grade 10

Oxford Core Mathematics Today is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency-Based Education**. Books in the 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).

Oxford Core Mathematics Today, Learner's Book Grade 10 provides:

- **Introduction sections** aimed at helping learners appreciate the application of the concepts learnt in the sub strands to real life.
- Numerous **interactive activities** to enable learners acquire practical skills to solve real-life problems.
- **Learning point sections** that provide explanations on concepts learnt.
- Numerous **assessment exercises** for self-evaluation by the learners.
- **Extended activity sections** to enable learners engage their families in the learning process.
- **Digital activity sections** to enable learners apply ICT in learning.

Interactive activities that enable learners to acquire practical skills to solve real-life problems.

Activity 1 Group work

1. (a) Write down the ages of learners in your group.
(b) Classify each age as either even or odd number.
2. (a) Let each learner in your group write down a number.
(b) Classify each number you have written as either even or odd number.

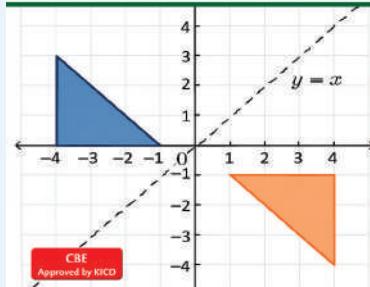
Activity 4 Group work

1. Make a number spinner like the one shown on the right.
(a) Spin the spinner once.
(b) Determine the probability of the arrow stopping at:
(i) 3 (ii) 4 (iii) 6
(c) Determine the probability of the arrow stopping at:
(i) red (ii) blue (iii) yellow (iv) green



Activity 6 Group work

1. Determine the reciprocal of 1.56 using a calculator as follows:
(a) Press the keys $1 \cdot 5 \cdot 6$ in that order.
(b) Press the keys $x^{-1} =$ in that order.
(c) What is the reciprocal of 1.56 from the calculator?
2. Use a calculator to determine the reciprocal of other different numbers.



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

Digital activity

1. Connect the external storage device to a computer.
2. Open the **Statistics and Probability** folder and then the **Probability** folder.
3. Work out the questions.

Learning point that provides explanations on concepts learnt through the interactive activities.

Learning point

Figures are said to be similar if they have the same shape, irrespective of their sizes. Two figures are similar if:

- (a) the corresponding angles are equal.
- (b) the ratio of the corresponding sides is a constant.

QR codes are provided at the end of each sub strand and at the back cover of the book. The codes give access to interactive exercises by scanning the code using a QR code scanner.

Digital activity

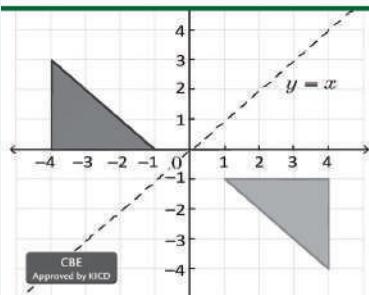
1. Scan the QR code.
Alternatively, search the following link:
<https://www.oxford.co.ke/grade9/mathematics/data%20handling%20and%20Probability>
2. Select **Probability** and work out the questions.



Extended activities section allows learners to engage family members in learning. They promote parental engagement and empowerment in learning.

Extended activity

Using the knowledge of statistics, collect data on the number of days in a week your family eats proteins, carbohydrates and vitamins. Together with your peers, represent the data you have collected. You can also guide your family members on the importance of eating a balanced diet.



Teacher's Guide – Grade 10

Oxford Mathematics Today is a series specially written to provide practical experiences that support the acquisition of skills for the Competency-Based Education. Books in this series provide a range of activities that learners will find exciting and motivating. The activities are aimed at enabling the learner to acquire the core competencies and values as well as explore the Pertinent and Contemporary Issues (PCIs).

This Teacher's Guide supports the teacher by offering the following.

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- A sample lesson presentation to assist the teacher to plan the lessons.

- Helpful hints on class management, group work and differentiated learning.
- Helpful hints on how to handle learners with special needs during the lessons.
- Detailed guidelines on both formative and summative assessment.

Together, the Learner's Book and the Teacher's Guide provide learners and teachers with all they need to succeed in the competency-based education.

Oxford, your companion for success!

Introductions that relate what learners will cover in a given sub strand to real life.

Introduction

To make house plans, to print pictures in photography and to make maps, we can use the knowledge of similarity and enlargement.

Learner's Book – Grade 10

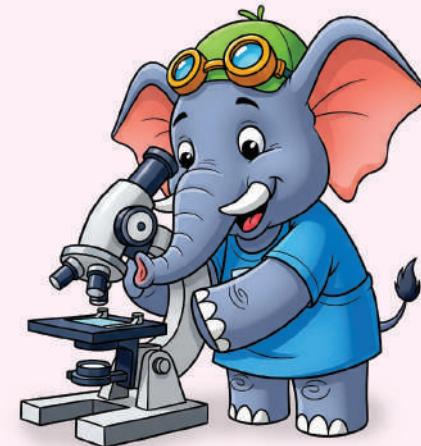
Oxford Biology Today is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the series have a wide range of activities that learners will find exciting and motivating.

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Oxford Biology Today, Learner's Book Grade 10:

- Is written in **simple language** that makes it easy for the learners to understand the concepts.
- Contains **well-designed activities** and **thought-provoking questions** that prompt learners to think about real-life issues and find solutions to problems.
- Has **full-colour pictures** that work closely together, offering excellent language and conceptual support.
- Develops **knowledge and practical skills** that are essential at school and in the community.
- Includes **assessments** at the end of each sub strand that give the learners an opportunity to test their understanding of the concepts covered in each topic.



Interactive activities

The activities are well researched, relevant, creative and fun. They enable learners to acquire key competencies. The activities range from **group discussions, experience sharing, interpretation of pictures** and use of resource persons.

Activity 5 Discuss with a resource person the careers opportunities in the fields of study in Biology and the factors that influence career choices

Work as a class

Requirements: A resource person, writing materials.

Instructions

1. Visit an institution such as a hospital, pharmacy, agricultural centre, college, environmental office, forest reserve or veterinary centre.
2. Identify the various careers of the people working in the institution and find out how the fields of study in Biology relate to their careers.
3. Talk to a resource person working in a career related to a field of study in Biology about his or her career and other career opportunities related to the fields of study in Biology.

Note

You can also listen to the resource person through a video call.

4. Discuss with the resource person, the factors that led them to pursue their career. Discuss also the factors that should not influence career choices.
5. Share, with the resource person, about a career related to the fields of study in Biology that interests you most. Talk about why that career interests you.
6. Note down your findings and discuss them when you get back to class.

Project

This section allows learners to apply what they have learnt in class to solve real-life problems. It also builds high order skills of synthesising, analysing and creating.

Project

Model the structure of animal and plant cells as seen under the electron microscope

1. Using suitable sources of information such as textbooks, relevant pictures or the internet, search for information on models of plant and animal cells as seen under the electron microscope.
2. Study 3D models and take note of how the various cell organelles and structures have been modelled.
3. Discuss and choose suitable models of plant and animal cells you can create. Your models can either be 2D or 3D.
4. Draw a sketch of the models, showing the various cell components and structures.
5. Discuss the locally available materials you can use to construct your models. Such materials can include cardboard, clay, leaves, bottle tops, small sticks, bottles and papers.
6. Assemble the materials and use them to create each component of the cells as outlined in your sketch.
7. Place each component on the different sections of the models according to your sketch. Create labels and assign each component or structure accordingly.
8. Present your models in class. Explain the functions of the different organelles and structures of your models. You may take photographs and store them in your biology portfolio.



Figure 1.35 Models of animal and plant cells



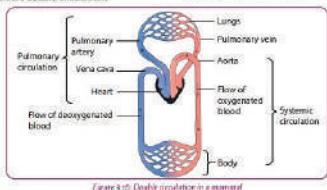
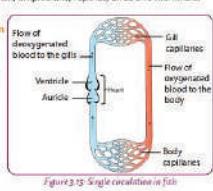
Notes

There are summary notes appearing after every activity. They explain the concept further and answer the key inquiry questions. They are also used to conclude the concept learnt.

A closed transport system consists of a transport fluid which is confined within **vessels**, and a pumping mechanism which consists of the heart. The main type of closed transport system in animals is the **blood circulatory system**. Closed transport systems are found in all **vertebrates** such as fish, amphibians, reptiles, birds and mammals.

The closed transport system is further divided into **single circulation** and **double circulation**. In single circulation, blood flows through the heart once in every complete circuit. Organisms with this type of circulation include fish. Figure 3.15 illustrates single circulation.

In double circulation, blood flows through the heart twice in every complete circuit. Organisms with this type of circulation include reptiles, birds and mammals. Figure 3.16 illustrates double circulation.



Read ahead

These are activities meant to enable learners to research concepts that are new before they are introduced in class. They infuse digital literacy as learners are use the internet and other digital resources and develop the competencies of self-efficacy and learning to learn.



Work individually

Using relevant textbooks and digital devices, search for information on the following mechanisms of opening and closing of the stomata:

- (a) The photosynthetic theory
- (b) The starch-sugar interconversion theory
- (c) The potassium ions theory

Write short notes explaining how each mechanism takes place. Discuss your findings during the next lesson.

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Oxford, your companion for success!



CHEMISTRY TODAY

Learner's Book – Grade 10

Oxford Chemistry Today is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the 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).

