Shuters

TVET

TVET COLLEGES TEXTBOOK CATALOGUE

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Since then, we have been successfully producing quality literature and educational materials in all of the South African official languages, as well as for the core schools curriculum.

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In 2018 we published our first TVET title and have since produced titles in over 15 subject areas.

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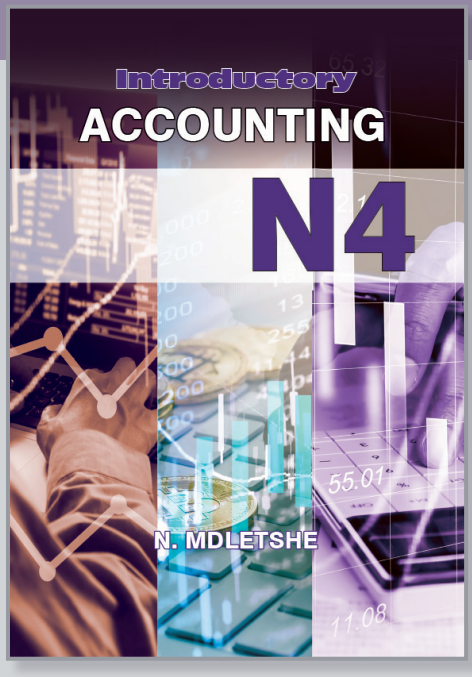
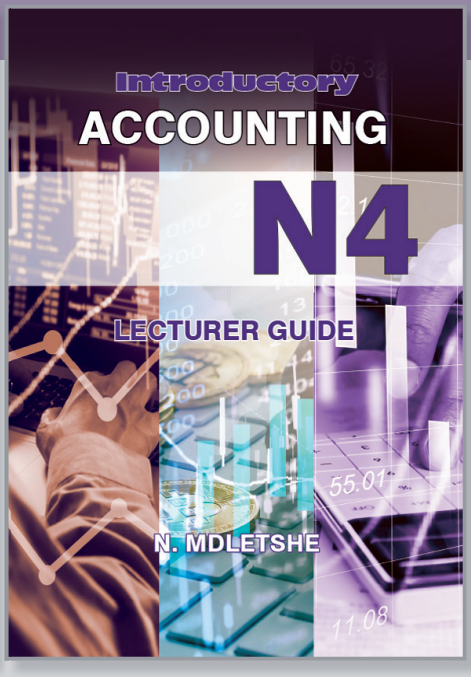
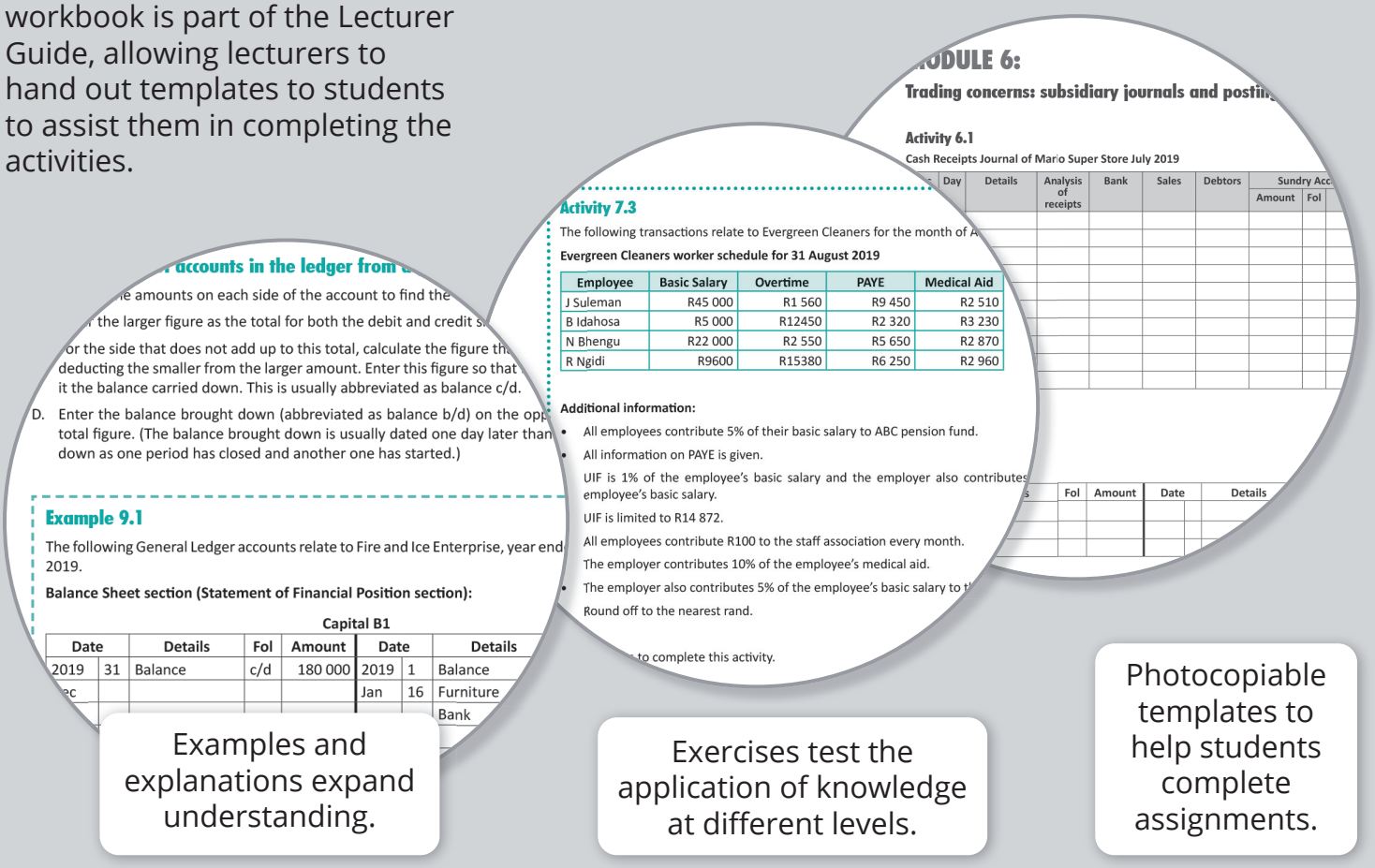
INTRODUCTORY ACCOUNTING N4

Written in line with the updated NATED syllabus, **Introductory Accounting N4** introduces the student to the world of accounting. Using simple, relevant examples and explanations, students learn to grasp the concepts needed to master basic Accounting. A variety of activities in the *Student Textbook* help students to apply their theoretical knowledge in practice.

The *Lecturer Guide* provides the solutions to all of the activities in the Student Textbook. In addition, a photocopiable workbook is part of the Lecturer Guide, allowing lecturers to hand out templates to students to assist them in completing the activities.







Example 9.1

The following General Ledger accounts relate to Fire and Ice Enterprise, year end 2019.

Balance Sheet section (Statement of Financial Position section):

Capital B1

Date		Details	Fol	Amount	Date		Details
2019	31	Balance	c/d	180 000	2019	1	Balance
					Jan	16	Furniture
							Bank

Activity 7.3

The following transactions relate to Evergreen Cleaners for the month of

Evergreen Cleaners worker schedule for 31 August 2019

Employee	Basic Salary	Overtime	PAYE	Medical Aid
J Suleman	R45 000	R1 560	R9 450	R2 510
B Idahosa	R5 000	R12450	R2 320	R3 230
N Bhengu	R22 000	R2 550	R5 650	R2 870
R Ngidi	R9600	R15380	R6 250	R2 960

Additional information:

- All employees contribute 5% of their basic salary to ABC pension fund.
- All information on PAYE is given.
- UIF is 1% of the employee's basic salary and the employer also contributes employee's basic salary.
- UIF is limited to R14 872.
- All employees contribute R100 to the staff association every month.
- The employer contributes 10% of the employee's medical aid.
- The employer also contributes 5% of the employee's basic salary to t
- Round off to the nearest rand.

to complete this activity.

Activity 6.1

Cash Receipts Journal of Mario Super Store July 2019

Day	Details	Analysis of receipts	Bank	Sales	Debtors	Sundry Acc	
						Amount	Fol

Fol	Amount	Date	Details

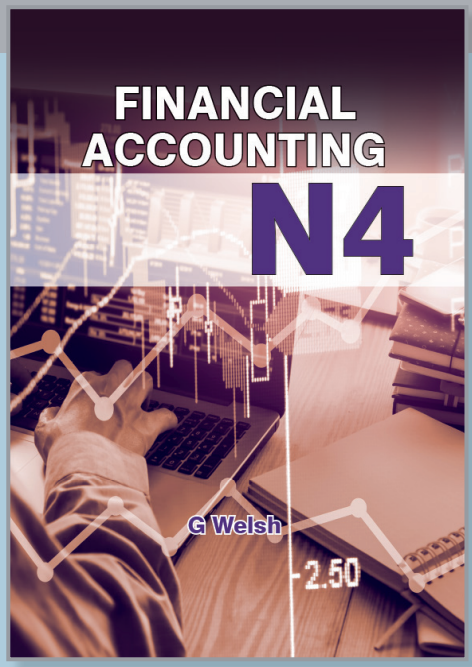
Examples and explanations expand understanding.

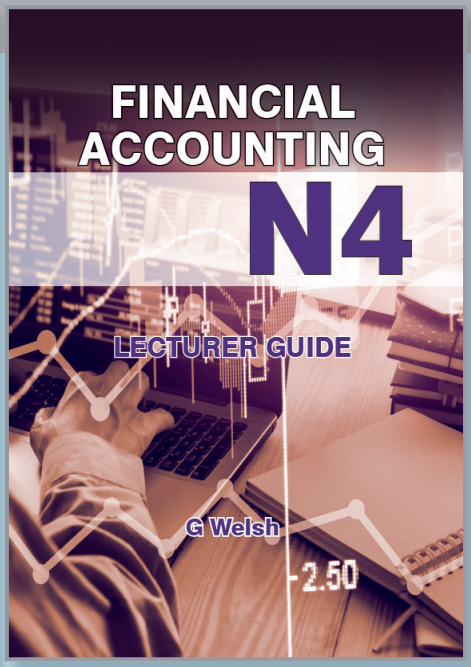
Exercises test the application of knowledge at different levels.

Photocopiable templates to help students complete assignments.

9781485836490	INTRODUCTORY ACCOUNTING N4 STUDENT TEXTBOOK
9781485836506	INTRODUCTORY ACCOUNTING N4 LECTURER GUIDE

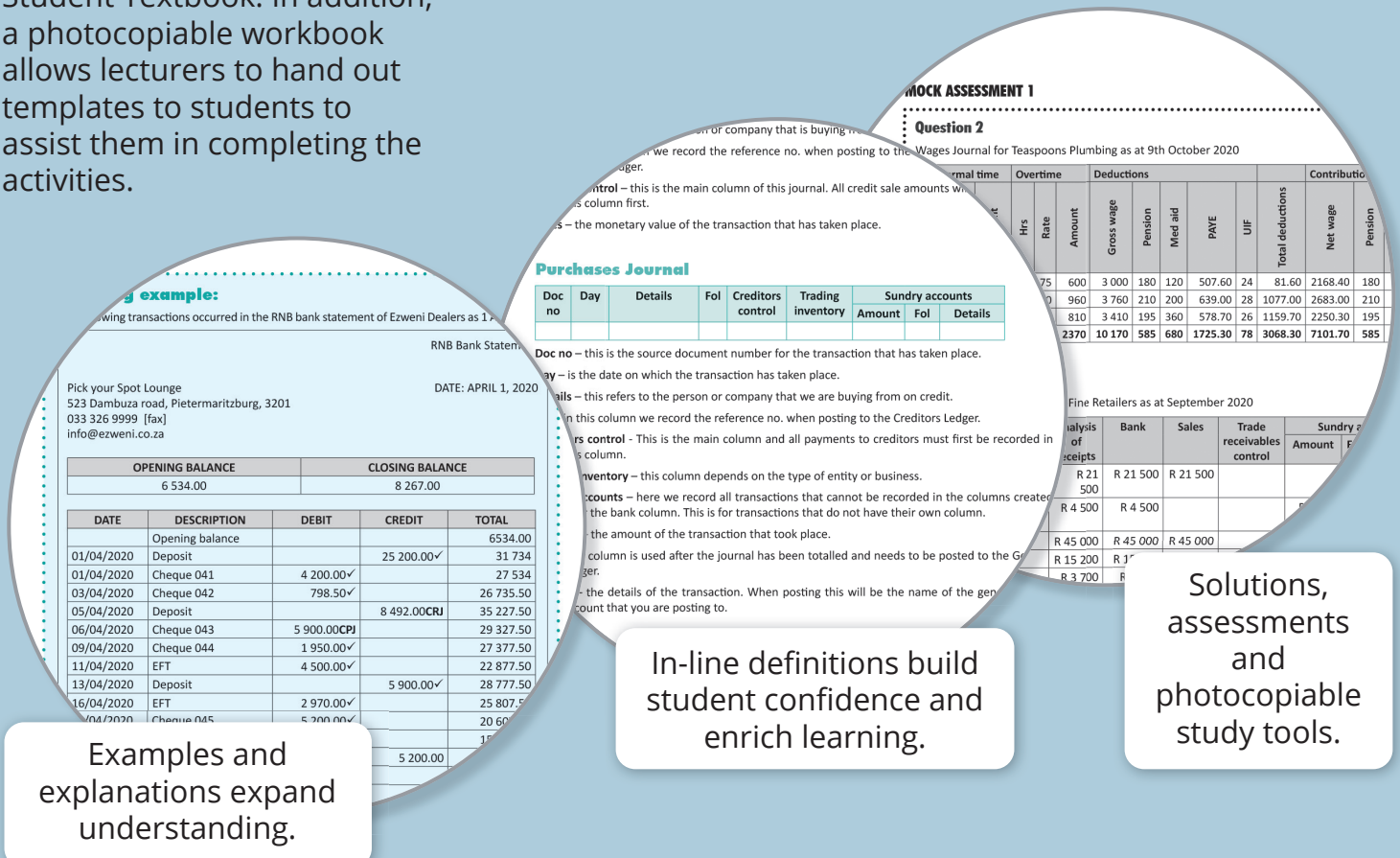
FINANCIAL ACCOUNTING N4





Shuters Financial Accounting N4 and **N5** is written in line with the updated NATED syllabus, and is aimed at students who have a basic knowledge of Accounting principles. After recap and revision of their prior knowledge, more complex concepts and calculations are learned. Exercises and activities are provided in the *Student Textbook* let students apply and practice their knowledge.

The *Lecturer Guide* provides all answers to the activities in the Student Textbook. In addition, a photocopiable workbook allows lecturers to hand out templates to students to assist them in completing the activities.



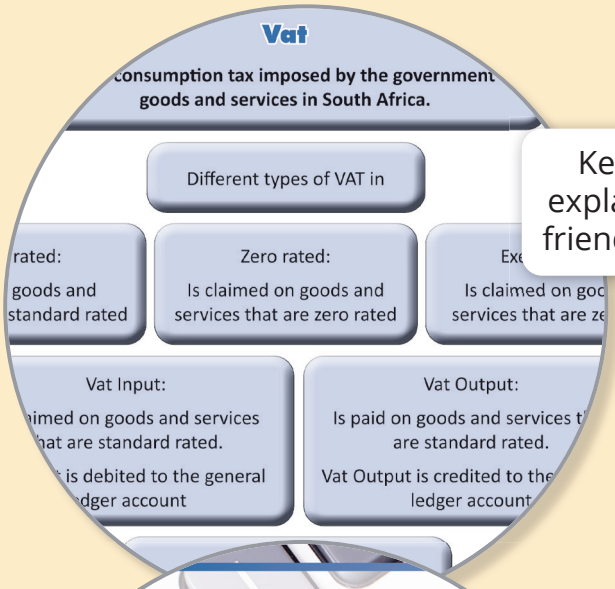
Examples and explanations expand understanding.

In-line definitions build student confidence and enrich learning.

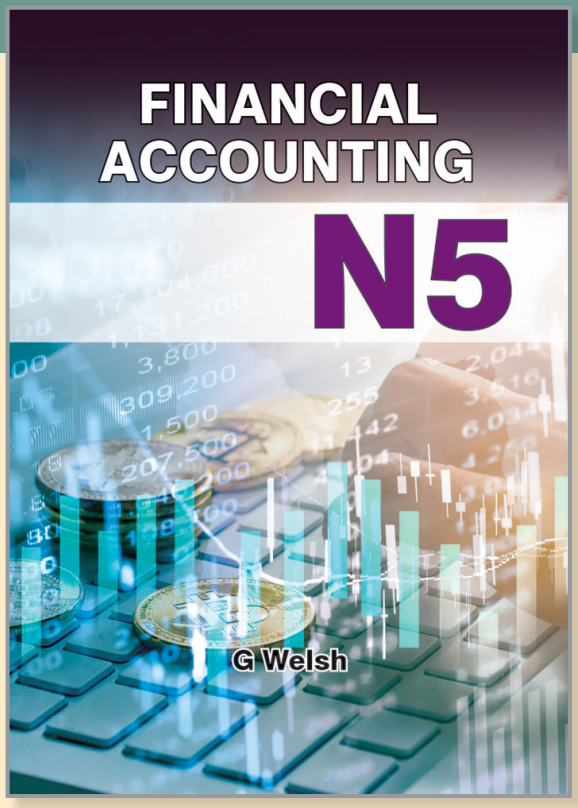
Solutions, assessments and photocopiable study tools.