Oxford Chemistry Today, Learner's Book Grade 10 has:

- Content that is structured according to the **strands** and **sub strands** as outlined in the Competency Based Education.
- Numerous and varied activities** that facilitate learning by discovery through teamwork and collaboration.
- Why study about sections** that explain the importance of learning certain concepts in Chemistry and the application of the knowledge and skills acquired in day-to-day life.
- Key points sections** that summarise the concept learnt to enable quick revision and reflection.
- Quick assessment sections** that provide questions that the teacher and learners can use to assess the understanding of concepts covered in a lesson.
- Evaluation tests** that the teacher and learners can use to assess the understanding of concepts in each sub strand.
- Self-assessment sections** that learners can use to assess their own learning.

Varied activities

These are structured experiences to facilitate acquisition of knowledge and skill development. They include experiments, discussion activities and digital activities. All activities are designed to promote learning by discovery.

What is Chemistry?

Activity 1 To discuss the meaning of Chemistry

Requirements

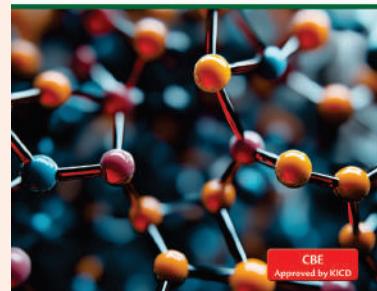
Print media such as Chemistry textbooks that have information on the meaning of Chemistry, digital devices and internet access.

Instructions

1. Brainstorm the meaning of the word 'Chemistry'.
2. Find the meaning of the word 'Chemistry' from the relevant print media available. You can also search the meaning of the word from the internet.
3. Discuss and agree about the meaning you have found with other members of your group.
4. Write the meaning in your exercise book and present it to the rest of the class.
5. Listen to the presentations from the other groups.

Grade
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Why learn about?

Each sub strand begins with a **"Why Learn About?"** section that connects chemistry concepts to everyday life.

Examples include:

- Understanding atoms as building blocks of matter.
- Exploring chemical processes in industries and environmental conservation.
- Applying chemistry in careers such as pharmaceuticals, forensic science and environmental management.

Why learn about the atom?

Atoms can be compared to bricks or blocks in a building. Without the blocks, the building will not stand. Similarly, atoms are the building blocks of all matter. Learning about atoms will help you to understand the changes that occur in matter under different conditions. It will also help you to understand how different substances interact and combine to form new substances and materials that we use in day-to-day life.

Quick assessments

Assessments that comes after every outcome. They provide instant feedback on whether the outcome has been achieved, enabling the teacher to find out what went well and what needs improvement right away.

Quick assessment 1

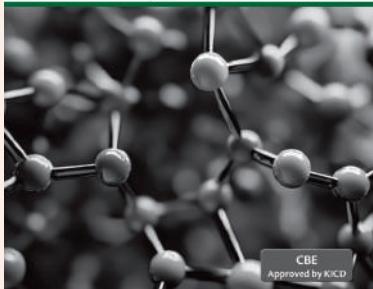
1. What do you understand by the term Chemistry?
2. Why is Chemistry organised into branches?
3. Identify three branches of Chemistry and explain what each of the branches entails.



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Chemistry Today

Grade 10
Teacher's Guide



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Key points

Short notes at the end of every concept. They help the learners to grasp the main ideas quickly and effectively. They also help them to recall important ideas.



Chemistry is the study of composition, structure and properties of matter and the changes that matter undergoes. **Matter** refers to everything around us including air, plants, animals, water, stones and soil.

Self-assessments

Sections that enable learners to reflect on their understanding and progress. They also help the teacher identify areas where individual learners need support, hence prepare individualised education programmes to assist them.

Self-assessment

- Find out if you can do the following:
 - State the meaning of Chemistry as a field of science.
 - Describe the role of Chemistry in day-to-day life.
 - Explain the effects of drug and substance use in day-to-day life.
 - Explain the rights and responsibilities to a safe and healthy learning environment.
- Consult the teacher in the areas where you have challenges.

Evaluation tests

These are tests at the end of every sub strand. They are designed to assess the learner's understanding of concepts and acquisition of skills in the sub strand.

Evaluation test 1.1

- We experience Chemistry in many aspects of our daily life. Explain this statement giving four examples.
- Chemistry leads to very interesting and life-saving careers. State three such careers and explain what each entails.
- James went to hospital and was given medicine with the following instructions.

Take 5 ml 4 times a day.

Study it and answer the questions that follow:

- What is the dose?
- After how many hours should James take the medicine?
- What is the route of administration of the drug?
- What is likely to happen if James:
 - takes 5 ml 2 times a day?
 - takes 10 ml 4 times a day?

Teacher's Guide – Grade 10

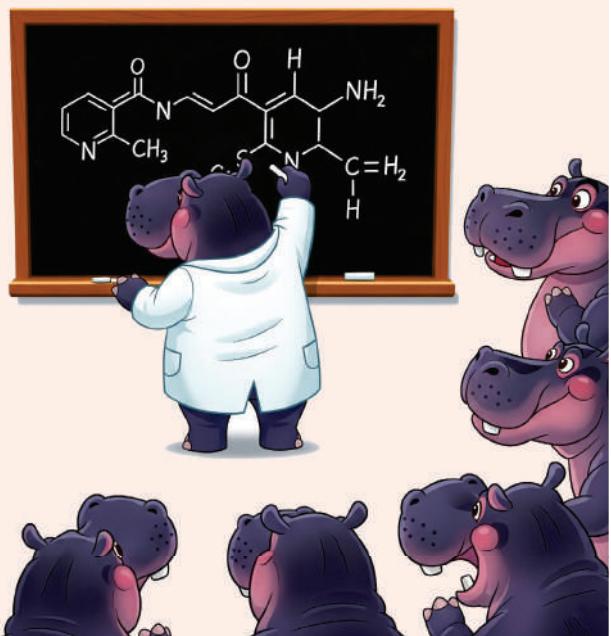
Oxford Chemistry Today is a series specially written to provide practical experiences that support the acquisition of skills for the competency-based Education. Books in this series provide a range of activities that learners will find exciting and motivating. The activities are aimed at enabling the learner to acquire the core competencies and values as well as explore the Pertinent and Contemporary Issues (PCIs).

This **Teacher's Guide** supports the teacher by offering the following.

- A detailed **introduction** to the Competency-Based Education.
- Comprehensive **teaching guidelines** for each activity.
- A **sample lesson presentation** to assist the teacher to plan the lessons.
- Helpful hints on class management, group work and differentiated learning.
- Helpful hints on how to handle learners with **special needs** during the lessons.
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GENERAL SCIENCE TODAY

Grade
10
Learner's
Book

Learner's Book – Grade 10

Oxford General Science Today is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the 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).

Oxford General Science Today, Learner's Book Grade 10 has:

- **Numerous activities** that are structured to enable learning through engagement, discovery and hands-on approach.
- **Key points sections** that summarise the concept learnt to enable quick revision and reflection.
- **Get started section** at the beginning of every strand to stimulate learner's interest.
- **Warm-up activity** at the beginning of each sub strand to jog the learner's mind.
- **Numerous Practice Exercises** to enable learners acquire scientific skills to solve problems.
- **Further activity** aimed at encouraging learning outside the classroom.
- **Discussion questions** to enhance critical thinking and problem solving skills in learners.
- **Know more sections** that provide a platform for interesting facts.
- **Self-evaluation sections** that provide an opportunity for learners to assess themselves based on the content covered.

Warm-up activity that 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 form a mental picture of what they are expected to learn in the sub strand.

Warm-up activity

1. Which career would you like to pursue in future? Is the career related to the study of General Science?
2. Describe how the knowledge and skills you acquired in Junior School will support your career goals.

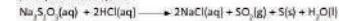
OXFORD General Science Today



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

Key Points

The reaction between sodium thiosulphate and hydrochloric acid forms a yellow precipitate of sulphur.



An increase in temperature means that more energy is supplied to the particles which then move at greater speeds thus increasing the rate of reaction.

Figure 5 (a) shows a graph of temperature against time. From the graph, it is evident that at high temperatures, less time is required to produce the sulphur. The graph of temperature against $1/t$ is a straight line as shown in Figure 5(b). This shows the rate of reaction increases with increase in temperature.

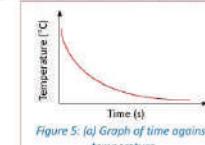


Figure 5: (a) Graph of time against temperature

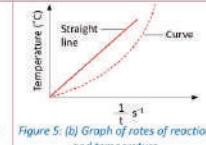


Figure 5: (b) Graph of rates of reaction and temperature

Note: Graphs involving $1/t$ are not always straight lines. This depends on the type of reaction.

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.

Activity 9 To investigate the effect of pressure on the rate of reaction

Requirements: 50 cm³ gas syringe with stopper, nitrogen (IV) oxide gas generator, a notebook and a pen.

Instructions: Your teacher will demonstrate this experiment.

Caution! Nitrogen (IV) oxide is poisonous.

Procedure

1. Set up the apparatus as shown in Figure 9.
2. Collect nitrogen (IV) oxide in 50 cm³ gas syringe with stopper.
3. Allow the gas to attain room temperature. Record the colour change of the gas.
4. Slowly push the piston and note any change in the colour of the gas.

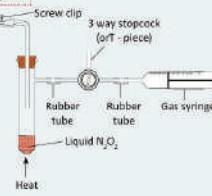


Figure 9: Experimental set-up

Discussion questions, Did you discover and Explanations sections aimed at helping learners understand what they should have discovered during experiments.

Discussion questions

- Why is it necessary to cut the leafy shoot under water?
- Suggest the purpose of the petroleum jelly.
- Why is the water allowed to run out of the reservoir?
- Account for the results of the experiment.

Did you discover? As the leafy shoot take up water, the air bubble moves along the glass capillary tube. The speed of movement of the air bubble along the capillary tube corresponds to the uptake of water.

When the air bubble moves along distance within a short period of time, it indicates that the rate of water uptake by the leafy shoot is high. This also means that the rate of water loss through transpiration is high and vice versa.

Explanation: When setting up the potometer, the stem of the leafy shoot is cut while still under water to prevent an air bubble from entering the xylem vessels. The air bubble can block the xylem vessels and hence interfere with the uptake of water. A slanting cut is made on the stem to increase the surface area for water uptake.

Petroleum jelly is applied around the hole in the bung to keep the set up airtight. Before reusing the potometer, the reservoir is emptied to reposition the air bubble at the beginning of the scale in the capillary tube.

Know more section which provides a platform for interesting facts.

Know more

Auxin hormones in plants cause **apical dominance**. Apical dominance is the inhibition of the growth of lateral buds in the shoot tip. This phenomenon is employed in agriculture during pruning.

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

Self-Evaluation

For each of the following statements, evaluate your ability by responding with **Yes** or **I have a challenge**. I can:

- describe rate of chemical reactions.
- perform experiments involving the rate of chemical reactions.
- explain factors that influence the rate of reactions in biological, chemical and physical processes.
- appreciate the importance of manipulating factors affecting the rate of chemical and biological processes in day-to-day life.

Seek the help of your teacher or classmates in areas where you have challenges. You can also look for more information from relevant textbooks or use digital devices with internet connection.

Further activities that provide additional activities learners will engage in to enhance both formal and non-formal learning.

Further activity

During your science club meeting, organise a debate on the factors that affect rates of chemical reactions. Note the points presented.

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

Introduction

Natural physical science is the branch of science that studies non-living systems, natural phenomena and the fundamental laws of nature. It helps to explain how the universe functions by studying force, motion, waves and magnetism. By studying Natural Physical Science, we gain a deep understanding of the natural world and the physical laws that govern it.

Teacher's Guide – Grade 10

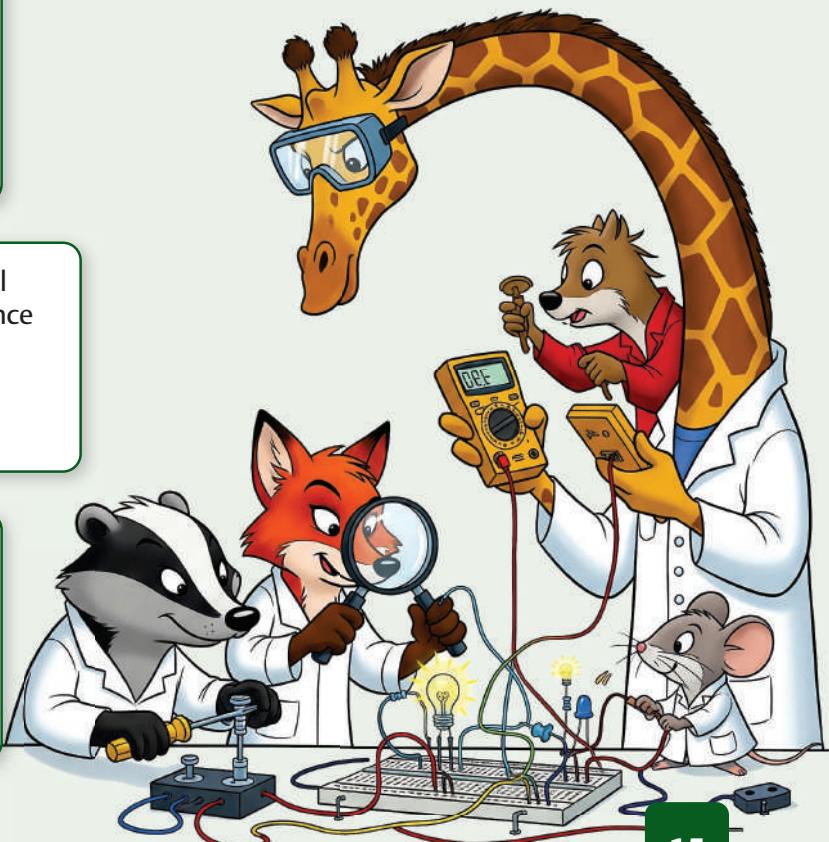
Oxford General Science Today is a series specially written to provide practical experiences that support the acquisition of skills for the competency-based Education. Books in this series provide a range of activities that learners will find exciting and motivating. The activities are aimed at enabling the learner to acquire the core competencies and values as well as explore the Pertinent and Contemporary Issues (PCIs).

This Teacher's Guide supports the teacher by offering the following.

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Learner's Book – Grade 10

Oxford Active Computer Studies is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the 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).

Oxford Active Computer Studies, Learner's Book Grade 10 has:

- **Strands and sub strands** that are arranged according to the curriculum design.
- **Get started sections** featuring theme images to spark curiosity and activate prior knowledge.
- **Varied interactive activities** that promote learning by discovery.
- **Key points** that summarise concepts learnt for quick revision and reflection.
- **Extended activities** that reinforce and deepen the understanding of concepts.
- **Take away tasks** that promote the application of acquired knowledge and skills in real-life situations.
- **Assessment tasks** at the end of each sub strand that provide valuable feedback for both learners and teachers.

Key points section provide a summary of the concepts that learners are expected to understand after completing an activity. It highlights the outcome achieved and reinforces the knowledge or skills developed through the activity. This section serves as a quick reference for revision and reflection.

 **Key Points**

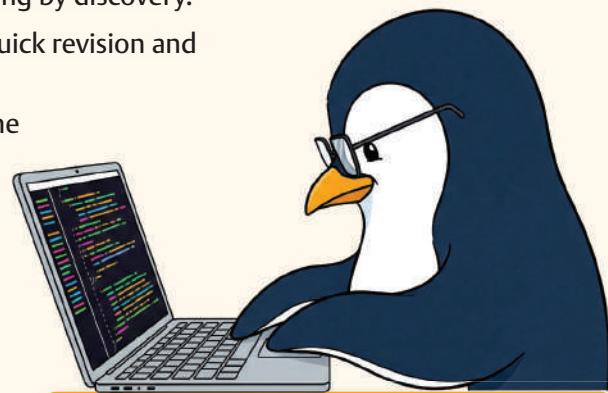
Remote storage refers to a type of data storage that allows users to save and access files from a location other than their local device or computer. This storage is typically hosted on external servers, data centers or cloud platforms and accessed via the internet or a network.

Extended/Further activity section offers additional tasks or exercises that learners can complete to extend, reinforce or deepen their understanding of the concepts learnt in the sub strand.

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Assessment task section appear at the end of every sub strand. Questions in this section are specifically designed to evaluate whether learners have understood the key concepts and skills covered. These tasks provide both the teacher and the learner with feedback on the learning progress and highlights areas that may need reinforcement.

Assessment Task 1.2

1. Which part of the CPU fetches and decodes instructions?
2. What is the function of ALU?
3. Explain the purpose of the Control Unit (CU) in von Neumann architecture.
4. Describe the stored-program concept and why it's important.
5. What are registers and how do they help the CPU?
6. Why does the von Neumann architecture use a single bus for data and instructions?
7. Draw a simple diagram of von Neumann architecture and label its main components.

Further activity

Write simple programs that will accept input and display output in python to calculate the following.

(a) Volume of a cylinder (b) Volume of a cone (c) Volume of a sphere



Get started section appears at the beginning of each strand and serves as an introductory gateway to the strand. It uses a theme picture to give learners a glimpse of what they will explore in the upcoming sub strands. This helps to spark curiosity, activate prior knowledge and engage learners in exploring what they will learn in the strand.

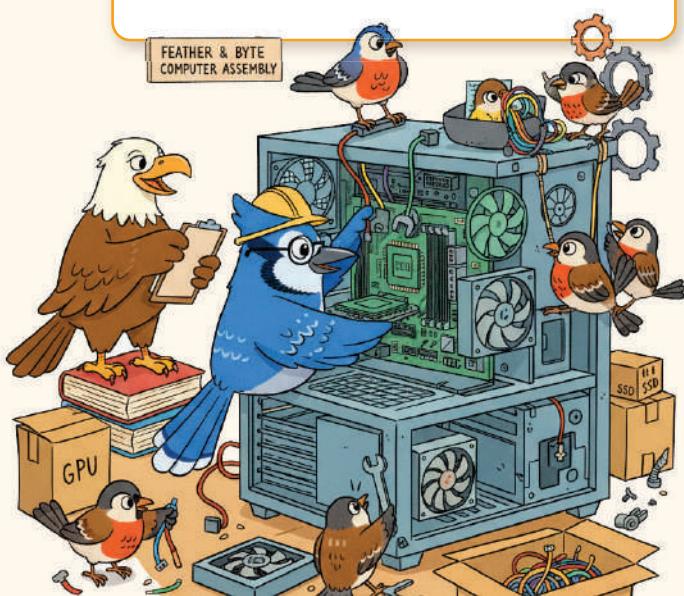
 **Get started**

1. The chart below shows some areas where computer technology is applied today. Think about what used to happen before the advent of computers for each case.