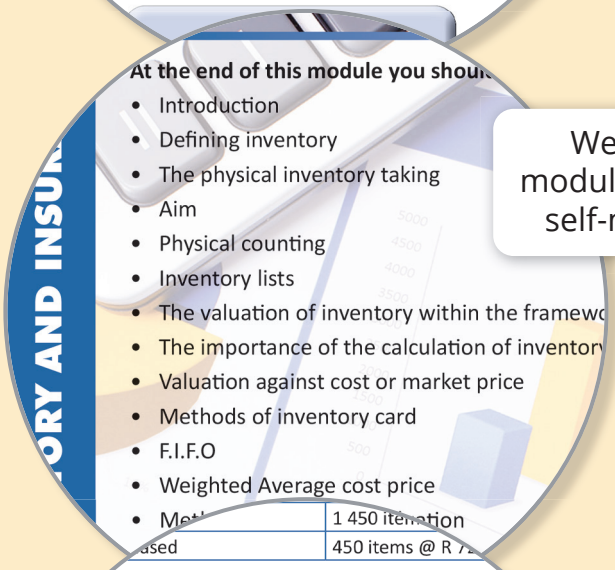
9781485836421	FINANCIAL ACCOUNTING N4 STUDENT TEXTBOOK
9781485836735	FINANCIAL ACCOUNTING N4 LECTURER GUIDE

FINANCIAL ACCOUNTING N5

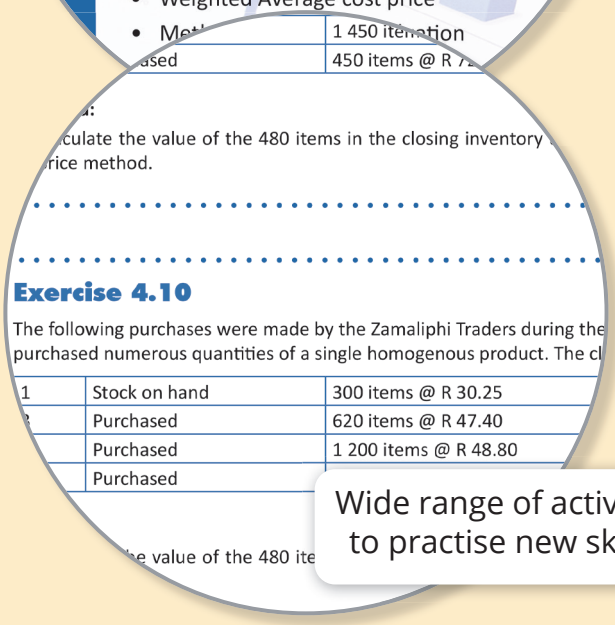


Key concepts explained in user friendly language.

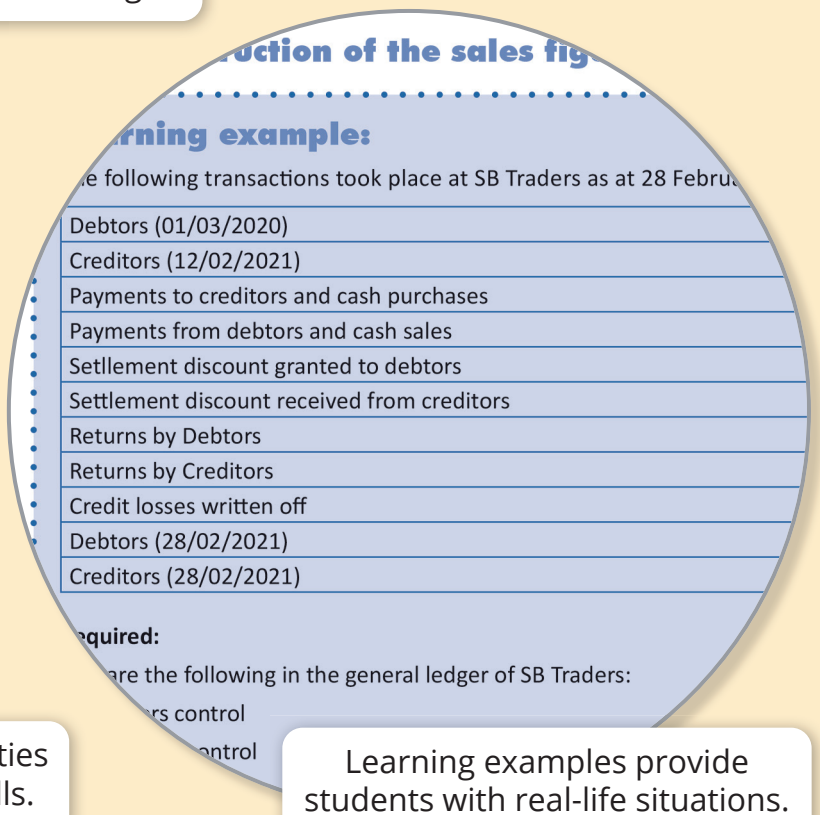




Well defined module goals allow self-monitoring.



Wide range of activities to practise new skills.



Learning examples provide students with real-life situations.

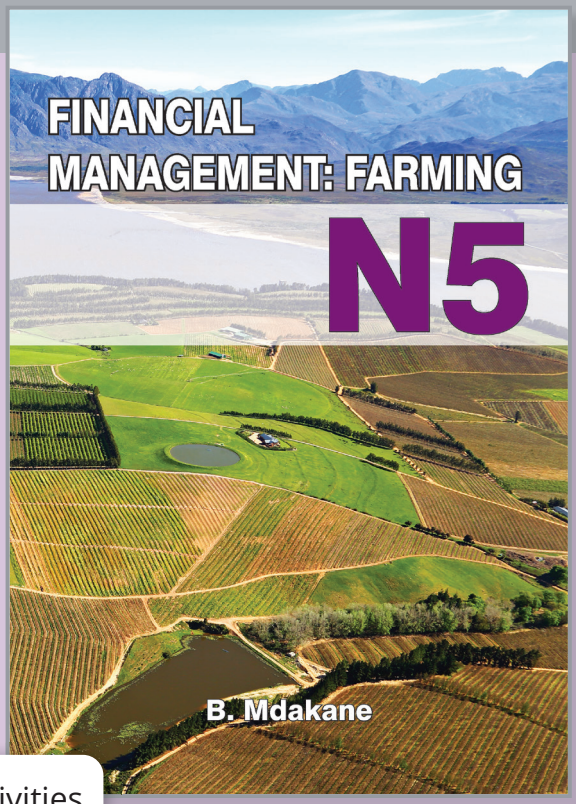
9781485838494	FINANCIAL ACCOUNTING N5 STUDENT TEXTBOOK

FINANCIAL MANAGEMENT: FARMING N5

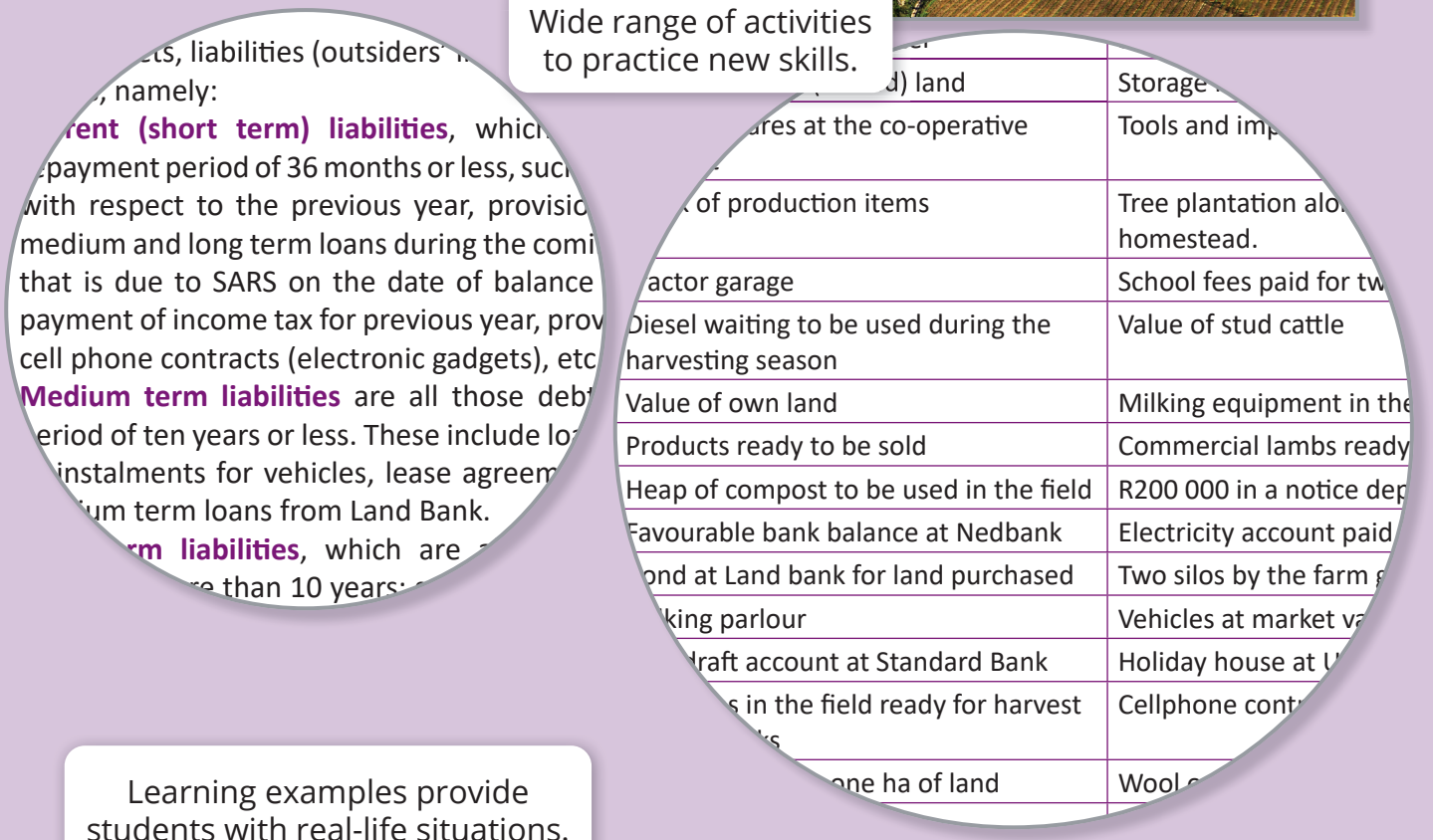
Financial Management: Farming N5 student textbook has been written to enable students to develop the necessary knowledge and skills which will help them to make a positive contribution as owners or managers of a farming business, with specific reference to financial management.

They will learn how to apply basic finance principles and financial analysis concepts to a farming enterprise and will be able to undertake basic financial statement calculations as they apply to the farming business environment.

Helpful activities and examples allow students to hone these skills, and the colourful pictures and user-friendly layout of the book make this subject particularly accessible.



Wide range of activities to practice new skills.


ts, liabilities (outsiders
, namely:
rent (short term) liabilities, which
payment period of 36 months or less, such
with respect to the previous year, provisio
medium and long term loans during the comi
that is due to SARS on the date of balance
payment of income tax for previous year, prov
cell phone contracts (electronic gadgets), etc
Medium term liabilities are all those debt
eriod of ten years or less. These include lo
instalments for vehicles, lease agreem
um term loans from Land Bank.
rm liabilities, which are
re than 10 years:

d) land	Storage
res at the co-operative	Tools and imp
of production items	Tree plantation alo homestead.
actor garage	School fees paid for tw
Diesel waiting to be used during the harvesting season	Value of stud cattle
Value of own land	Milking equipment in the
Products ready to be sold	Commercial lambs ready
Heap of compost to be used in the field	R200 000 in a notice dep
Favourable bank balance at Nedbank	Electricity account paid
ond at Land bank for land purchased	Two silos by the farm
king parlour	Vehicles at market va
draft account at Standard Bank	Holiday house at U
s in the field ready for harvest	Cellphone cont
one ha of land	Wool

Learning examples provide students with real-life situations.

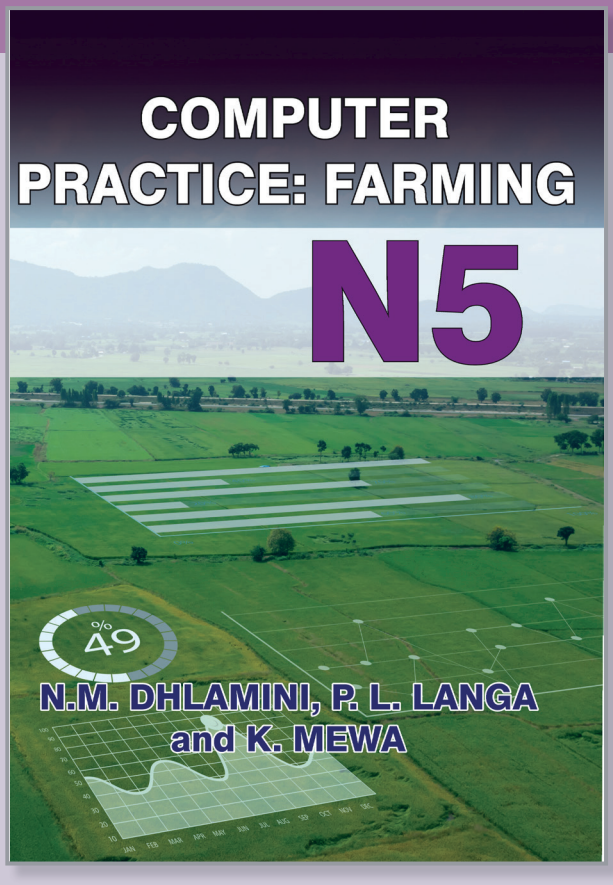
9781779922380	FINANCIAL MANAGEMENT:FARMING N5 STUDENT TEXTBOOK

COMPUTER PRACTICE: FARMING N5

Shuters Computer Practice: Farming N5 builds on the knowledge that students will have gained at N4 level. The same five topics covered in N4 are now explored in greater depth, with the addition of the Microsoft application OneNote.

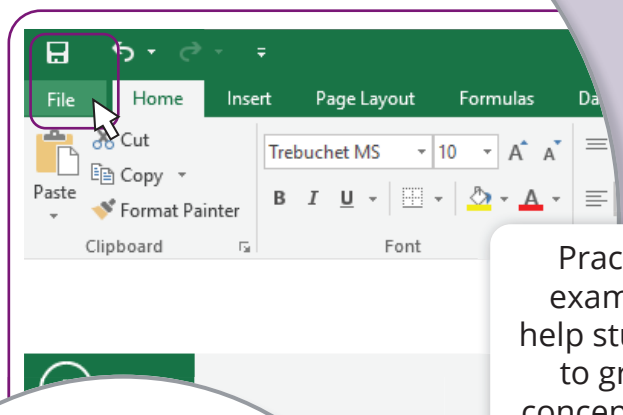
This book will help students to acquire problem-solving skills alongside the technical know-how of operating the various computer software packages.

This textbook integrates both theoretical and practical aspects of computer use with particular reference to the farming and agriculture industry.



Exporting a file to PDF

Select the **File** tab on the top left-hand corn



Practical examples help students to grasp concepts and procedures.

Real-world activities help students to apply their knowledge.

Borders

Apply pre-defined cell border

i. Choose the cell or range of cells border style, or erase a border.

ii. On the **Home** tab, in the **Font** gro

- Choose the arrow next to B different border sty

Hint

To make use of **Borders**. In

Helpful hint boxes provide useful guidance for students.

Activity 4.2 60 minutes (

Part A

1. Create the following document in *indicated.*

	A	B
1	**FRESH FRUIT & VEGETABLE**	
2	Ingogo Farm	
3	NEWCASTLE	
4	Costing Sheet for Febru	
	INVOICE	ITE

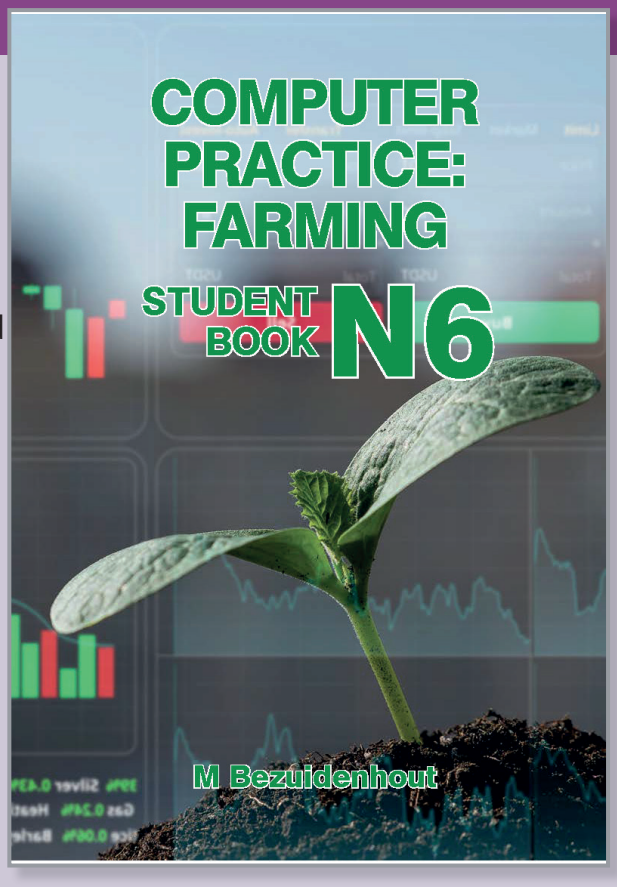
9781779922403	COMPUTER PRACTICE: FARMING N5 STUDENT TEXTBOOK

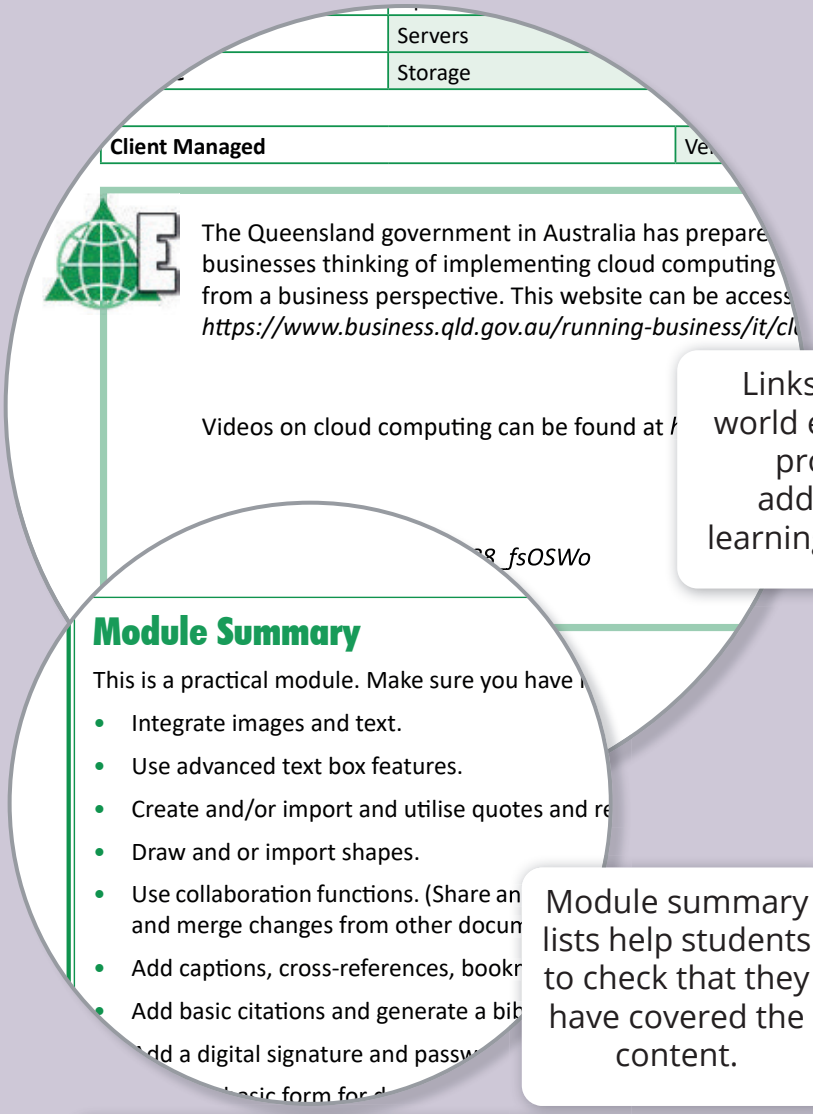
COMPUTER PRACTICE: FARMING N6

Shuters Computer Practice: Farming N6 is the last level of Computer Practice, and uses the foundation of knowledge acquired at levels four and five, to help students to apply the correct computer software with confidence in a farming context.

The book integrates both theoretical and practical knowledge and will help students to develop logical and critical thinking skills with particular reference to using computers in farming.

The wider ethical aspects of computing and IT, as well as the Internet and computer networks are also covered, giving the student an excellent grounding and preparation for their final examination.

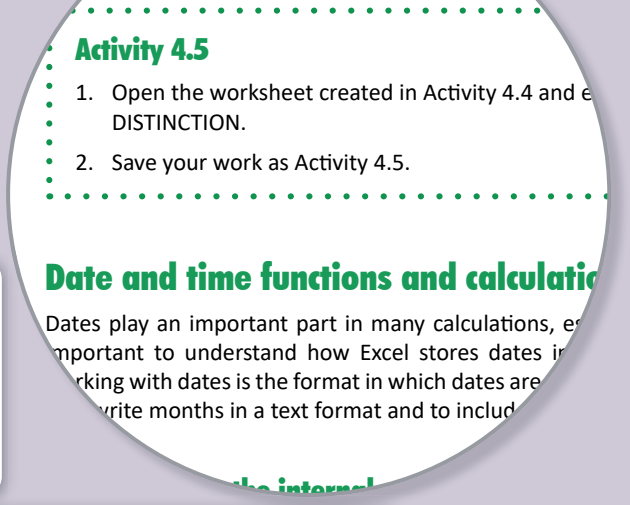




Links to real world examples provide additional learning context.

Practical worked examples help students get to grip with unfamiliar concepts.

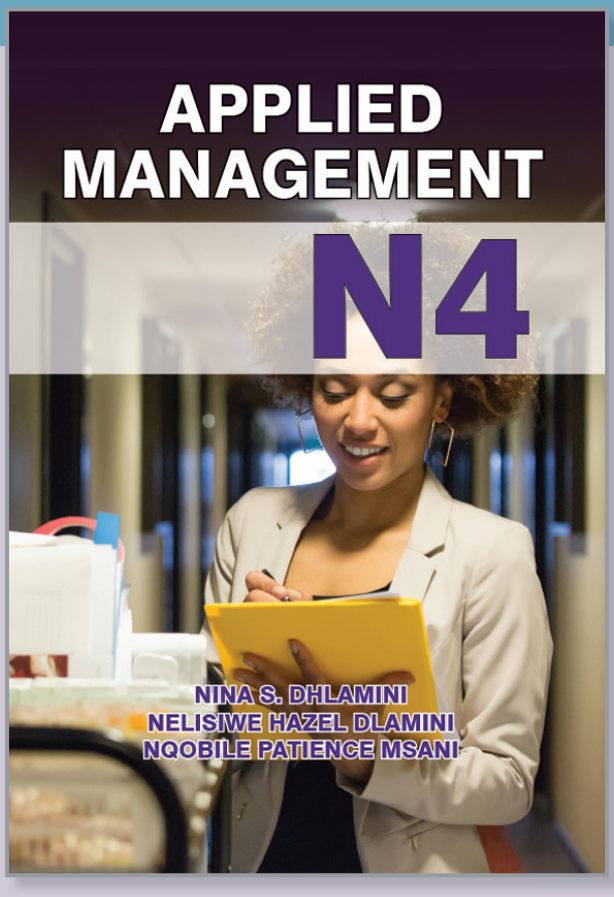
Module summary lists help students to check that they have covered the content.

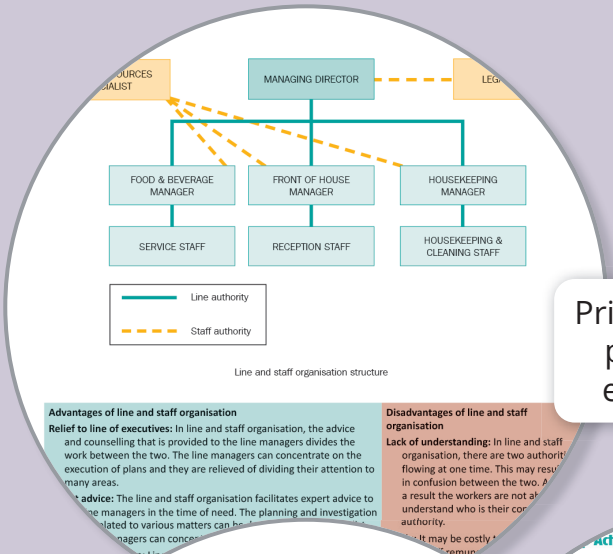


9781779922441	COMPUTER PRACTICE: FARMING N6 STUDENT TEXTBOOK

APPLIED MANAGEMENT N4

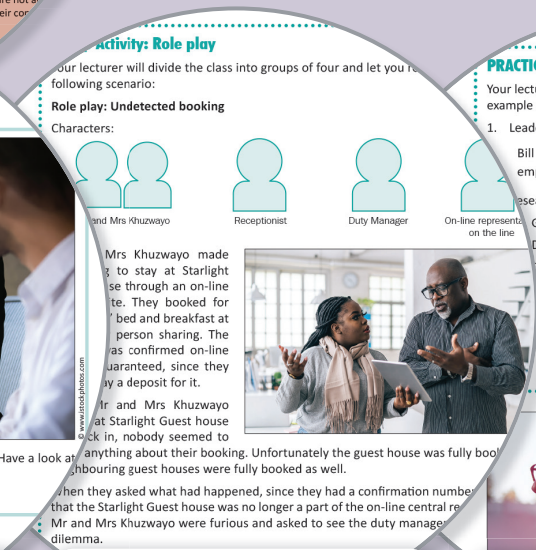
Aimed at Hospitality Students, **Shuters Applied Management N4** is based on the latest NATED syllabus. It contains South African based examples and activities to engage hospitality students with all aspects of Management in that environment. Through examples and activities, students master the necessary concepts and learn to apply their knowledge. The book provides references to e-resources such as videos and websites which make the subject come alive for students who may not have experienced the environment first hand.



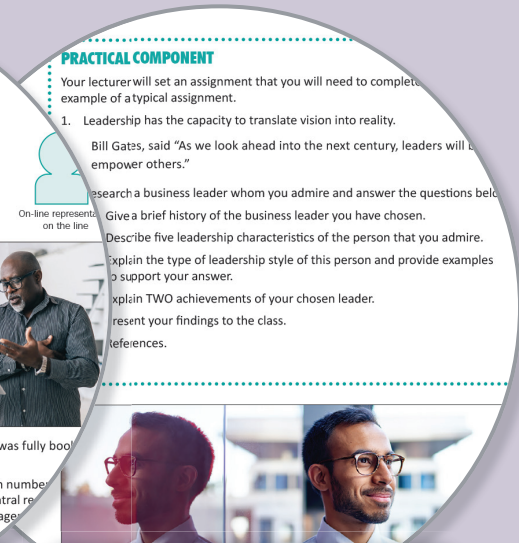


Principles and processes explained.

Links to current electronic resources increase lesson relevance.



Case Studies and practical learning tools build confidence.



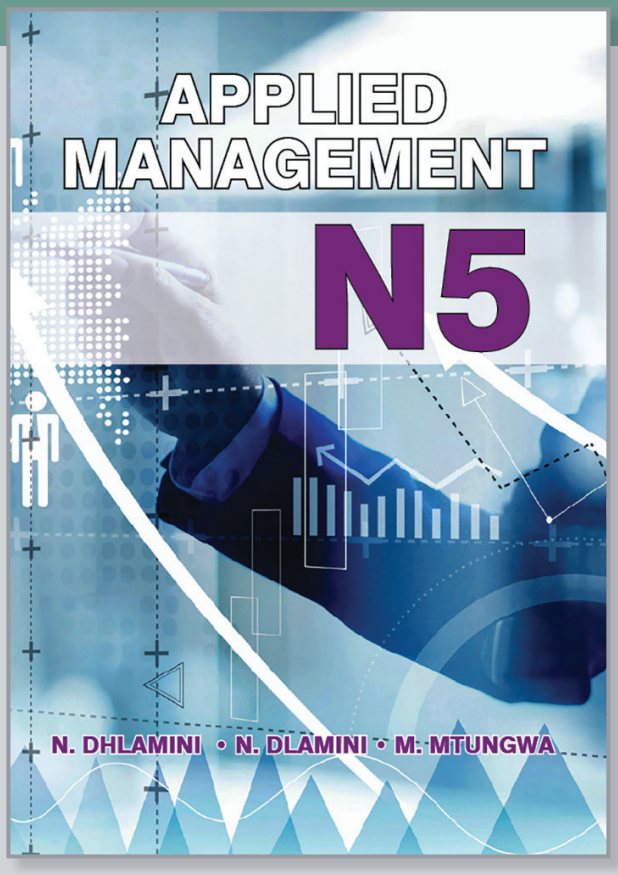
Practical component assignments to reinforce the theory.

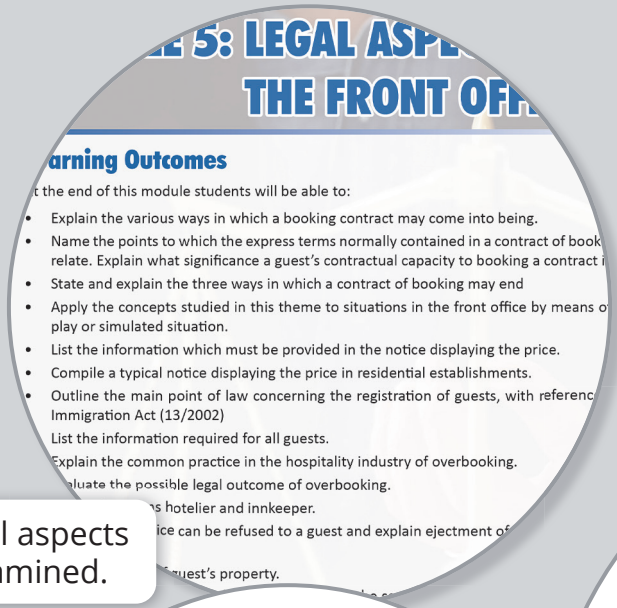
9781485836445 | APPLIED MANAGEMENT N4 STUDENT TEXTBOOK

APPLIED MANAGEMENT N5

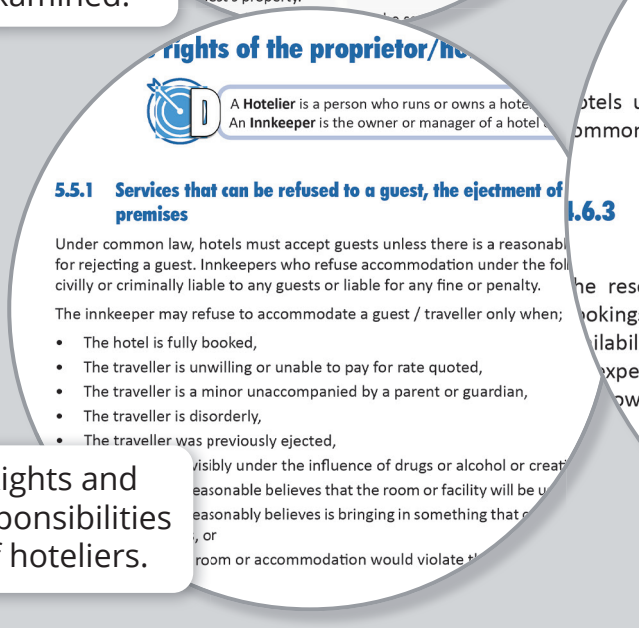
Shuters Applied Management N5 builds on the knowledge gained by students who have completed Applied Management N4. The book will assist students to navigate the content of the latest syllabus for this subject, and further their knowledge of management in a tourism and hospitality context.

Examples, case studies and activities help students understand and master the subject content, and additional e-resources help to make the subject up-to-date and relevant.

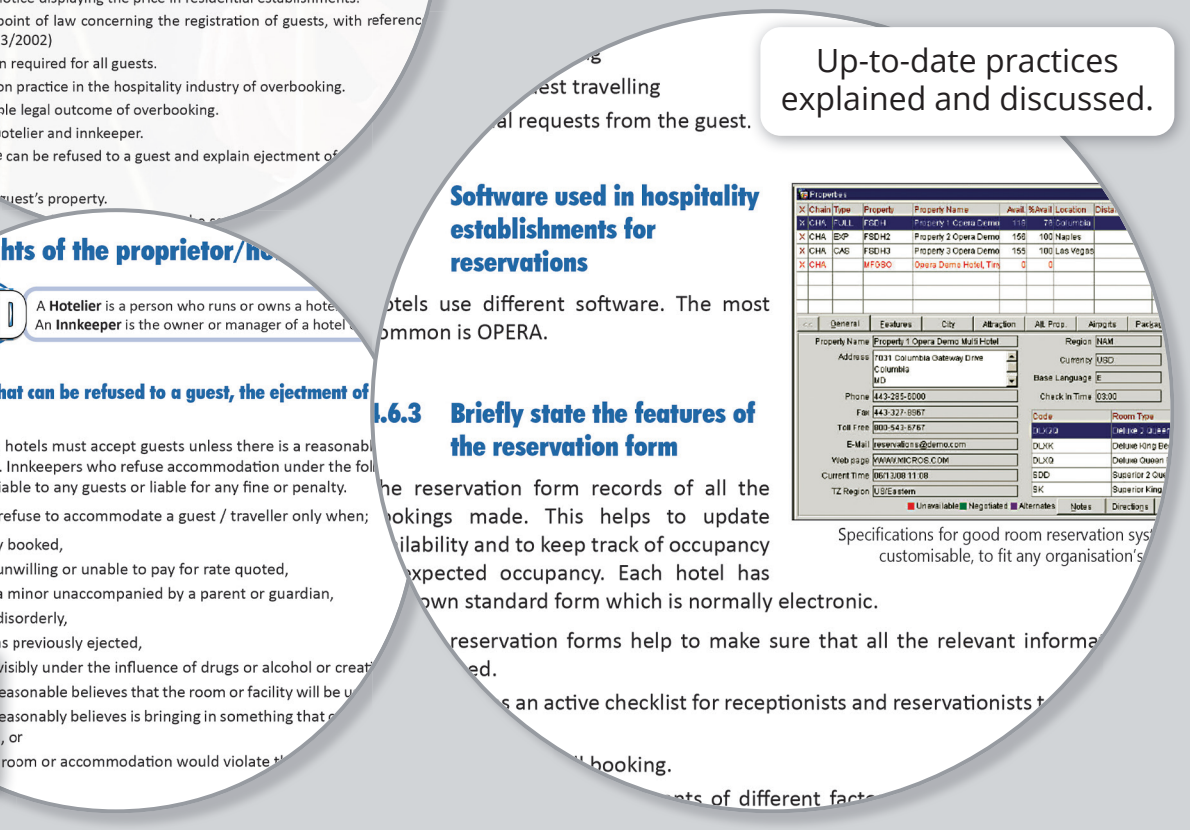




Legal aspects examined.