2. What is your opinion about the invention of computers?

 FEATHER & BYTE COMPUTER ASSEMBLY



Teacher's Guide – Grade 10

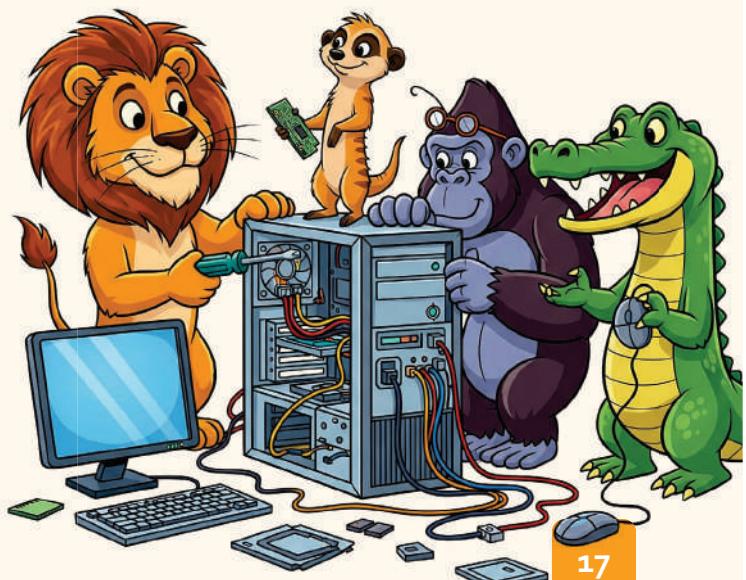
Oxford Active Computer Studies Today is a series specially written to provide practical experiences that support the acquisition of computer technology skills for the competency-based education. Books in this series provide a range of activities that learners will find exciting and motivating. The activities are aimed at enabling the learner to acquire the core competencies and values as well as enhance the Pertinent and Contemporary Issues (PCIs).

This **Teacher's Guide** supports the teacher by offering the following:

- A detailed **introduction** to the competency-based education.
- A comprehensive **teaching guideline** for each activity.
- A **sample lesson presentation** to assist the teacher to plan the lessons.
- Helpful hints on class management, group work and differentiated learning.
- Helpful hints on how to handle learners with special needs during the lessons.
- Detailed guidance on both **formative** and **summative assessment**.
- **Sample assessment tools** to guide the teacher in developing tools for evaluating and recording the learners' progress.

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ESSENTIAL COMMUNITY SERVICE LEARNING (CSL)

Learner's Book – Grade 10

The **Oxford Essential Community Service Learning** is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency-Based Education**. Books in the 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).

Oxford Essential Community Learning (CSL), Learner's Book Grade 10 provides:

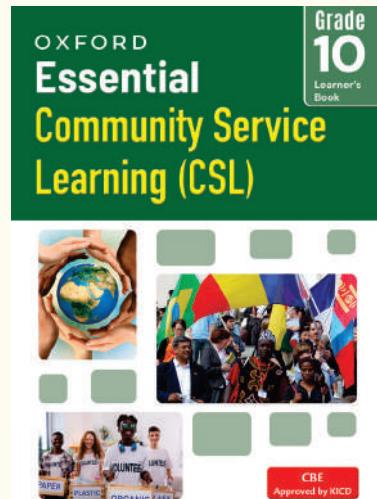
- **Content** that is structured according to the strands and sub-strands as outlined in the Competency-Based Curriculum.
- **Activities** that facilitate learning by discovery through teamwork and collaboration.
- **Learning spots** which provide concise summaries of concepts presented in a variety of ways to enhance understanding.
- **Digital spaces** that integrate technology into learning, encouraging learners to use digital devices to conduct research, watch videos and complete interactive tasks.
- **Talk about it sections** that give learners a chance to discuss contemporary issues related to concepts covered.
- **What about you?** sections that encourage self-reflection and personal assessment, prompting learners to evaluate their behaviour, skills and contributions to society, and develop strategies for improvement.
- **Explore and out of class activities** that foster lifelong learning that goes beyond the classroom, encouraging learners to research and apply skills acquired to develop their communities.
- **Assessment sections** that comprise summative questions to encourage learners to evaluate and assess their own learning.

Assessments

Summative questions help learners evaluate their understanding, test their ability to apply knowledge and measure their progress.

Assessment

1. Explain your understanding of the following terms:
 - (a) Community learning
 - (b) Community service learning.
 - (c) Community service
 - (d) Community service learning.
2. Identify four key principles of community service learning as a learning strategy.
3. Why is reflection important in community service learning? Explain two reasons.
4. Why is it important to examine our own civic identity as members of the community?



Learning Spot Sections

Concise summaries are presented in a variety of ways to reinforce concepts covered in each sub strand.

 **Learning spot**

Action research is cyclical, meaning it is continuous. Each study cycle entails planning, action, observation and reflection phases or stages.

- 1. **Planning phase**
 - Identify the problem: Clearly define the issue you want to address.
 - Set objectives: Determine what you aim to achieve with your research.
 - Develop a plan to address the issue: Outline the steps and methods you will use to collect information (data collection), analyse it, interpret and share the results and intervention action(s) determined.

4. Reflect

- Evaluate effectiveness: Assess whether your objectives were met and what worked well.
- Plan the next steps by deciding on any further actions or improvements based on your reflection.
- Action research is continuous, so use your findings to start the cycle again, for continuous improvement.

2. Action phase

- Implement the plan by carrying out the actions you outlined.
- Keep track of your activities and ensure everyone involved in the research knows their roles.
- Be flexible and ready to make adjustments if things do not go as planned.

3. Observation phase

- Monitor your progress regularly to check how the implementation is going.
- Gather information on the outcomes and any changes or impact observed. Use various methods including observation and interviews.
- Analyse the data collected to understand the impact of your actions.
- Keep detailed records of what you observe for analysis.
- Share the results with stakeholders.

Digital Spaces

Integrating technology into learning. These sections encourage learners to use digital devices to conduct research, watch videos and complete interactive tasks, making learning more relevant and engaging.



Create and maintain a database of community needs, resources and stakeholders for your CSL activities using digital and print resources.

OXFORD Essential Community Service Learning (CSL)



Grade
10
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Guide

Talk about it Sections

These are thought-provoking conversation sections where learners discuss pertinent and contemporary issues affecting them. They analyse different perspectives, assess challenges and collaborate on solutions, thereby acquiring essential life skills to navigate life's challenges effectively.

Talk about it

Biases, stereotypes and misconceptions about our cultures affect us. Reflect on the common stereotypes about your culture. How would you respond to them? Share with a peer. You can also ask them to guide you on how to respond.

Stereotype

I am afraid I cannot assign you this leadership role to avoid disappointment. People from your culture are known to be lazy.

Response

Thank you for sharing your concerns. I believe that judging someone's abilities based on their community is unfair and unlawful. I am confident in my skills and work ethic, and I would appreciate the opportunity to demonstrate my leadership capabilities.

Activities

The book comprises well researched and designed tasks and examples that are creative, fun and intellectually stimulating, thereby promoting evidence based learning. Whether working individually, in pairs, in groups or as a class, learners engage in tasks that encourage them to think critically, collaborate and apply their knowledge to develop essential competencies, nurture values and address PCIs.

Activity 2 Class discussion

1. Study the information below and answer the questions asked.

Focus on people: Its mission is to positively impact people in the community by creating jobs and providing solutions to their problems. As a result, they reinvest their profit to support social causes such as the provision of healthcare and sanitation facilities. *How else does social entrepreneurship impact people?*

Professional practices: It operates according to legal requirements and professional ethics by demonstrating fairness, transparency and accountability to community members and other stakeholders. *What other values do social entrepreneurs uphold?*

Profit making: It earns revenue by undertaking profitable business activities. The profit is reinvested into the project to ensure continuity of the enterprise and make it self-reliant. *Why else is it important for a social enterprise to make profit?*

Conservation of planet earth: It works towards environmental conservation through effective preservation and utilisation of resources, for example, through reusing, reducing and recycling. *How else do social enterprises conserve the planet earth?*

Teacher's Guide – Grade 10

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This Teacher's Guide supports the teacher by offering the following:

- A detailed introduction section highlighting the different aspects of the competency-based education system.
- Comprehensive teaching guidelines for each sub strand.
- Sample professional documents to assist the teacher in planning the lessons.
- Helpful hints on class management, group work and differentiated learning.
- Helpful hints on how to handle learners with special needs during the lessons.
- Detailed guidance on both formative and summative assessment.
- Sample assessment tools to guide the teacher in developing tools for evaluating and recording the learners' progress.

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Explore sections

These sections encourage learning from the community and mentorship as learners engage different stakeholders to deepen their understanding of concepts or develop skills.

Explore

Ask your teacher to guide you to do this activity.

1. Identify members of the school or neighbouring community from different cultures.
2. Engage them in a dialogue to learn about their culture.
3. Find out whether they have any issues (needs or gaps) that affect cohesion and harmony between them and other cultures. List down your findings.
4. Discuss how to overcome the issues raised in 3 to promote social cohesion. You may need to consult members of the communities, research on the internet or read print media.