Rights and responsibilities of hoteliers.



Up-to-date practices explained and discussed.

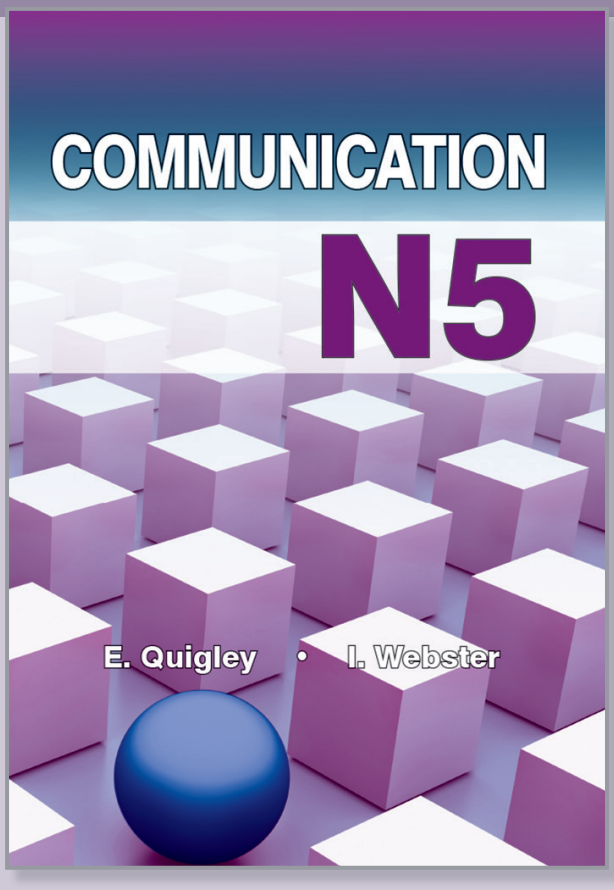
Specifications for good room reservation syst
customisable, to fit any organisation's

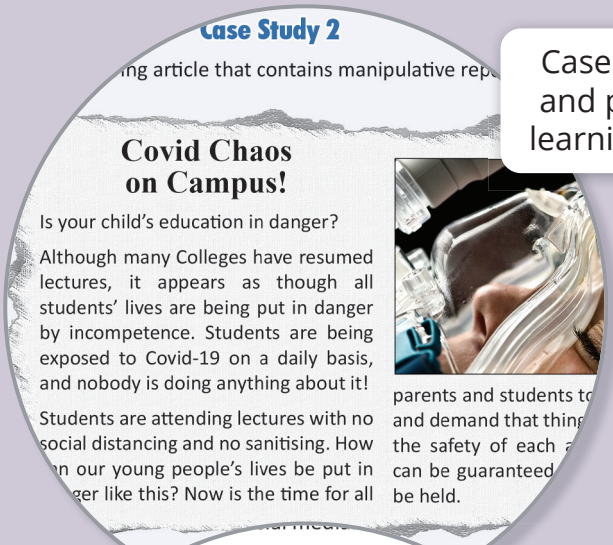
9781776288175 | APPLIED MANAGEMENT N5 STUDENT TEXTBOOK

COMMUNICATION N5

Shuters Communication N5 has been designed to teach the theory behind communication principles as well as to equip the student with the skills necessary to function efficiently and professionally in the business world.

The student will learn about acceptable behaviour and business ethics that take place in the business world, and find ways to develop their own personality, skills and interpersonal relationships.




Case Study 2

ng article that contains manipulative rep

Covid Chaos on Campus!

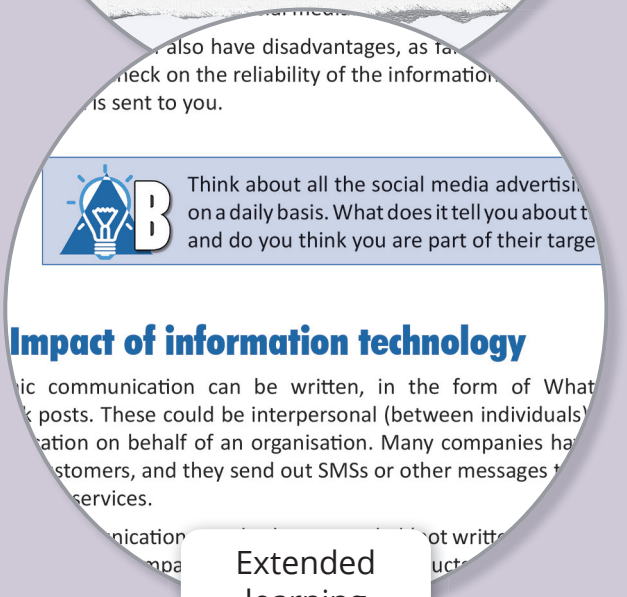
Is your child's education in danger?

Although many Colleges have resumed lectures, it appears as though all students' lives are being put in danger by incompetence. Students are being exposed to Covid-19 on a daily basis, and nobody is doing anything about it!

Students are attending lectures with no social distancing and no sanitising. How n our young people's lives be put in ger like this? Now is the time for all

parents and students to and demand that thing the safety of each a can be guaranteed be held.

Case Studies and practical learning tools.


also have disadvantages, as fa heck on the reliability of the information is sent to you.

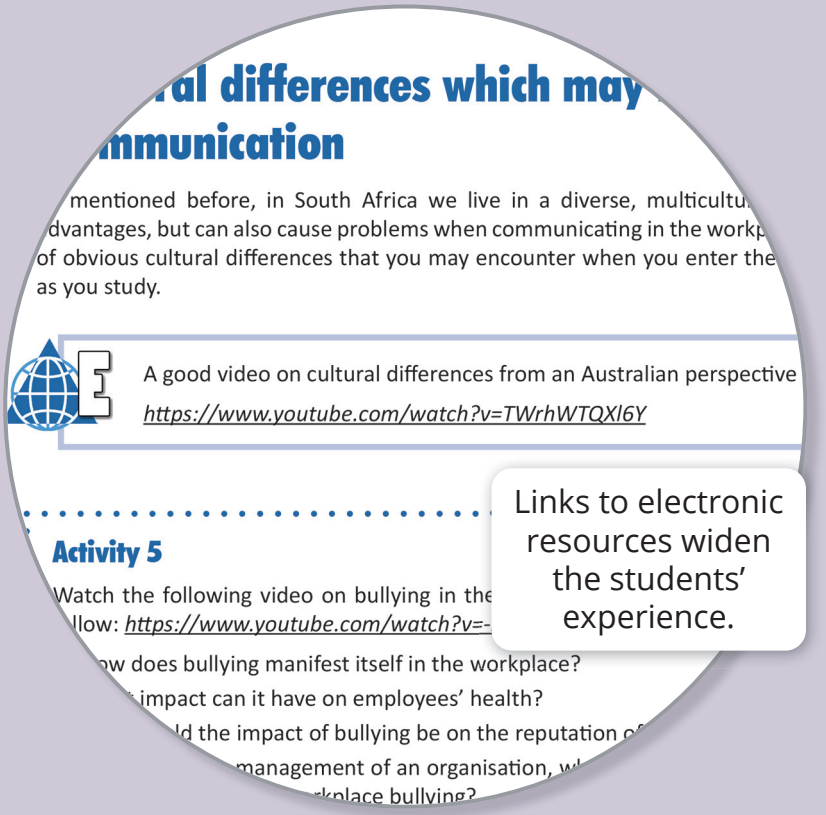
Think about all the social media advertisi on a daily basis. What does it tell you about t and do you think you are part of their targe

Impact of information technology

ic communication can be written, in the form of What k posts. These could be interpersonal (between individuals) cation on behalf of an organisation. Many companies ha stomers, and they send out SMSs or other messages t services.

nication ot writt mpa uct

Extended learning offered in the 'Bright Idea' sections.


al differences which may mmunication

mentioned before, in South Africa we live in a diverse, multicultu dvantages, but can also cause problems when communicating in the workp of obvious cultural differences that you may encounter when you enter the as you study.

A good video on cultural differences from an Australian perspective

https://www.youtube.com/watch?v=TWrhWTQXl6Y

Activity 5

Watch the following video on bullying in the llow: https://www.youtube.com/watch?v=-

w does bullying manifest itself in the workplace?

impact can it have on employees' health?

ld the impact of bullying be on the reputation o

management of an organisation, w

rkplace bullying?

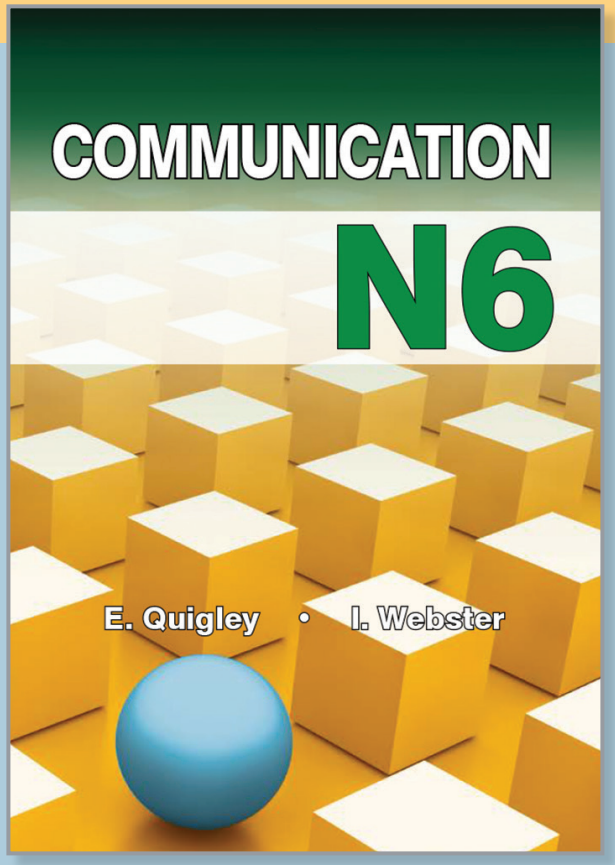
Links to electronic resources widen the students' experience.

9781485838364 | COMMUNICATION N5 STUDENT TEXTBOOK

COMMUNICATION N6

Shuters Communication N6 introduces students to new communication concepts and adds greater depth to their existing knowledge gained during the study of N4 and N5. All the necessary correspondence from N4 and N5 is recapped and new correspondence is explained and practised.

Students will learn more about motivation, coping with stress in the workplace, acceptable business behaviour, and how to prepare themselves for the world of work. Real-life case studies and activities will help them gain greater self-knowledge and prepare them for their final examinations.



Targeted activities provide opportunities to reinforce new skills.

Activity 3

…isider the following scenarios, ar…
…eason or reasons for stress. Prepare…

Scenario 1

Lesedi is working as a sales representative for a comp…
is to go out to small shops and pharmacies, to encou…
She spends her days on the road, travelling from place…
targets to meet, and will lose her bonus if they aren't…
and helps her where possible. Why is Lesedi stressed…

…enario 2

…er is working as a shampooist in a hair…
…er numbers have dropped. Wh…
…aken hair. When there a…

…ion of a grievance, both employer and empl…
…y.

…tlines action
…es who break
can include
…ault and use of
…ace.

… of conduct
…behave. Each
these rules.

Discipline in the workplace is th… behaviour that is expected of the employee. It includes obeying company rules, but also extends to job performance.

Disciplinary action is action taken by the employer to deal with an employee's job performance or behaviour with th… aim of improving it.

Easy to find *Definitions* assist self-study.

… or video interview

…terviews that are held online using … as the communication channel. …actors such as distance, and recently, …9, many interviews are now being held … using video software such as Skype, Zoom …crosoft Teams.

…dvantages

- It is cheap and convenient.
- Allows for body language and non-verbal communication to be seen.
- The interview can be recorded for future …eference.
- …s stressful for the interviewee, as …are in their own environment.

Disadvantages

- Technical issues can a…
- Not everyone may hav… know-how to use the …
- The applicant cann… other than the offi… in the backgroun…
- Does not give … organizatio…

Structured role-modelling supports practical experience.

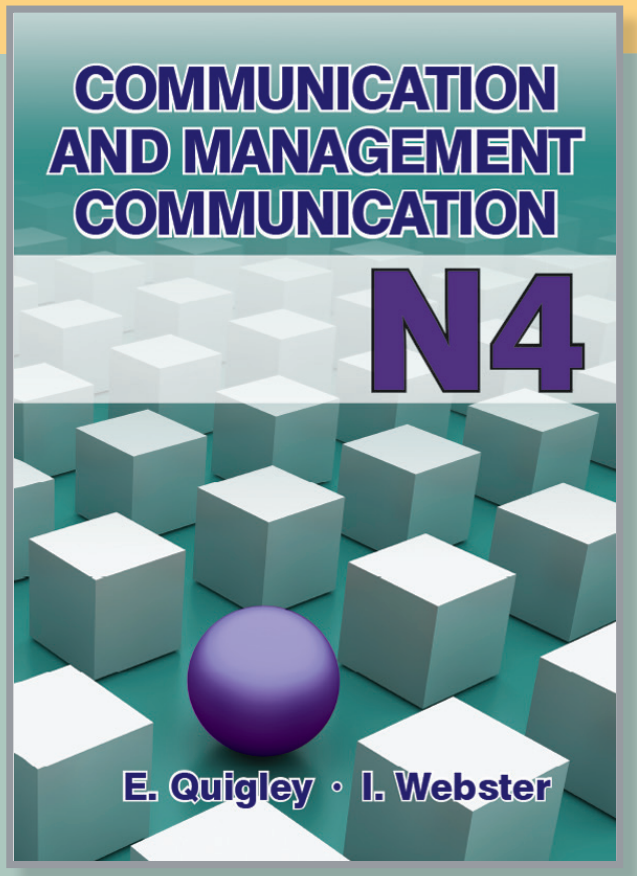
981776314041 | COMMUNICATION N6 STUDENT TEXTBOOK

COMMUNICATION & MANAGEMENT COMMUNICATION N4

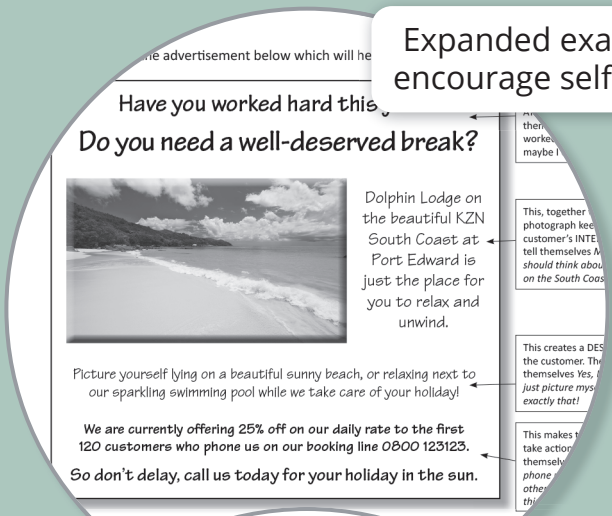
Communication and Management Communication N4 is designed to teach students the theory behind communication principles as well as to equip them with the skills necessary to function efficiently and professionally in the business world.

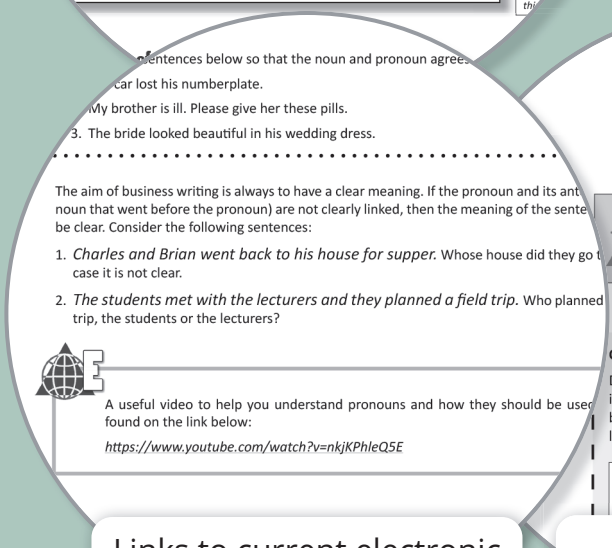
Theory is explained using clear, easily understood language and graphics.

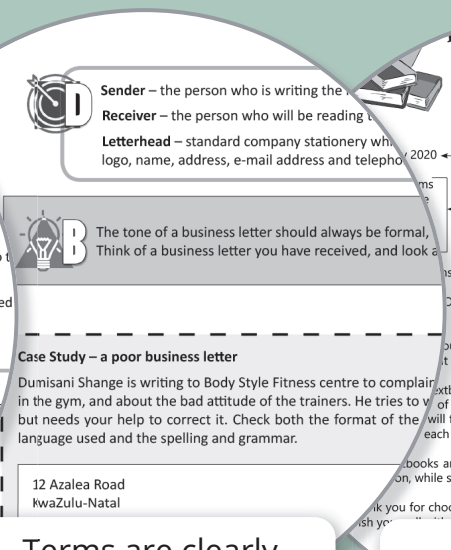
This book covers the syllabus for both Communication N4 and Management Communication N4.

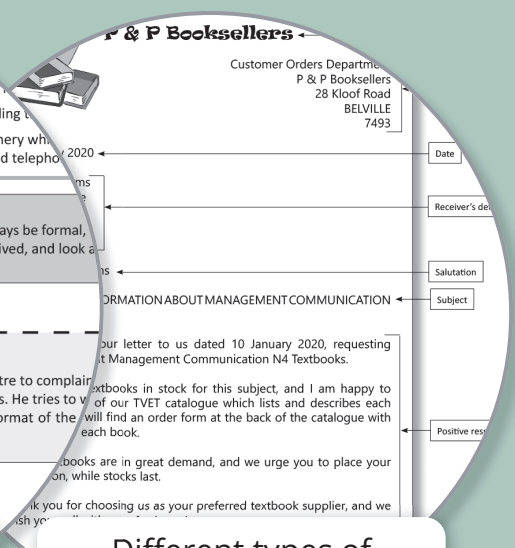


Expanded examples encourage self-study.









Links to current electronic resources increase lesson relevance.

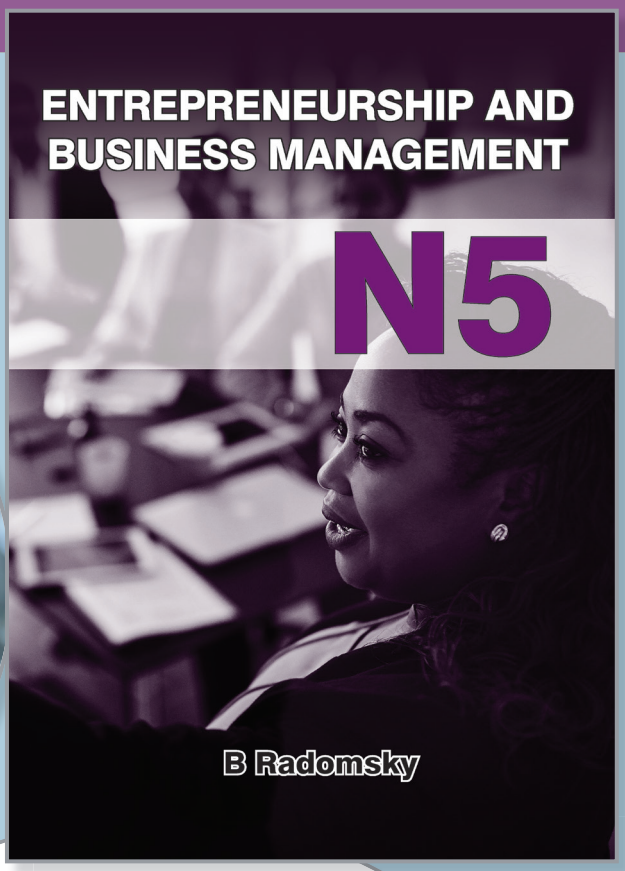
Terms are clearly defined, and Tips for learners are provided.

Different types of communications are 'unpacked' and labelled.

9780796075468	COMMUNICATION AND MANAGEMENT COMMUNICATION N4 STUDENT TEXTBOOK

ENTREPRENEURSHIP AND BUSINESS MANAGEMENT N5

Shuters Entrepreneurship and Business Management N5 takes real-world cases and examples to help students understand the world of business management and the challenges and rewards of entrepreneurship in a South African context.



...he the entrepre...
...n as a slideshow, to help ...
...s questions that allow the audienc...

Presenting tips and techniq

The golden rule before presenting and pitchi...
stakeholders is that the entrepreneur knows...
comprehensive overview of the new venture...
the entrepreneur or entrepreneurial team to...

...nce managers have a clear outline of the...
...ctive visual aids to support the oral pr...
...tation to interested audiences.

...for delivering a suc...

...of organisational structures

...e type of organisation layout required will reflect on the typ...
...key to convey to the stakeholders of the business i.e. the workfo...

Five common types of organisational structures used are listed belo... presented.

1. Hierarchical organisational structure

The pyramid-shaped organisational structure is the most common type an... from the top of the business (e.g., the CEO or high-level managers) down... The structure defines the level of authority and responsibility and is motiv... can define career paths and opportunities for promotion.

Whilst this structure brings standardisation and accountability in the decisio... down innovation in a business because of the increased bureaucracy, an... more in the interest of their department than the company.

2. Functional organisational structure

Primarily the team are organised according to their specific skills an... business, such as finance, marketing or manufacturing. This allows fo... role and higher motivation as each functional department is man... manager.

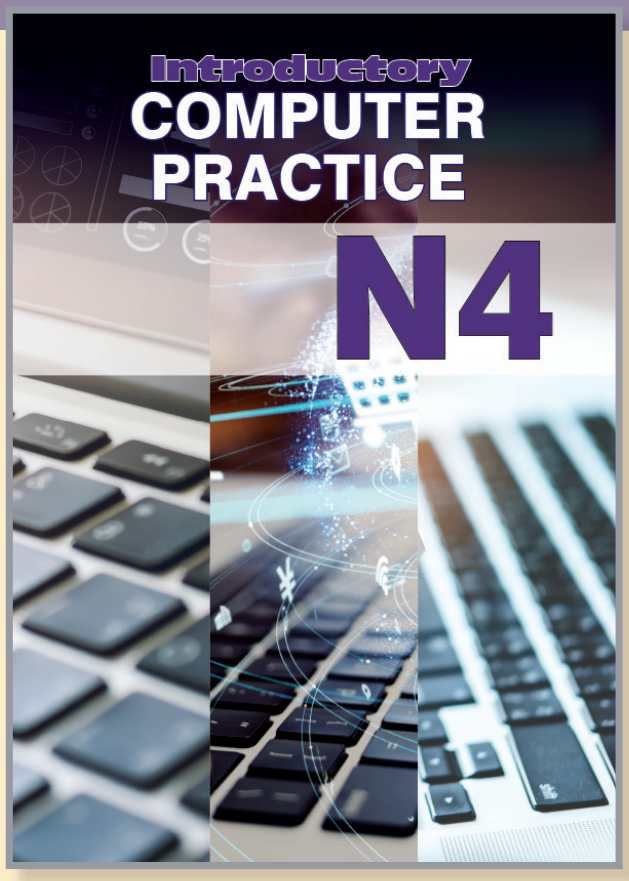
...s important for organisations to promote inter-departme...

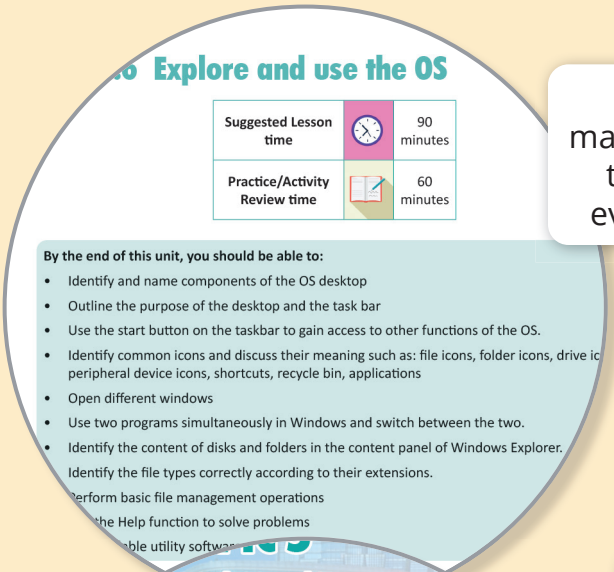
LECTURER GUIDE MATERIAL IS AVAILABLE TO ACCESS ELECTRONICALLY

9781779920256	SHUTERS ENTREPRENEURSHIP AND BUSINESS MANAGEMENT N5 STUDENT TEXTBOOK
9781776315437	SHUTERS ENTREPRENEURSHIP AND BUSINESS MANAGEMENT N5 LECTURER GUIDE

INTRODUCTORY COMPUTER PRACTICE N4

Shuters Introductory Computer Practice N4 provides a solid foundation for students on which they can build their further knowledge. Students will receive a thorough grounding in basic computer concepts, network and communication technology, information management and computational thinking, internet and communication skills. Digital citizenship and current IT issues are also highlighted and help students to act responsibly in a digital world. A comprehensive guide for the lecturer is also available to assist with resources, activities and assessment.





Time management tools for every unit.

UX issues examined and discussed.

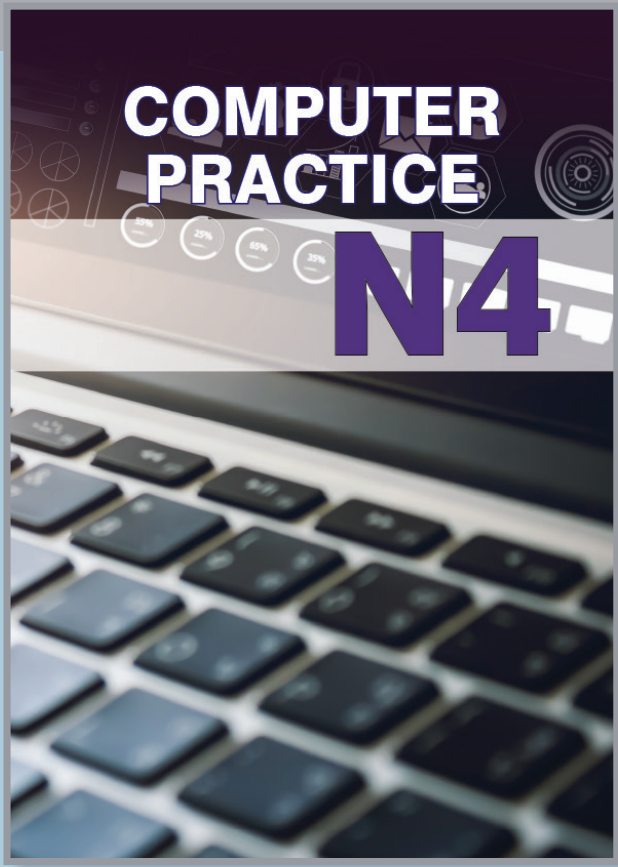
E-resources such as YouTube videos and websites are provided.

9781485836544	INTRODUCTORY COMPUTER PRACTICE N4 STUDENT TEXTBOOK

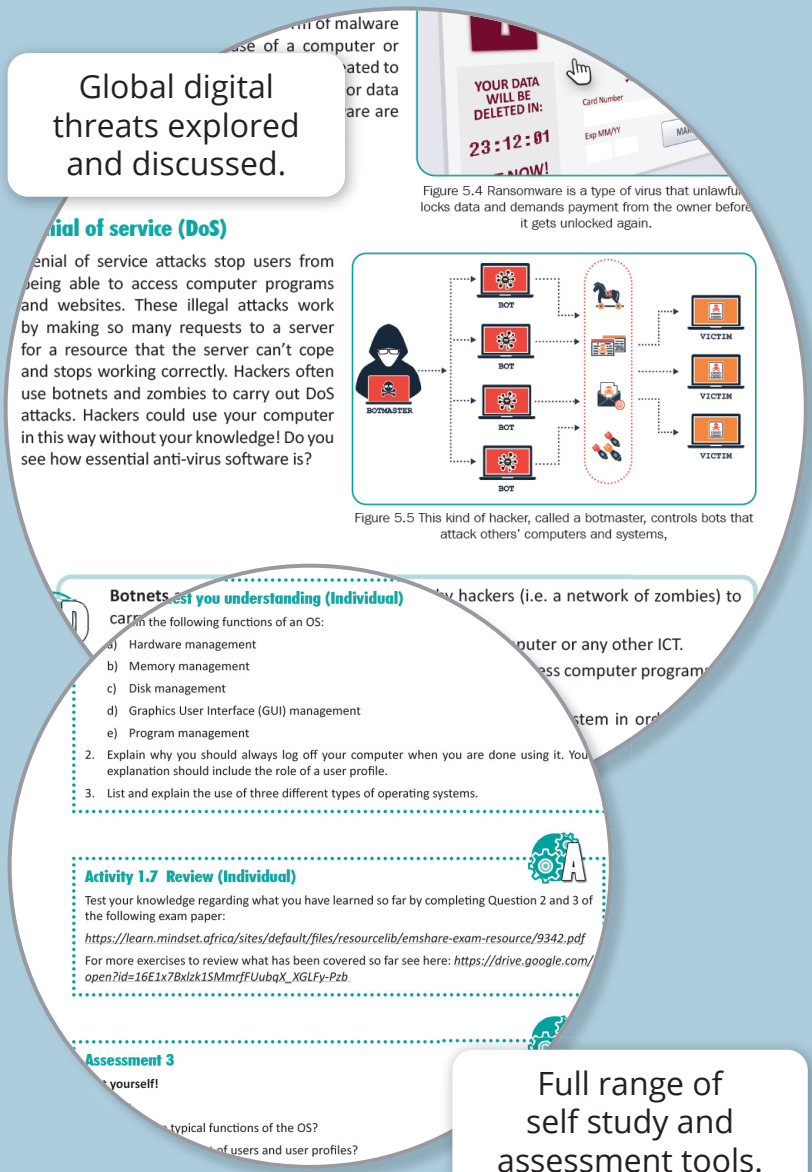
COMPUTER PRACTICE N4

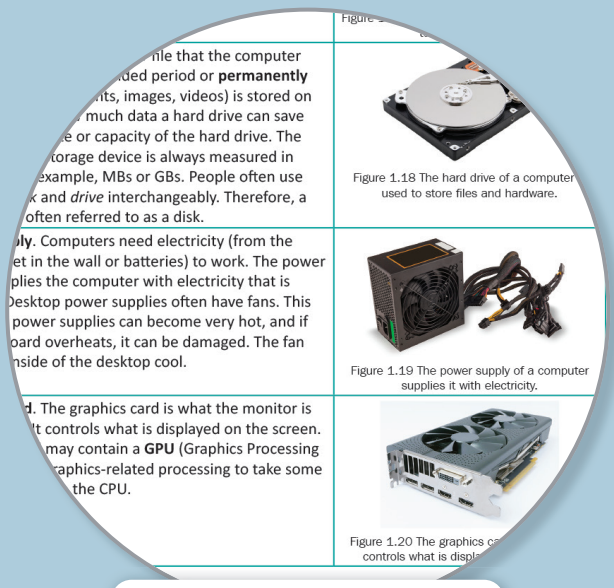
Shuters Computer Practice N4 builds on the foundation created by **Introductory Computer Practice**. It takes students to a more complex level of computer concepts, network and communication technology, information management and computational thinking, internet and communication skills and digital citizenship.

This textbook is a 'one-stop-shop' for both lecturer and student as it contains all the resources needed to successfully master the contents of this subject.



Global digital threats explored and discussed.





Full range of self study and assessment tools.

Visual aids assist student to gain a fuller understanding.

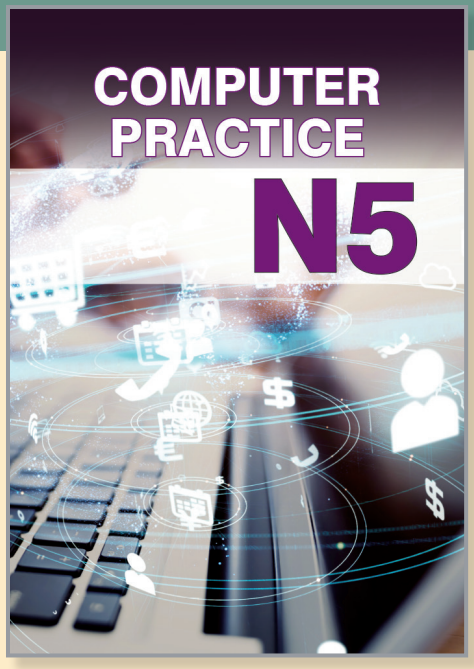
9781485836551	COMPUTER PRACTICE N4 STUDENT TEXTBOOK

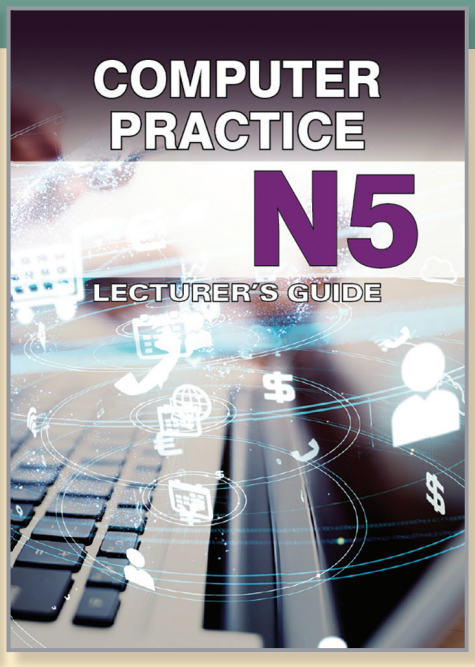
COMPUTER PRACTICE N5

Shuters Computer Practice N5. In N4 the different aspects of computer practice were divided into five topics. These are further explored in N5.

The final examination for this subject will consist of two sections: Section A (theory) and Section B (practical) which must be completed using a computer.