HISTORY AND CITIZENSHIP

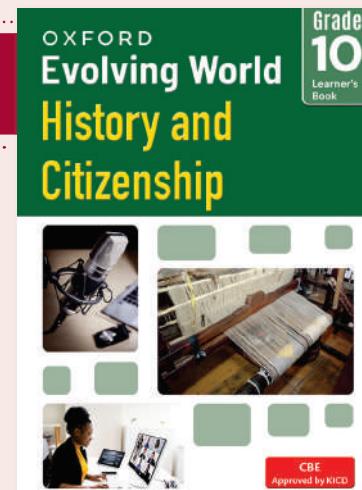
Learner's Book – Grade 10

Evolving World History and Citizenship is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the 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).

Oxford Evolving World History and Citizenship, Learner's Book

Grade 10 provides:

- **Content** that is structured according to the strands and sub strands as outlined in the Competency Based Education Curriculum.
- **Activities** that facilitate learning by discovery through teamwork and collaboration.
- **Learning spots** that provide short summaries that enable the learners appreciate and understand the concepts.
- **Digital spaces** that provide the learners with an opportunity to interact with digital devices.
- **Out of class activities** that enhance learning outside of the classroom, at home and in the community.
- **Remember sections** that present interesting historical facts or important information related to the concept or sub strand.
- **Key words sections** where the learners interact with new vocabulary relevant to the themes in the sub strand.
- **Explore sections** that give learners a chance to discuss contemporary issues related to themes in the curriculum design.

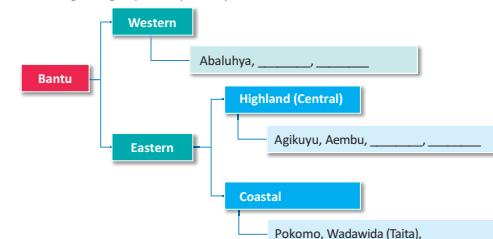


Activities

They 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 3 Group work

Grade 10 learners at Bute Senior School have created the following chart on the Bantu linguistic group in Kenya. Study the chart and do the tasks that follow.



1. Draw the chart above in your exercise books. Complete the chart by adding other communities that belong to each linguistic group. Pick the names of the communities from the bar below.

Abagusii, Ameru, Mijikenda, Akamba, Abakuria, Wataveta, Ambeere, Waswahili.

2. Display your chart in class.

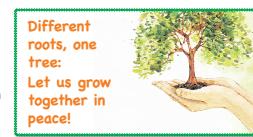
Out of class activities

These sections cover **school, home or community activities** where the learners may research on something and apply the knowledge learnt to solve a problem.

Out of class activity

Community activity

1. Come up with messages or slogans that promote peaceful co-existence in society.
2. Develop posters showing the messages or slogans that you have come up with. See the sample poster on the side.
3. Display your posters in public spaces such as markets or community halls. You may also ask your parents, guardians or older relatives to post the messages on their social media platforms.



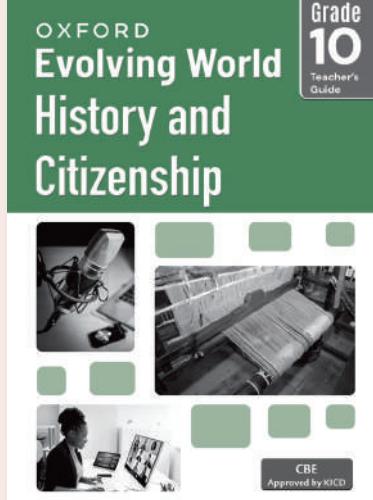
Learning spot

These are summaries that reinforce the learner's understanding of the concept being learnt. They mostly appear after an activity.

Learning spot

The establishment of colonial rule in Kenya offers valuable lessons that help us build a fairer and more harmonious society. It teaches us the importance of inclusive leadership, where everyone's voice is heard and respected. The harsh treatment of Kenyans during colonial times underscores the need to protect human rights and ensure that everyone is treated with dignity. The unfair economic practices of the colonial era remind us that economic policies should benefit all members of society, not just a select few.

The colonial strategy of dividing communities to maintain control shows us the power of unity and collaboration in achieving common goals. By learning from history, we can avoid repeating past mistakes and work towards a more just and equal future.



Teacher's Guide – Grade 10

Oxford Evolving World History and Citizenship is a series specially written to provide practical experiences that support the acquisition of computer technology skills for the competency-based education.

Books in this series provide a range of activities that learners will find exciting and motivating. The activities are aimed at enabling the learner to acquire the core competencies and values as well as enhance the Pertinent and Contemporary Issues (PCIs).

This Teacher's Guide supports the teacher by offering the following:

- A detailed **introduction** to the competency-based education.
 - A comprehensive **teaching guideline** for each activity.
 - A **sample lesson presentation** to assist the teacher to plan the lessons.
 - Helpful hints on class management, group work and differentiated learning.
 - Helpful hints on how to handle learners with special needs during the lessons.
 - Detailed guidance on both **formative** and **summative assessment**.
 - **Sample assessment tools** to guide the teacher in developing tools for evaluating and recording the learners' progress.

Key words

These are sections where the definition of new words or phrases that are critical to the sub strand or concept is done.



De facto – by fact and not by law.

Explore Sections

These are sections where the learners get to explore contemporary issues related to the concepts in the sub strand. It gives provocative but safe topics for the learners to engage and give opinions.



The first phase of Industrial Revolution led to the underdevelopment of Africa.
Do you agree with this statement? Justify your answer.

Together, the Learner's Book and the Teacher's Guide provide learners and teachers with all they need to succeed in the competency-based education.

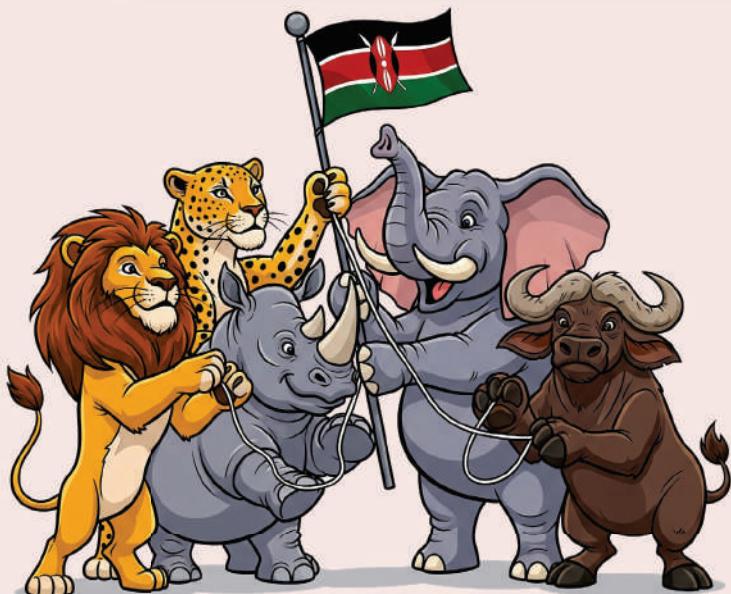
Oxford, your companion for success!

Remember Sections

These are platforms for raising awareness about contemporary issues.



Any person, including you or I, can fall victim to human trafficking. Stay vigilant! Report suspected cases to the authorities.



Digital space

This 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 TV to perform the various tasks.



Work in groups

1. Watch a documentary on the establishment of colonial rule in Kenya. You may also read relevant print materials such as history books, magazines, journals and newspapers. Answer the following questions:
 - (a) Which European country colonised Kenya?
 - (b) When did the colonisation of Kenya begin?
 - (c) What were the reasons for the establishment of colonial rule in Kenya?

Learner's Book – Grade 10

Oxford Active Geography is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the 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).

Oxford Active Geography, Learner's Book Grade 10 provides:

- **Content** that is structured according to the strands and sub strands as outlined in the Competency Based Education Curriculum.
- **Activities** that facilitate learning by discovery through teamwork and collaboration.
- **Learning points** that provide short summaries that enable the learner to appreciate and understand the concepts.
- **Digital spots** that provide the learner with an opportunity to interact with technology, with guidance on using digital devices.
- **Out of class activities** that enhance learning outside of the classroom, at home and in the community.
- **Key words sections** where the learner interacts with new vocabulary relevant to the themes in the sub strand.
- **Discussion spot sections** that give the learner a chance to discuss pertinent and contemporary issues related to themes in the curriculum design.
- **Summary sections** that provide key points for the concepts in each sub strand.
- **Assessment questions** to enable learners to revise the concepts learnt.
- **Reflection sections** that provide the learner with an opportunity for self-evaluation on the specific learning outcomes within a sub strand.

Summary

This section provides key points on the concepts learnt. Summaries appear at the end of every sub strand.

Summary

- A **rock** is naturally occurring solid substance composed of mineral particles. It forms the solid part of the earth's crust.
- The three main types of rocks according to their mode of formation are: Igneous rocks, sedimentary rocks and metamorphic rocks
- **Igneous rocks** are crystalline, have joints or cracks, lack fossils and are either acidic or basic.
- **Sedimentary rocks** have layers, contain fossils and are non-crystalline.
- **Metamorphic rocks** are often brightly coloured, resistant to weathering and may have layers.
- **Igneous rocks** are found in the Kenyan Highlands, the Rift Valley and around the Lake Victoria Basin.