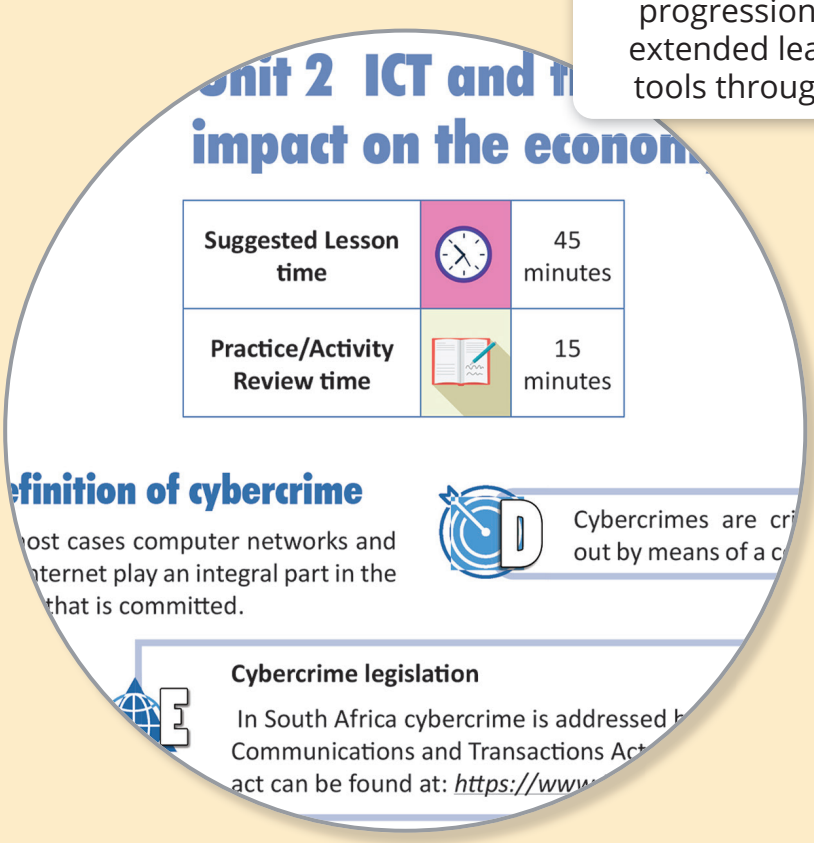
An aim of the course is to promote problem-solving skills alongside the technical abilities to use the software packages.

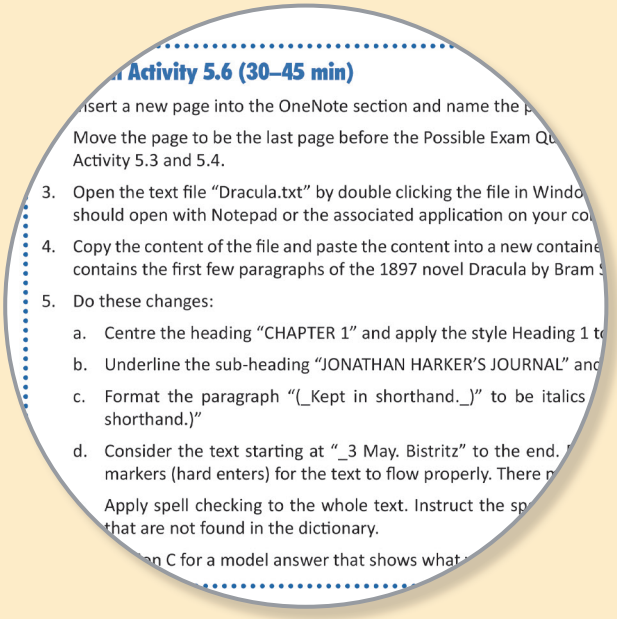




Measurable progression, and extended learning tools throughout.

Practical activities reinforce student experience.



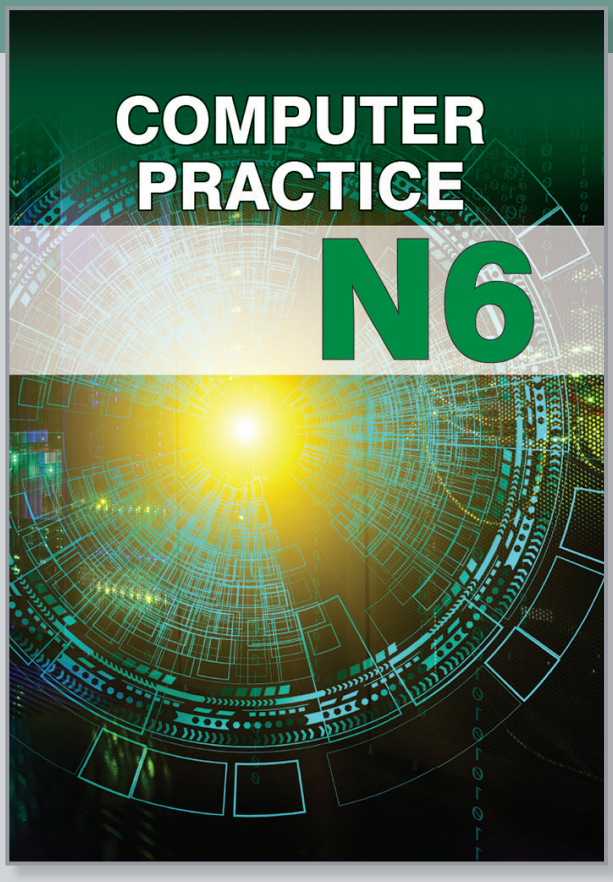


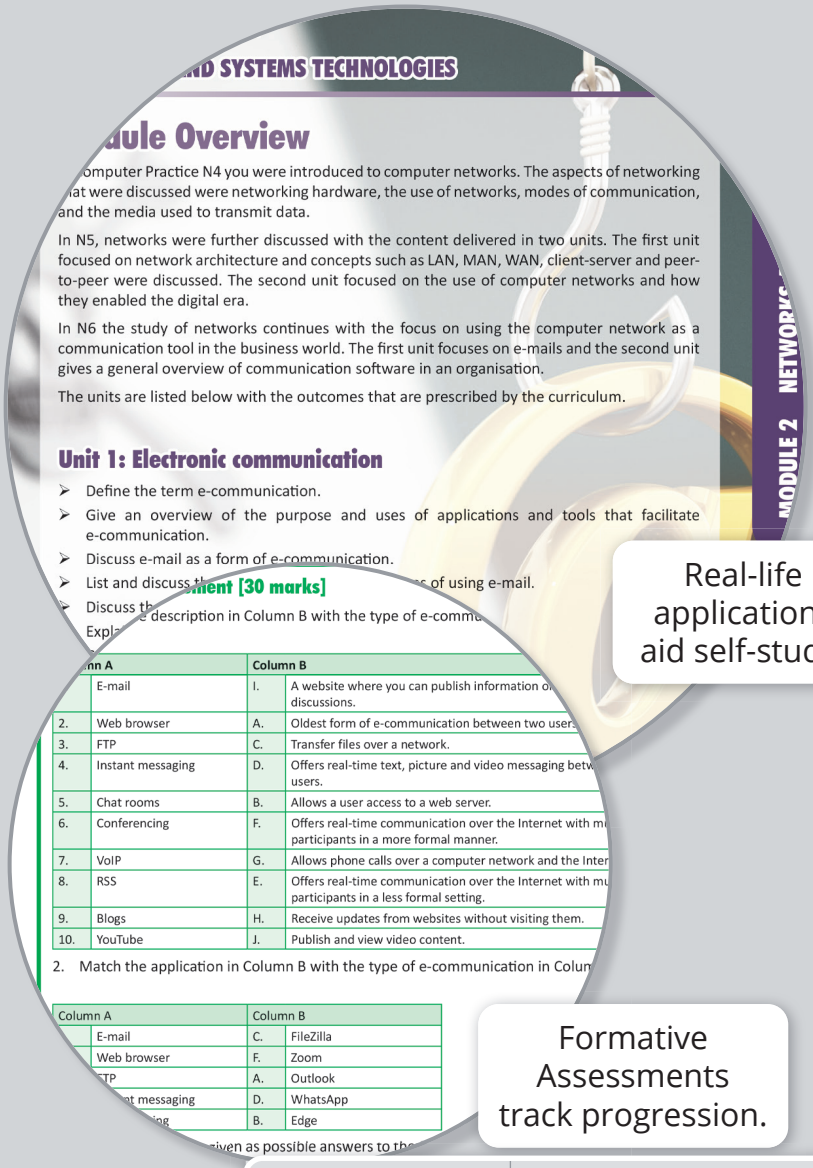
9781485838302	COMPUTER PRACTICE N5 STUDENT TEXTBOOK
9781485838463	COMPUTER PRACTICE N5 LECTURER GUIDE

COMPUTER PRACTICE N6

Shuters Computer Practice N6 separates the Section A (theory), from Section B (practical application topics). The final mark obtained in the subject has two components – a semester mark and a final examination mark. The semester mark consists of a practical mark, a test mark and an internal examination mark.

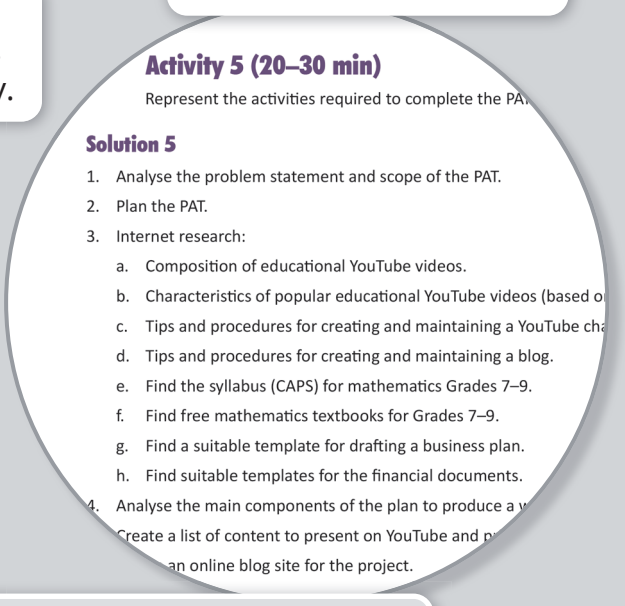
The practical assessment task (PAT) is prescribed for the course. It consists of numerous exercises and activities embedded in a single topic or project. Each topic ends with activities directed towards the PAT.





Real-life applications aid self-study.

PATs provide prescribed skills measurements.



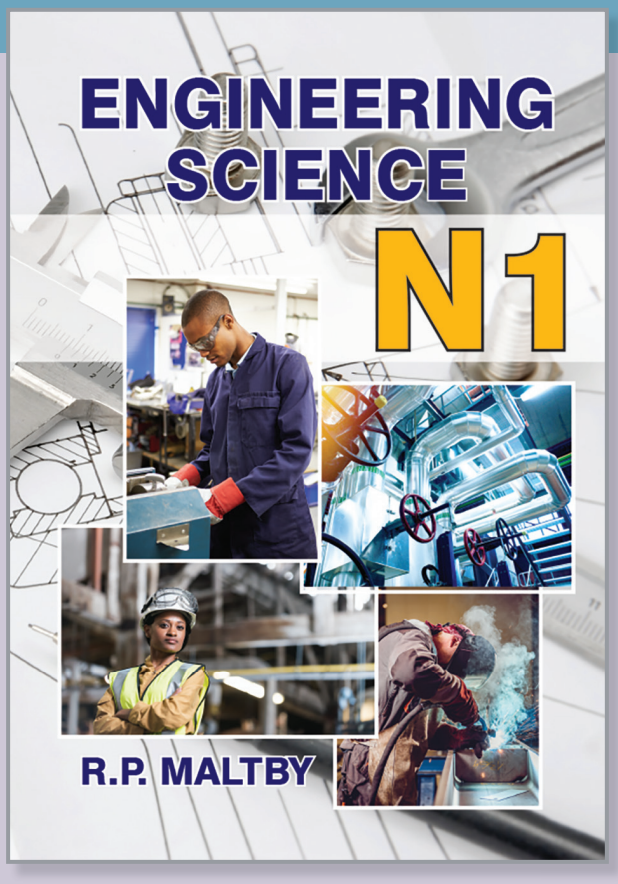
Formative Assessments track progression.

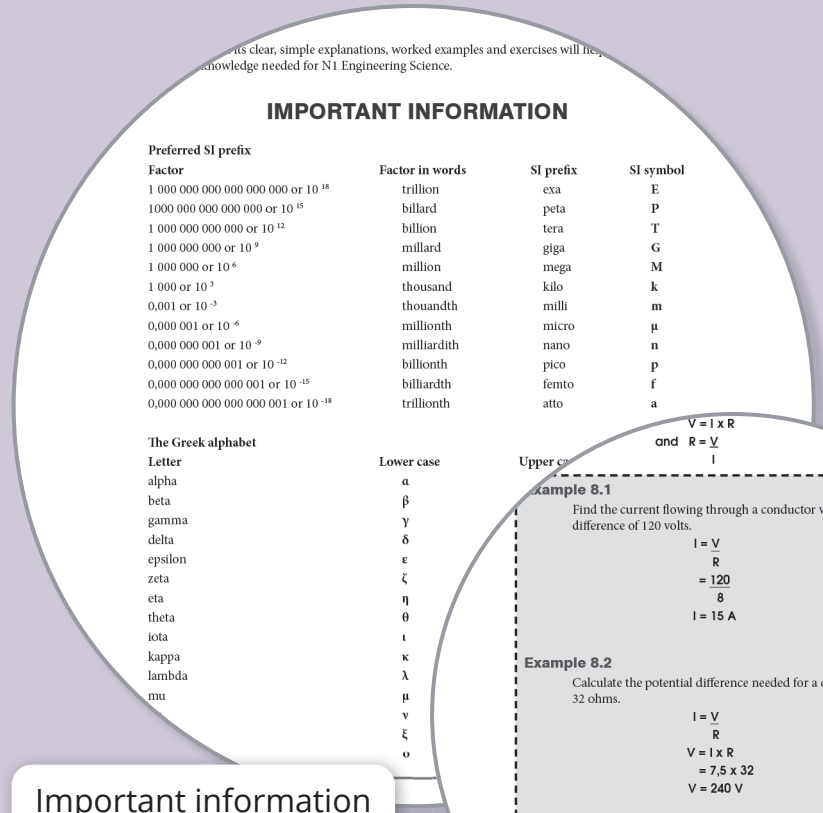
9781776314362	COMPUTER PRACTICE N6 STUDENT TEXTBOOK
9781776314423	COMPUTER PRACTICE N6 LECTURER GUIDE

ENGINEERING SCIENCE N1

This series covers Engineering Science for levels N1, N2, N3 and N4 was written by subject expert, Richard Maltby, these books contain simple and clear explanations of all Engineering Science concepts.

Shuters Engineering Science N1 includes worked examples, exercises and solutions to assist students in mastering all the skills and knowledge needed to succeed in Engineering Science.





IMPORTANT INFORMATION

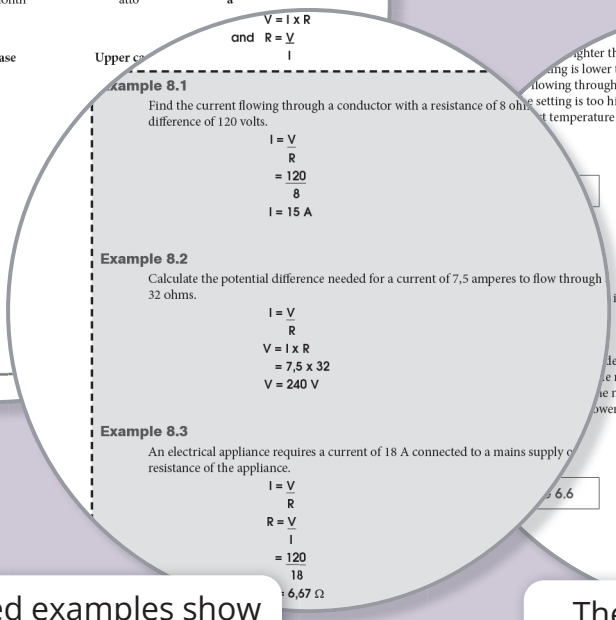
Preferred SI prefix

Factor	Factor in words	SI prefix	SI symbol
1 000 000 000 000 000 000 or 10^{18}	trillion	exa	E
1000 000 000 000 000 or 10^{15}	billard	peta	P
1 000 000 000 000 or 10^{12}	billion	tera	T
1 000 000 000 or 10^{9}	millard	giga	G
1 000 000 or 10^{6}	million	mega	M
1 000 or 10^{3}	thousand	kilo	k
0,001 or 10^{-3}	thouandth	milli	m
0,000 001 or 10^{-6}	millionth	micro	μ
0,000 000 001 or 10^{-9}	milliardith	nano	n
0,000 000 000 001 or 10^{-12}	billionth	pico	p
0,000 000 000 000 001 or 10^{-15}	billiardth	femto	f
0,000 000 000 000 000 001 or 10^{-18}	trillionth	atto	a

The Greek alphabet

Letter	Lower case
alpha	α
beta	β
gamma	γ
delta	δ
epsilon	ε
zeta	ζ
eta	η
theta	θ
iota	ι
kappa	κ
lambda	λ
mu	μ
	ν
	ξ
	ο

Important information is provided at the start of each book.



$V = I \times R$ and $R = \frac{V}{I}$

Example 8.1

Find the current flowing through a conductor with a resistance of 8 ohms when connected to a potential difference of 120 volts.

$$I = \frac{V}{R} = \frac{120}{8}$$

$I = 15$ A

Example 8.2

Calculate the potential difference needed for a current of 7,5 amperes to flow through a resistance of 32 ohms.

$$I = \frac{V}{R}$$

$V = I \times R = 7{,}5 \times 32$

$V = 240$ V

Example 8.3

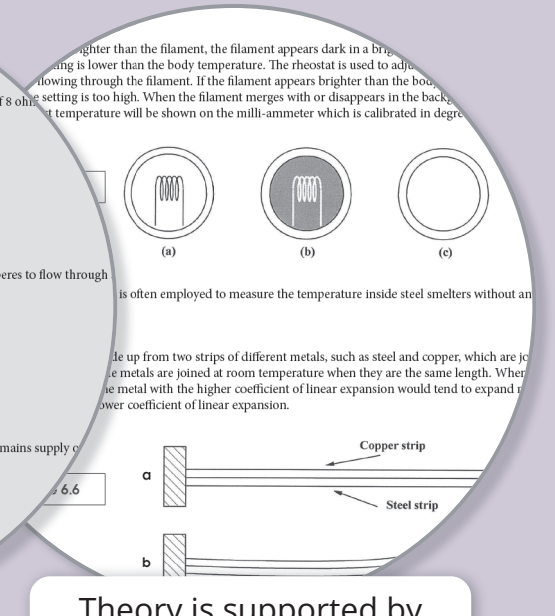
An electrical appliance requires a current of 18 A connected to a mains supply c… resistance of the appliance.

$$I = \frac{V}{R}$$

$$R = \frac{V}{I} = \frac{120}{18}$$

$= 6{,}67\ \Omega$

Worked examples show how theory is applied.



Theory is supported by clear and simple diagrams.

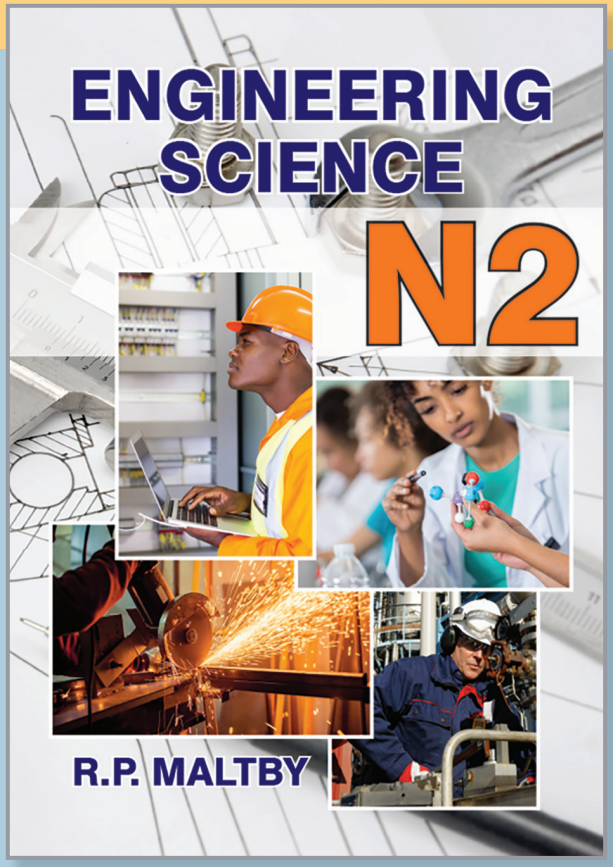
9781485834267	ENGINEERING SCIENCE N1 STUDENT TEXTBOOK

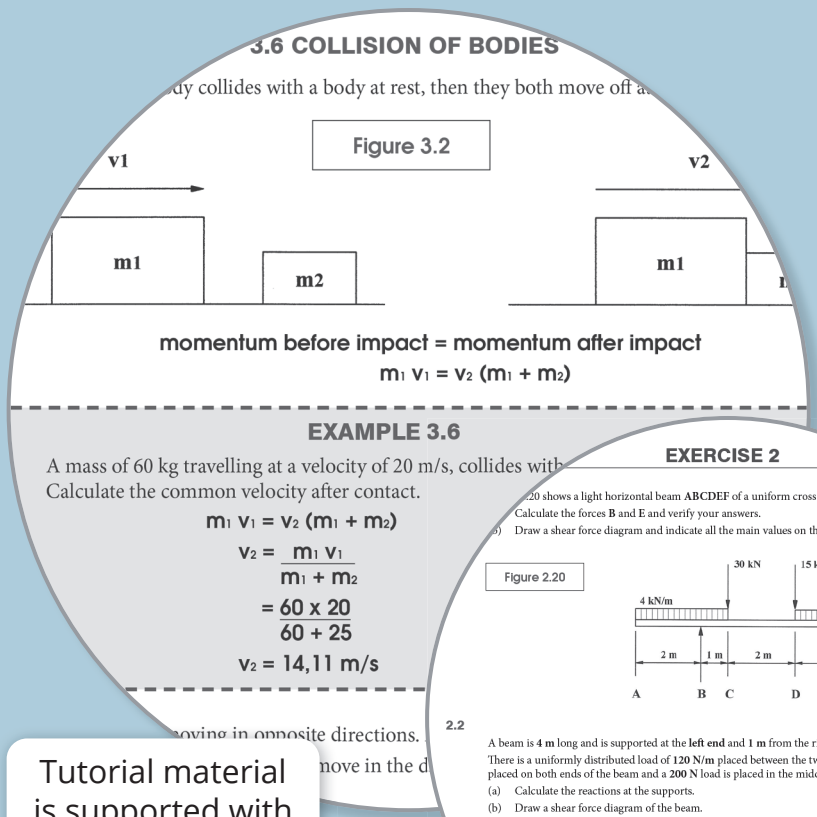
SOLUTIONS for the Engineering Science series are available online.

ENGINEERING SCIENCE N2

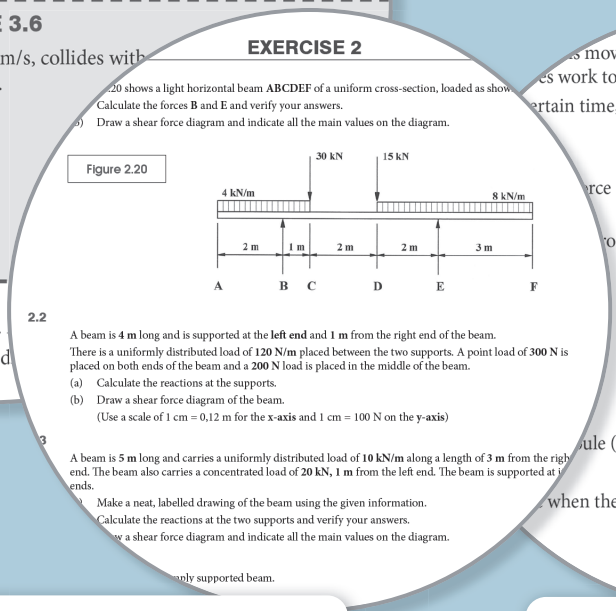
This series covers Engineering Science for levels N1, N2, N3 and N4 was written by subject expert, Richard Maltby, these books contain simple and clear explanations of all Engineering Science concepts.

Shuters Engineering Science N2 includes worked examples, exercises and solutions to assist students in mastering all the skills and knowledge needed to succeed in Engineering Science.

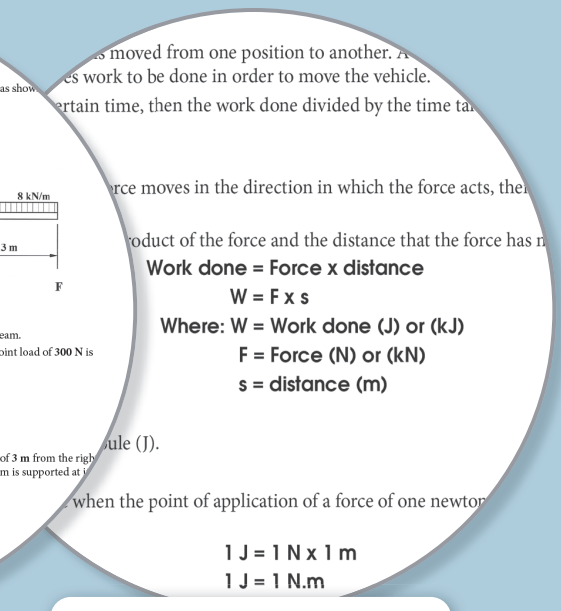




Tutorial material is supported with worked examples.



Exercises test the application of knowledge at different levels.



Tutorial material reinforces key concepts.

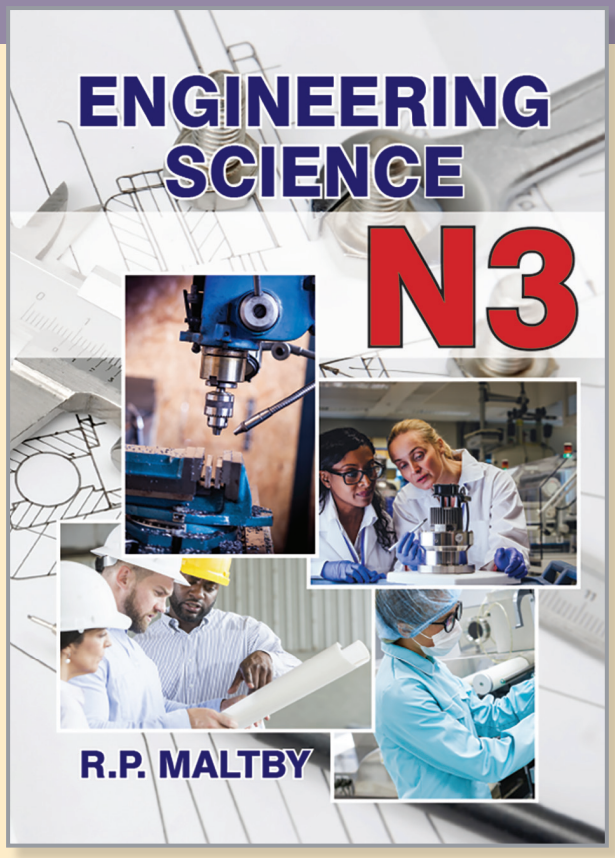
9781485834274	ENGINEERING SCIENCE N2 STUDENT TEXTBOOK

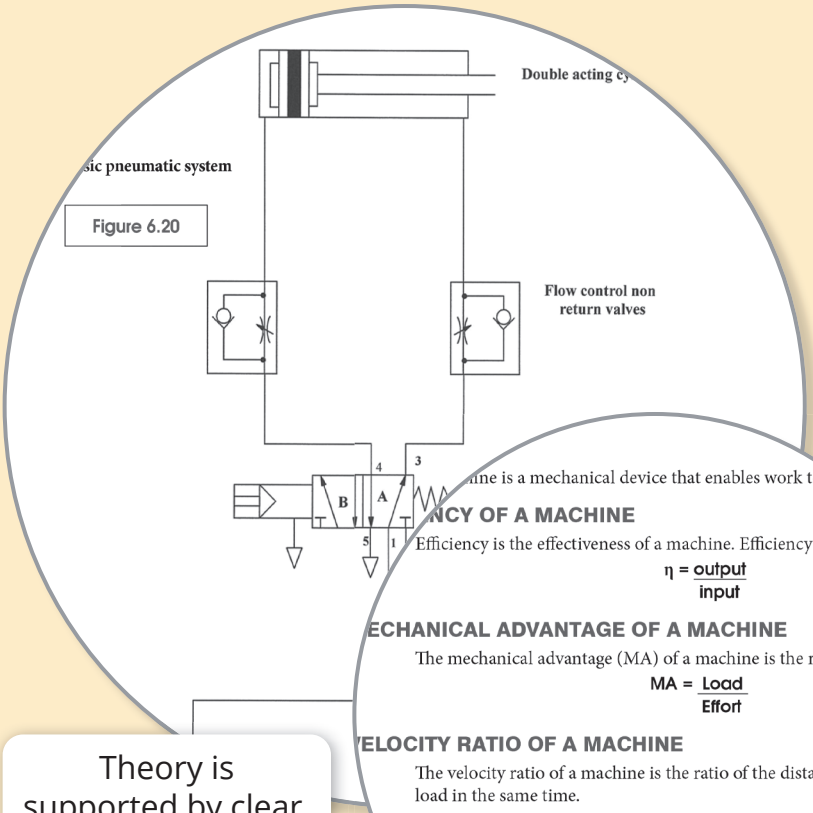
SOLUTIONS for the Engineering Science series are available online.

ENGINEERING SCIENCE N3

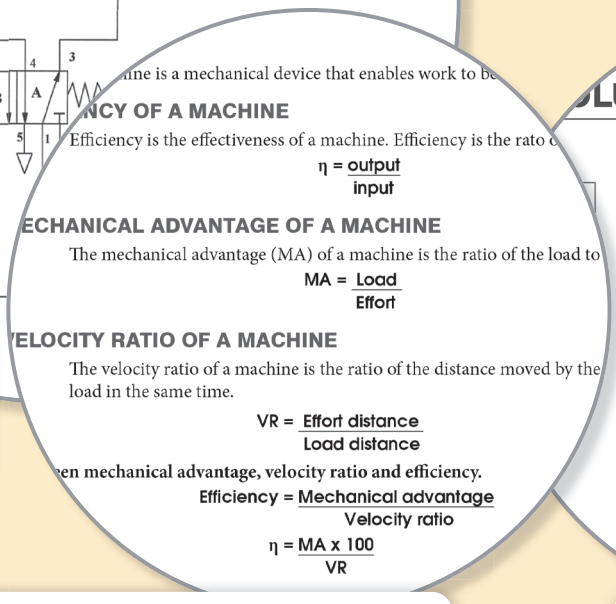
This series covers Engineering Science for levels N1, N2, N3 and N4 was written by subject expert, Richard Maltby, these books contain simple and clear explanations of all Engineering Science concepts.

Shuters Engineering Science N3 includes worked examples, exercises and solutions to assist students in mastering all the skills and knowledge needed to succeed in Engineering Science.

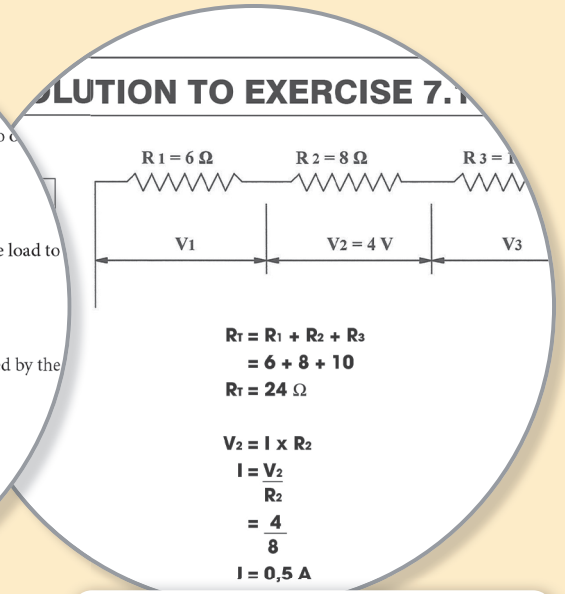




Theory is supported by clear, simple diagrams.



Comprehensive Glossary provides support for self-study.



Full Solutions provided FREE, online: www.shuters.com

9781485834281	ENGINEERING SCIENCE N3 STUDENT TEXTBOOK

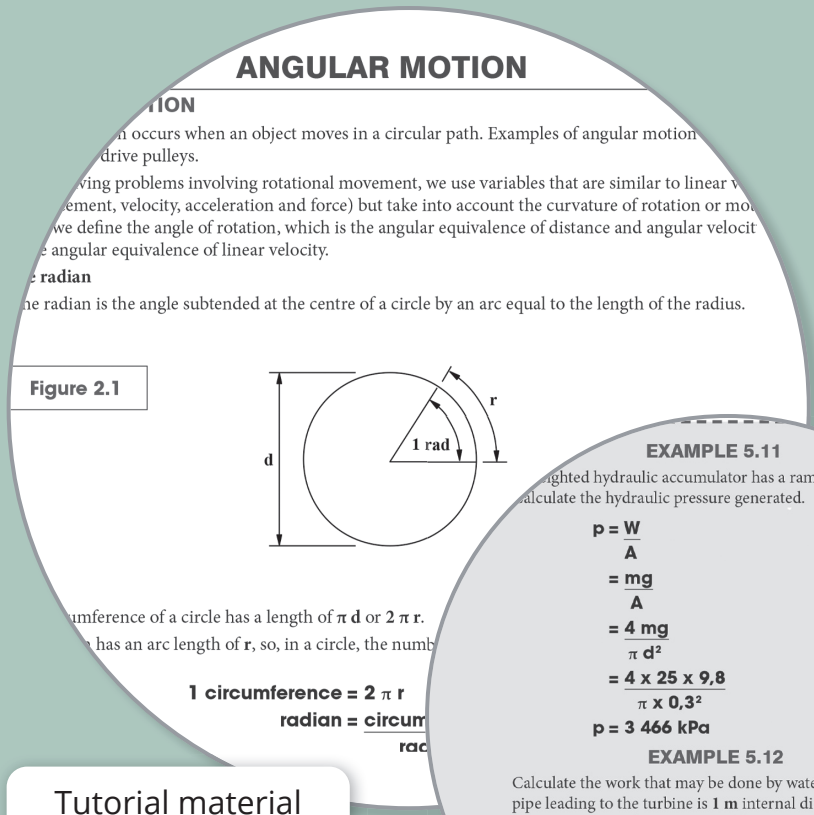
SOLUTIONS for the Engineering Science series are available online.