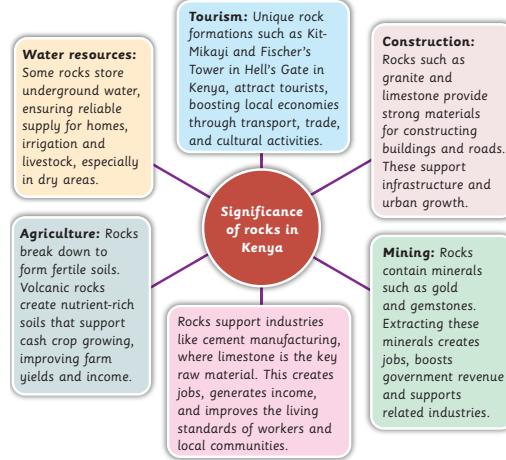


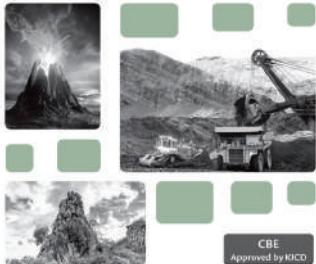
Learning points

- These notes reinforce the learners knowledge on the various concepts covered in the book.
- They appear after an activity and are creatively presented across the book.

Learning point

The chart below gives a summary of the significance of rocks in Kenya.





CBE
Approved by KICD

Discussion spots

These sections prompts the learners to explore pertinent and emerging issues related to the respective sub strands. They also encourage them to apply the skills and knowledge they have acquired.

Discussion spot

Debate this motion: Kenya's economy would be more developed if the country's rock resources were fully utilised.

Follow the instructions below.

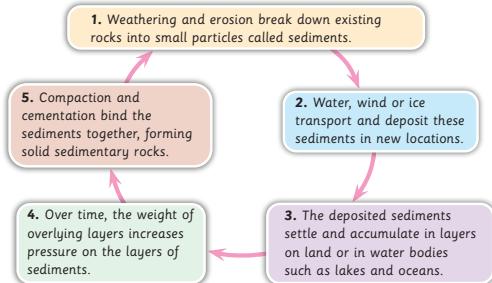
1. Form two groups: Group A will argue in favour of the motion. Group B will present opposing arguments.
2. Debate and discuss: Each group will present its arguments and respond to counterarguments. Take notes on key points from both sides.
3. Summarise the lessons learned from the debate. Your summary should include arguments from both groups. State your personal opinion on the issue, with a supporting reason.

Activities

The activities are well researched, relevant, creative, fun and engaging. They are intended to bring out the various core competencies, values and PCIs.

Activity 4 Group work

1. The diagram below illustrates the stages involved in the formation of some sedimentary rocks. Study it and complete the tasks that follow.



A flow diagram showing the stages of sedimentary rocks formation

Teacher's Guide – Grade 10

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The activities are aimed at acquisition and appreciation of the core competencies, values, and Pertinent and Contemporary Issues (PCIs).

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Oxford, your companion for success!

Assessments

These are summative assessments included in the book to test what the learners have understood throughout a sub strand. They appear at the end of every sub strand.

Assessment

1. Identify the types of folds labelled A to E.

2. Explain the difference between a symmetrical fold and an asymmetrical fold.
3. Describe how overthrust folds form.
4. Explain the significance of folding and the resultant features in:
 - Economic importance
 - Climate
5. Explain two ways in which fold mountains influence human settlement and population distribution.

OXFORD ACTIVE BUSINESS STUDIES

Learner's Book – Grade 10

Oxford Active Business Studies is a dynamic and learner-centered series crafted to equip students with practical skills and relevant knowledge for the modern business environment. Aligned with the Competency-Based Curriculum (CBC), this series fosters critical thinking, collaboration, and digital literacy while addressing **core competencies, values, and Pertinent and Contemporary Issues (PCIs)**.

Key features of the Learner's Book

• Engaging Activities

Each topic includes a variety of **group, pair, and individual** activities designed to help learners achieve specific outcomes through hands-on experience and collaboration.

• Sub-strand Introductions

Every sub-strand begins with a clear explanation of its relevance, helping learners understand the importance of the content and how it applies to real-life business scenarios.

• Digital Space Integration

Learners are encouraged to use digital tools to watch videos, conduct research, and present findings—enhancing their digital literacy and preparing them for the digital economy.

• Learning Spot Highlights

Key concepts are reinforced through concise summaries and real-world examples, making complex ideas easier to grasp and retain.

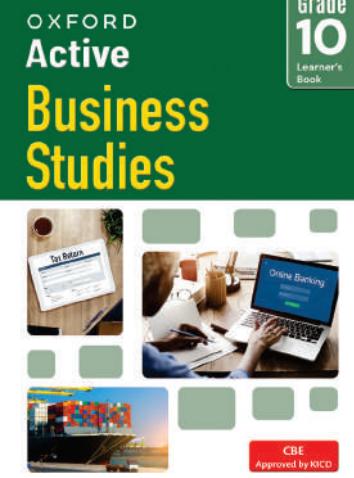
• Explore More Sections

These sections challenge learners to connect classroom knowledge with their environment by exploring current issues and local business practices.

Sub strand summaries which contain short notes in point form that summarise the content covered in a sub strand.

Sub strand summary

- Public finance is important because it enables the provision of public goods and services, promotes investment, enables the redistribution of resources, among others. The sources of public finance include tax revenue, non-tax revenue, grants and aid and loans (public debt).
- Taxation helps to raise revenue, control consumption, protect local industries, control inflation, reduce inequality among others.
- The principles of taxation include equity, diversity, simplicity, elasticity, certainty, economy, flexibility, convenience and non-oppression.
- The requirements for tax compliance in Kenya include registering with KRA, filing tax returns, keeping accurate records, payment of taxes, compliance with tax laws and regulations, among others.
- In Kenya, items exempted from taxation include equipment and machinery. The people exempted from taxation include persons with disability, diplomats and staff of foreign missions. Organisations exempted from tax include PBOs, Central Bank and cooperative societies.



Out-of-class activity section which consists of school, home or community activities where learners research on and apply the knowledge learnt to solve a problem or identify gaps and opportunities.

Out-of-class activity

School activity

1. Discuss and formulate messages to sensitize your community on legal and ethical issues in taxation.
2. Using manila paper, felt pens and other relevant materials, design posters with the messages you prepared in 1 above.
3. Display your posters in prominent places within the school or the community to reach as many people as possible.

Explore more sections where learners are given an opportunity to discuss key issues in their environment that are related to the concepts learnt.

Explore more

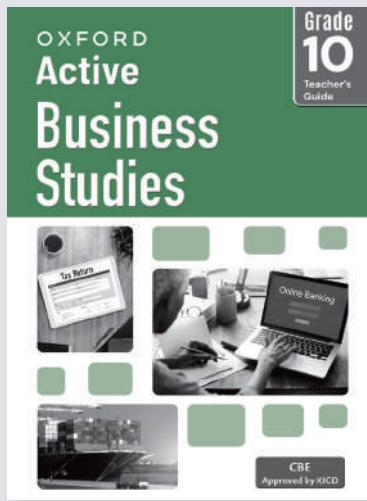
1. Find out ways in which county governments are involved in public finance in Kenya.
2. Discuss the levies imposed by county governments in Kenya.

Digital spaces which help the learner to develop digital literacy. They involve watching of video clips or doing research using digital devices connected to the internet.

Digital space

Discussing and presenting on the sources of public finance

1. Using digital devices, search for information on the sources of public finance.
2. Discuss the sources of public finance, providing full descriptions and examples in each case.
3. Using the digital devices, prepare a table to record your findings. (Alternatively, draw the table in your exercise books.) It should have the source of public finance, its description and examples.
4. Print your table and present it to the class. (Alternatively, present the tables you drew in your exercise books.)



Teacher's Guide – Grade 10

Oxford Active Business Studies is a series specially written to provide practical experiences that support the acquisition of skills for the **Competency Based Education**. Books in the 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).

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- Sample assessment tools to guide the teacher in developing tools for evaluating and recording the learners' progress.

Assessment section containing high order and low-order questions which test the learners' grasping of concepts taught in the sub strand.

Assessment

1. KRA officials held outreach meetings to sensitise the residents of Masingo on newly-introduced taxes and levies. They explained the importance of public finance to the community and the country.
 - (a) Explain the meaning of public finance.
 - (b) Explain five ways in which public finance is important.
 - (c) Describe four sources of public finance.
2. Public finance plays a very important role in Kenya, enabling the government to provide and operate public goods and services. Describe the three components of public finance.
3. The government of Kenya raises its revenues mainly through taxation. As such, individuals and businesses pay different types of taxes to the government.
 - (a) Explain five principles of taxation.
 - (b) Discuss the importance of taxation.

Learning spot sections which give a short summary of the concepts learnt in a particular outcome.

Learning spot

Public finance refers to the management of a government's revenue, debt and expenditure for purposes of development, provision of public services and economic stability. Public finance has components such as public revenue, public expenditure, recurrent expenditure, development expenditure and public debt.

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Varied activities to enable the learners tackle the outcomes. These activities are presented as either group, pair or individual activities.

Activity 3 Group work

Discussing and presenting on the importance of public finance

The following is part of an article that appeared in a trade magazine. Read it and answer the questions that follow.

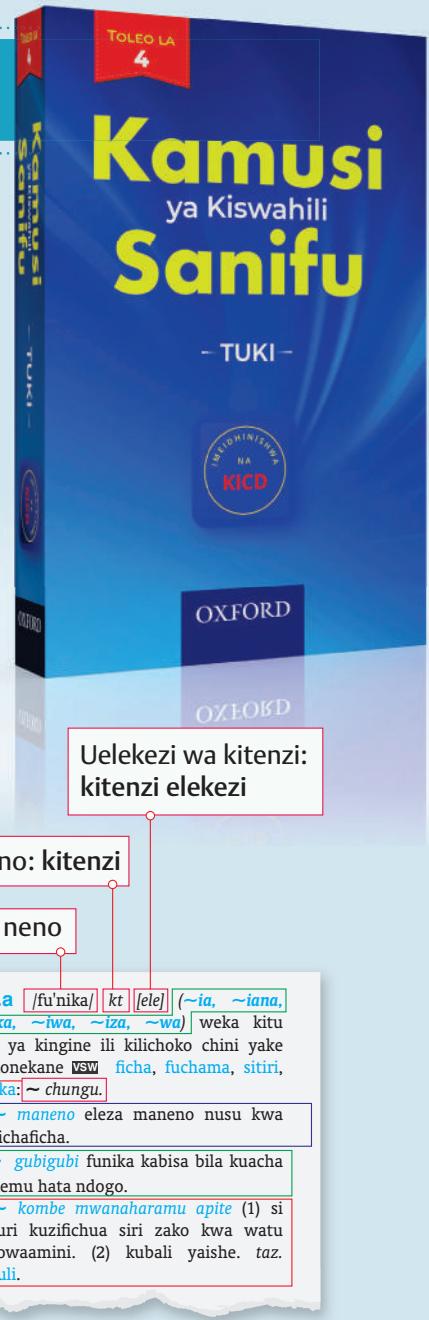
Did you know that the taxes you pay are only a small part of public finance? Public finance includes aspects such as revenue, expenditure, grants and aid and loans. Yet, taxes are the most known aspect because all income earners have to pay them.

Without your taxes, it would be impossible for the government to provide public services like education, security and health care. Do you know how expensive it is to provide education? In Kenya, one-third of the annual budget goes to the education sector. So, by contributing to public finance, you help educate millions of Kenyan children.

The government invests part of the funds it receives from various sources in development projects like roads and railways. I am sure you have seen construction workers on a road near you. The government utilises the resources you contribute to public finance to improve infrastructure. Hence, they make the business environment conducive enough for local and foreign investors.

KAMUSI YA KISWAHILI SANIFU

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.



Kiambishi cha wingi wa nomino: watu



Uelekezi wa kitenzi: kitenzi elekezi

Aina ya neno: kitenzi

Matamshi ya neno

Mnyambuliko wa kitenzi

funik.a /fu'nika/ kt [ele] (~ia, ~iana, ~ika, ~iwa, ~iza, ~wa) weka kitu juu ya kingine ili kilichoko chini yake kisionekane vsw ficha, fuchama, sitiri, fidika: ~ chungu.

Mfano wa matumizi

NH ~ maneno eleza maneno nusu kwa kuifachafcha.

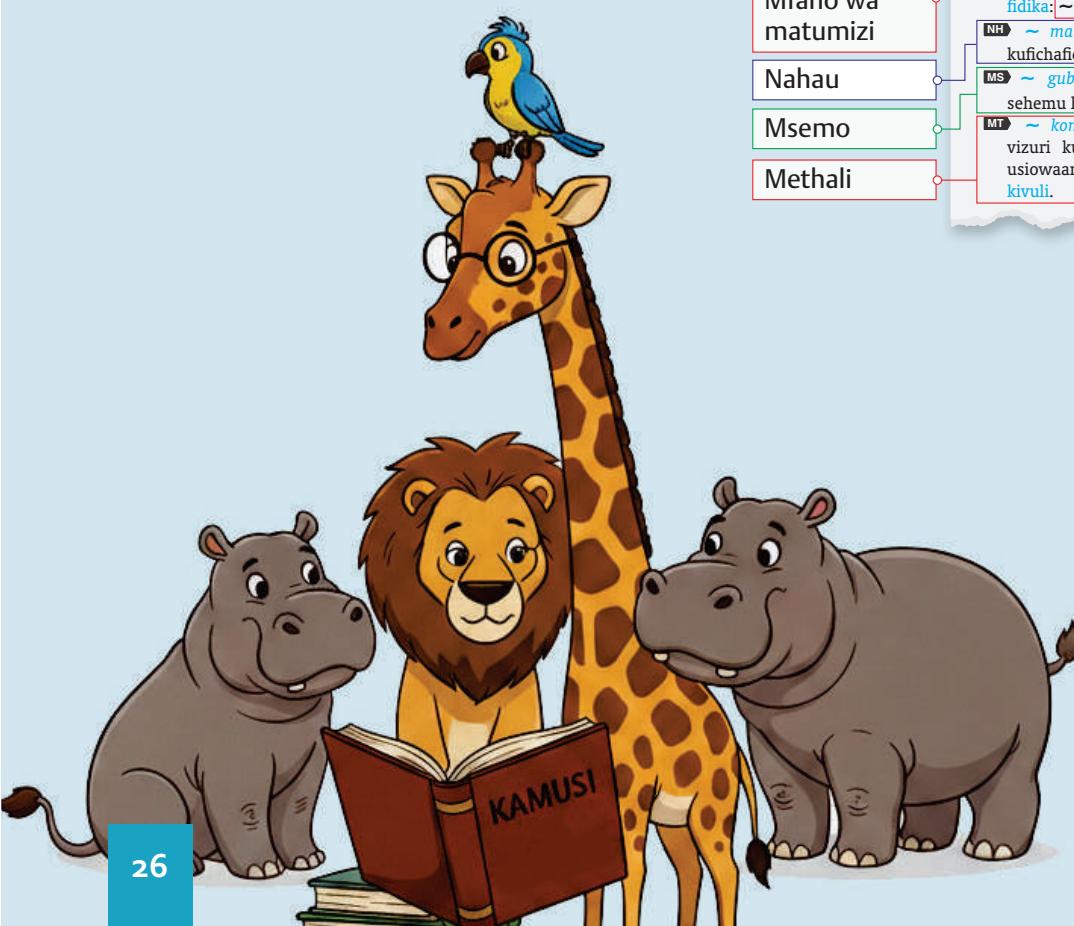
Nahau

MS ~ gubigubi funika kabisa bila kuacha sehemu hata ndogo.

Msemo

MT ~ kombe mwanaharamu apite (1) si vizuri kuzifichua siri zako kwa watu usiowaamini. (2) kubali yaishe. taz. kivuli.

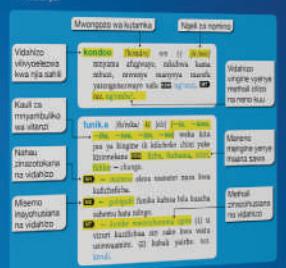
Methali



Kamus ya Kiswahili Sandi ina historia ya kisi. Toleo la Kwanza illichepewa mwaka 1981. Toleo hili ina Nchi imbereheku na kusoma kwa iliyotolewa kwa kufanya kazi kwa ardhini. Toleo hili ina:

- zaidi ya kifabzo vya 1,000
- koraas 48 za rangi zinayi mada mifuriko
- zaidi ya mifuriko 500 zilizolewa mifuriko
- mawazo na mifuriko kifabzo mifuriko

Vipungo vya kisi yeye kifabzo vya kifabzo mifuriko ina historia ya kisi hi ni parasi na vifabzo:



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9 78019 274619 7



Mfumo wa juu



Viambatisho

Afrika Mashariki | Mfumo wa juu | Mimea/Miti/Maua Nchi na Utaifa | Tehama

Orodha ya nchi na utaifa

Kiingereza – AFRICA		Kiswahili – AFRIKA				
Country	Nationality	Nchi	Utaifa	Mji Mkuu	Ukubwa (KM Mraba)	Bendera
1. Algeria	Algerian	Aljeria	Mwaljeria	Algiers	2,381,740	
2. Angola	Angolan	Angola	Mwangola	Luanda	1,246,700	
3. Benin	Beninese	Benini	Mbenini	Porto-Novo	112,622	
4. Botswana	Botswanan	Botswana	Mbotswana/ Mtswana	Gaborone	581,726	
5. Burkina Faso	Burkinabe	Bukinafaso	Mbukinafaso	Ouagadougou	274,000	
6. Burundi	Burundian	Burundi	Mrundi	Bujumbura	27,830	
7. Cameroon	Cameroonian	Kameruni	Mkameruni	Yaounde	475,442	
8. Cape Verde	Cape Verdean	Kepuvede	Mkepuvede	Praia	4,033	
9. Central African Republic	Central African	Jamhuri ya Afrika ya Kati	Mwafrika wa Kati	Bangui	622,984	
10. Chad	Chadian	Chadi	Mchadi	NDjamena	1,284,000	

Bendera



Nembo



Wimbo

1. Ee Mungu twaomba ulinde
Jumuiya Afrika Mashariki
Tuweszeshe kuishi kwa amani
Tutimizne na malengo yetu.

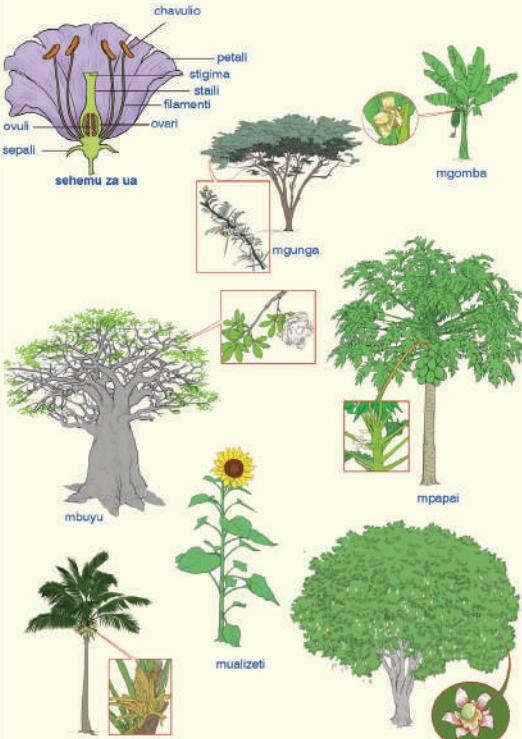
2. Uzalendo pia mshikamano
Viwe msingi wa Umoja wetu
Natulinde Uhuru na Amani
Mila zetu na desturi zetu.

3. Viwani na hata mashambani
Tufanye kazi sote kwa makini
Tujitoe kwa hali na mali
Tujenge Jumuiya bora.

Hoja muhimu kuhusu Jumuiya ya Afrika Mashariki

- Ilanzishwa kwanza 1967 (Kenya, Uganda, Tanzania)
- Ilivunjika 1977
- Ikaanzishwa upya Julai 7, 2000
- Ukuwba wa eneo – kilomita milioni 1.82 mhaba
- Makao Makuu – Arusha, Tanzania
- Rwanda na Burundi walijunga Julai 1, 2007
- Sudani Kusini ilijunga Septemba 5, 2016
- Bunge la Afrika Mashariki (EALA) pamoja na Mahakama ya Jumuiya ya Afrika Mashariki zilanzishwa tarehe 30 Novemba, 2001.
- Tume ya Kiswahili ya Afrika Mashariki ilanzishwa Aprili 14, 2007.

Mimea, Miti, Maua

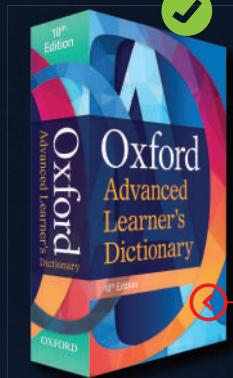


Vyombo vya teknolojia, habari na mawasiliano

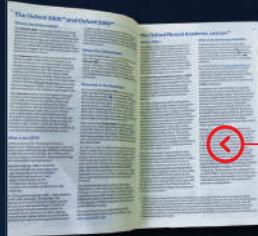
		
		
		
		
		
		
		
		
		

Beware of fakes!

Genuine OALD 10th Edition



There is no app icon on the genuine copy of the version sold in Kenya.



Bright, high-quality paper was used for the genuine copy.



The last word "zygote" on the genuine copy is on page 1777.



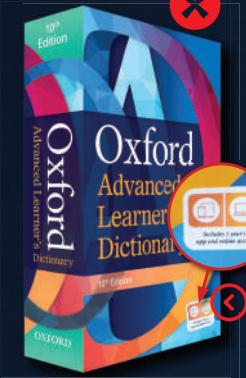
The images in the genuine copy are sharp and clear!



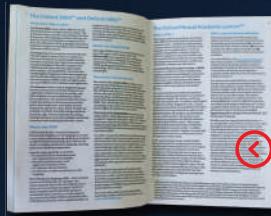
The inside back cover of a genuine copy is plain, with no additional elements, or CD included.

**Available in
bookshops
countrywide!**

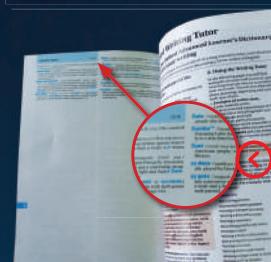
Fake OALD 10th Edition



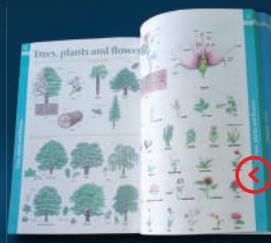
The fake copy has an app icon on the front cover.



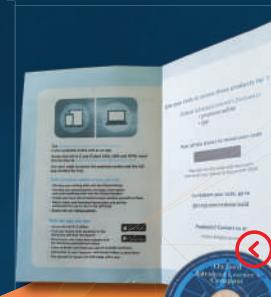
A fake copy has dull, low-quality paper.



The last word "zygote" on the fake copy is on page 1820.



The images on the fake copy are dull or blurry.



The inside back cover of the fake copy has a provision for a peel-off sticker that has been printed on it, and may also have a CD included.



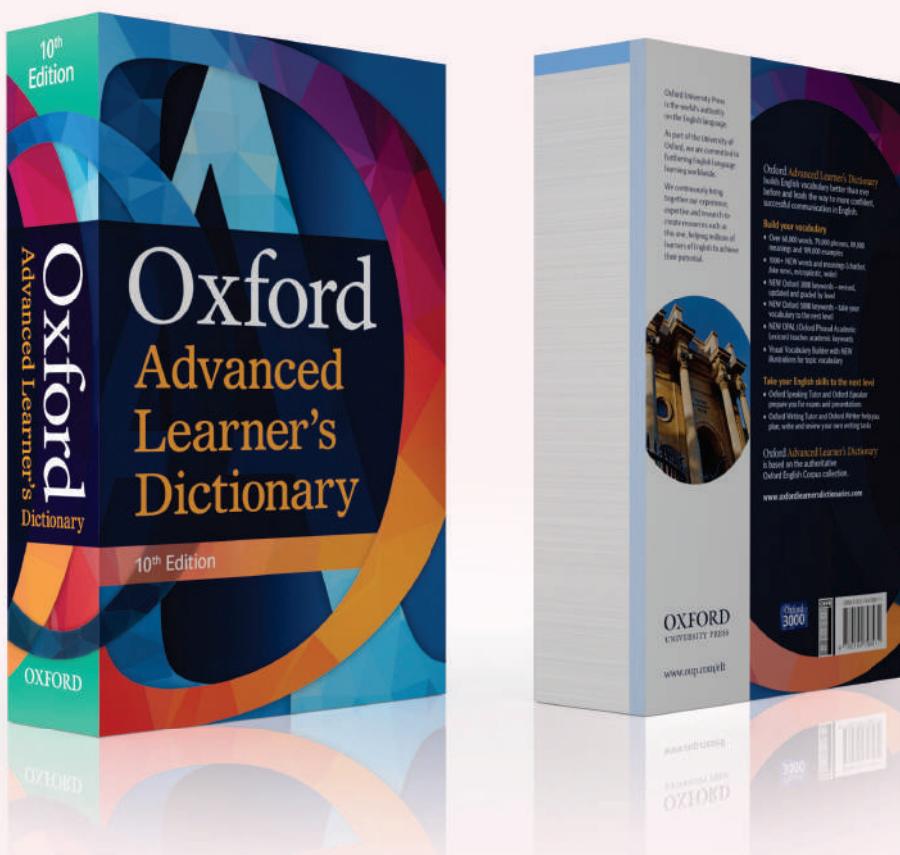
OXFORD ADVANCED LEARNERS DICTIONARY

During English lessons in Senior 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, 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 3 000 and Oxford 5 000 – 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.

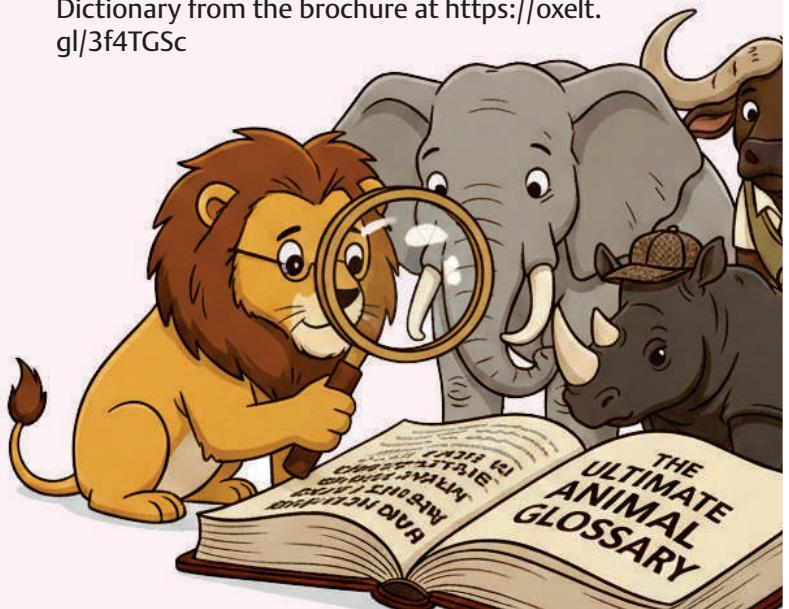
For the teacher, we recommend the online dictionary and app which are quick reference



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 /ə'blɪgətɔri; NAmE -tɔ:ri/ *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 /lɪm/ *noun* **1** 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

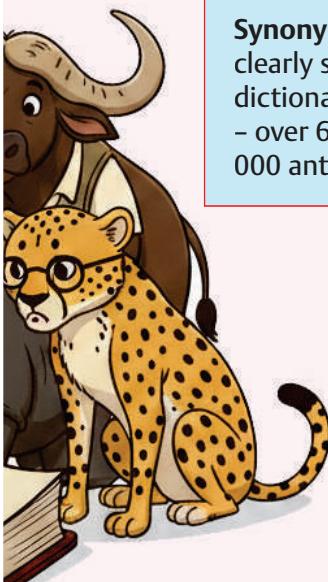
It is useful to know some general words to help you describe objects, especially if you do not know the name of a particular object.

- **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 – over 100 000 of them in print, over 230 000 online – show learners how to use words in context.



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