ENGINEERING SCIENCE N4

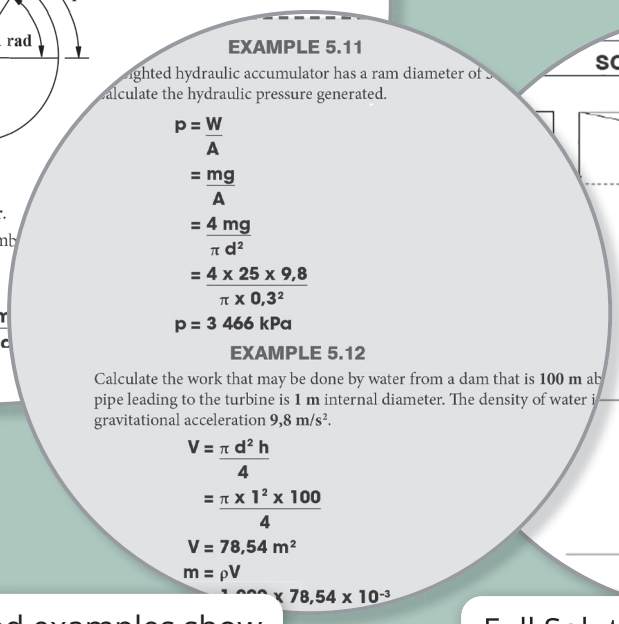
New updated version

This series covers Engineering Science for levels N1, N2, N3 and N4 was written by subject expert, Richard Maltby, these books contain simple and clear explanations of all Engineering Science concepts.

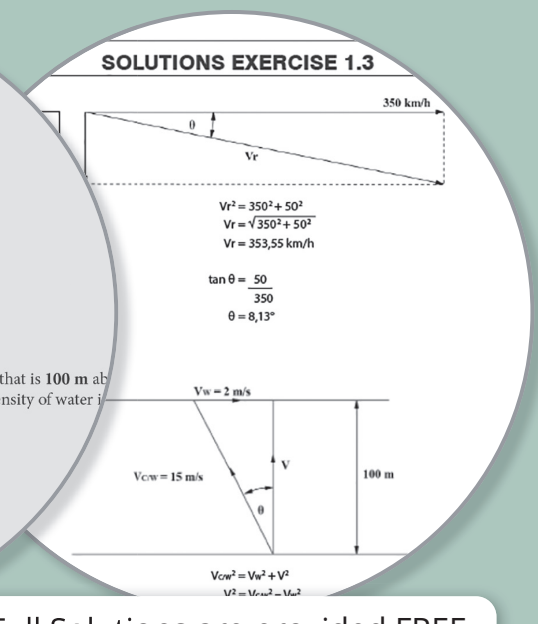
Shuters Engineering Science N4 includes worked examples, exercises and solutions to assist students in mastering all the skills and knowledge needed to succeed in Engineering Science.



Tutorial material presented in accessible language.



Worked examples show how theory is applied.



Full Solutions are provided FREE, online: www.shuters.com

9781776315680	ENGINEERING SCIENCE N4 STUDENT TEXTBOOK

SOLUTIONS for the Engineering Science series are available online.

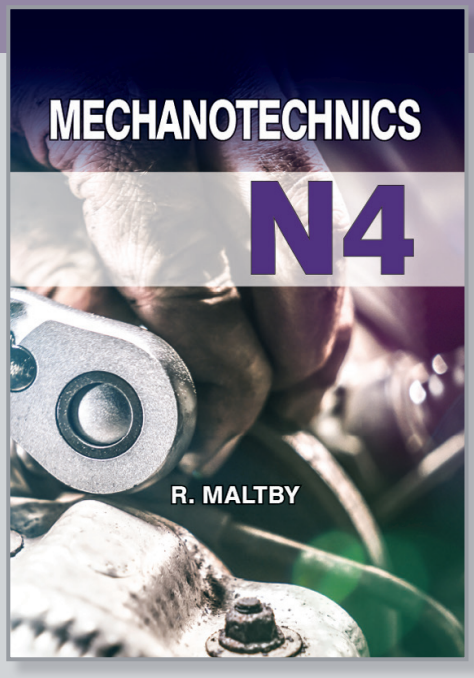
MECHANOTECHNICS N4

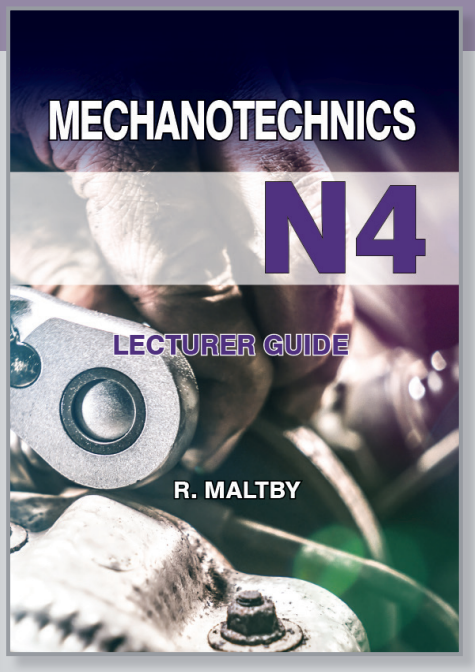
Shuters Mechanotechnics N4 introduces students to workshop procedures and processes, and teaches students the basic principles of mechanical engineering.

The book is written in accessible language to help students understand the main concepts in each module, and then, through worked examples, shows them how to apply the theoretical knowledge to practical calculations.

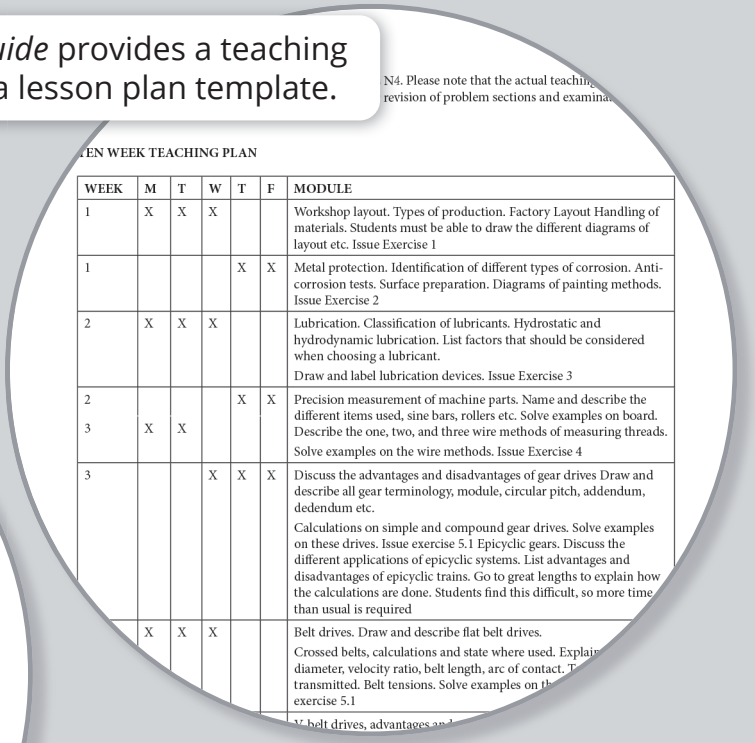
Finally students are given exercises to complete to practise the calculations.

The *Lecturer Guide* provides a teaching plan and a lesson plan template. A list of useful e-resources are provided for each module, to assist the lecturer in planning each lesson.





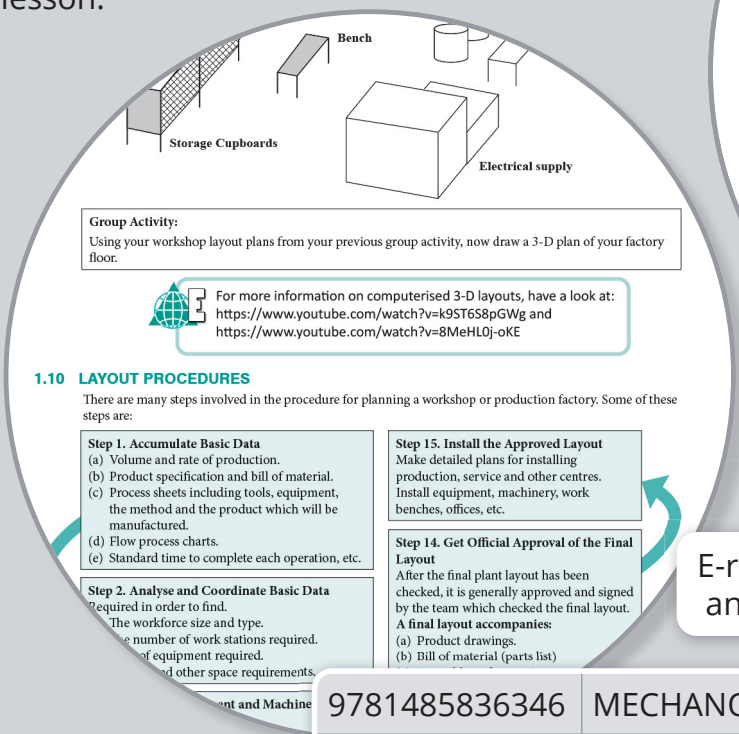
Lecturer Guide provides a teaching plan and a lesson plan template.



N4. Please note that the actual teachi
revision of problem sections and examina

EN WEEK TEACHING PLAN

WEEK	M	T	W	T	F	MODULE
1	X	X	X			Workshop layout. Types of production. Factory Layout Handling of materials. Students must be able to draw the different diagrams of layout etc. Issue Exercise 1
1				X	X	Metal protection. Identification of different types of corrosion. Anti-corrosion tests. Surface preparation. Diagrams of painting methods. Issue Exercise 2
2	X	X	X			Lubrication. Classification of lubricants. Hydrostatic and hydrodynamic lubrication. List factors that should be considered when choosing a lubricant. Draw and label lubrication devices. Issue Exercise 3
2 3	X	X		X	X	Precision measurement of machine parts. Name and describe the different items used, sine bars, rollers etc. Solve examples on board. Describe the one, two, and three wire methods of measuring threads. Solve examples on the wire methods. Issue Exercise 4
3			X	X	X	Discuss the advantages and disadvantages of gear drives Draw and describe all gear terminology, module, circular pitch, addendum, dedendum etc. Calculations on simple and compound gear drives. Solve examples on these drives. Issue exercise 5.1 Epicyclic gears. Discuss the different applications of epicyclic systems. List advantages and disadvantages of epicyclic trains. Go to great lengths to explain how the calculations are done. Students find this difficult, so more time than usual is required
	X	X	X			Belt drives. Draw and describe flat belt drives. Crossed belts, calculations and state where used. Explain diameter, velocity ratio, belt length, arc of contact. T transmitted. Belt tensions. Solve examples on th exercise 5.1
						V-belt drives, advantages and



E-resources (YouTube videos and websites) are provided.

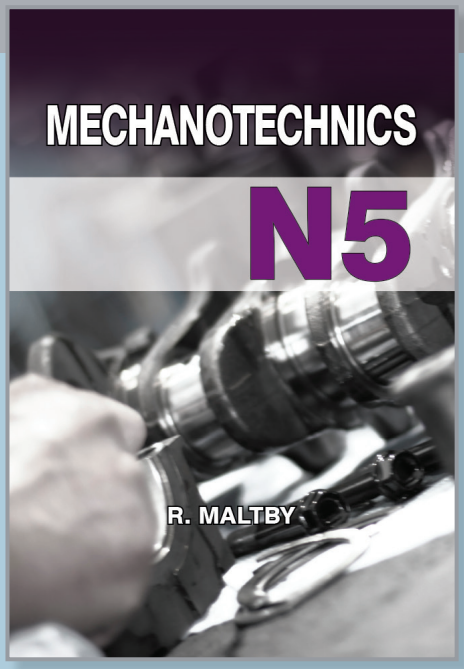
9781485836346	MECHANOTECHNICS N4 STUDENT TEXTBOOK
9781485836353	MECHANOTECHNICS N4 LECTURER GUIDE

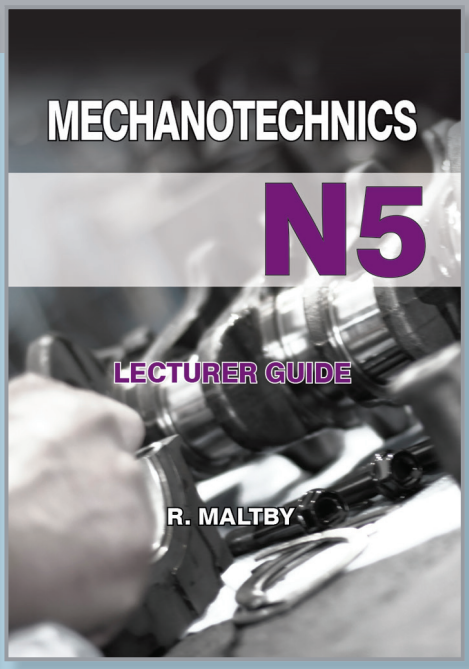
MECHANOTECHNICS N5

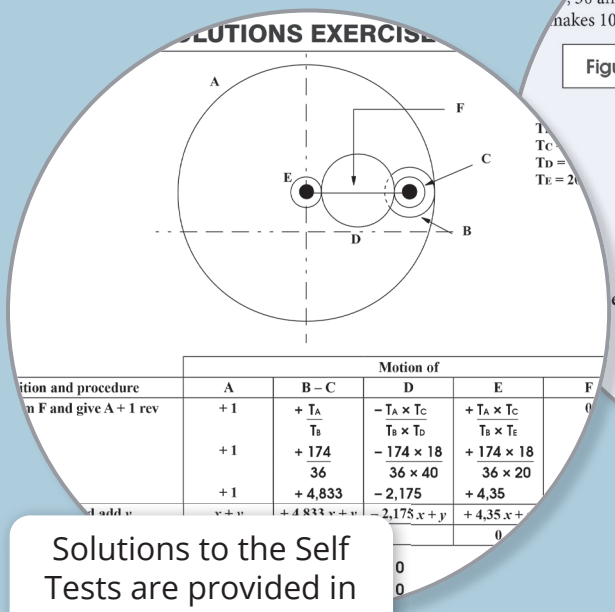
Shuters Mechanotechnics N5 builds on the introduction given in **Shuters Mechanotechnics N4.** Students continue to practise workshop procedures and processes, and reinforce the basic principles of mechanical engineering.

Worked examples throughout the book shows students how to apply the theoretical knowledge to practical calculations. Progressive exercises enable students to practise concepts.

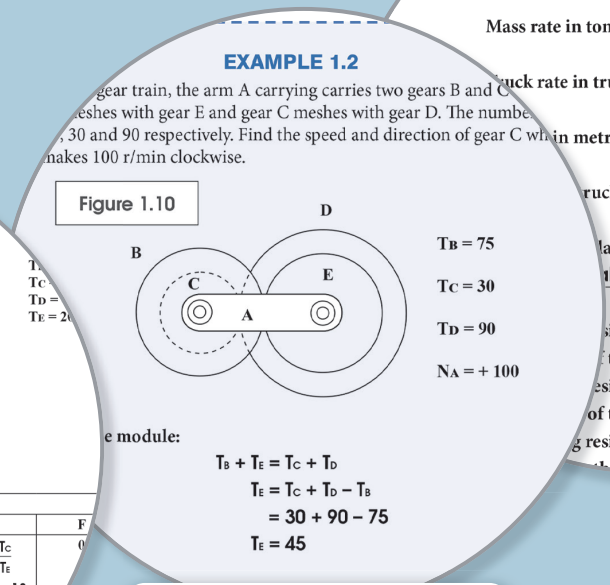
The *Lecturers Guide* provides a teaching plan and a lesson plan template. A list of useful e-resources (videos and websites for example) are provided for each module, as lesson planning aids.



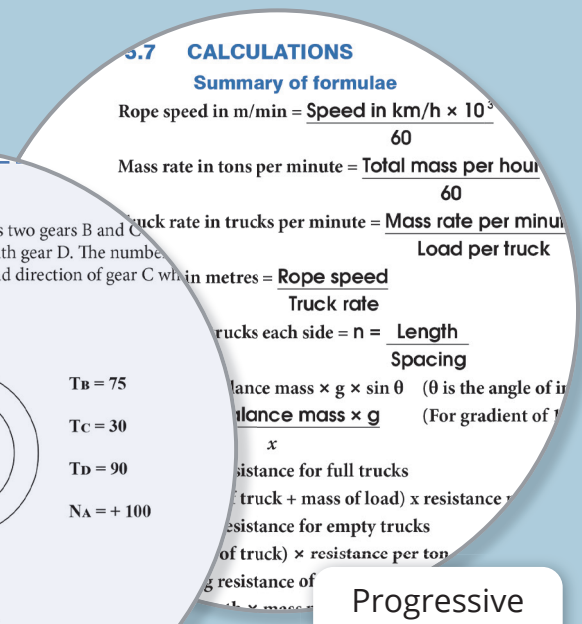




Solutions to the Self Tests are provided in the *Lecturer Guide*.



Worked Examples with labelled diagrams build student confidence and support self-study.



Progressive opportunities to revise calculations.

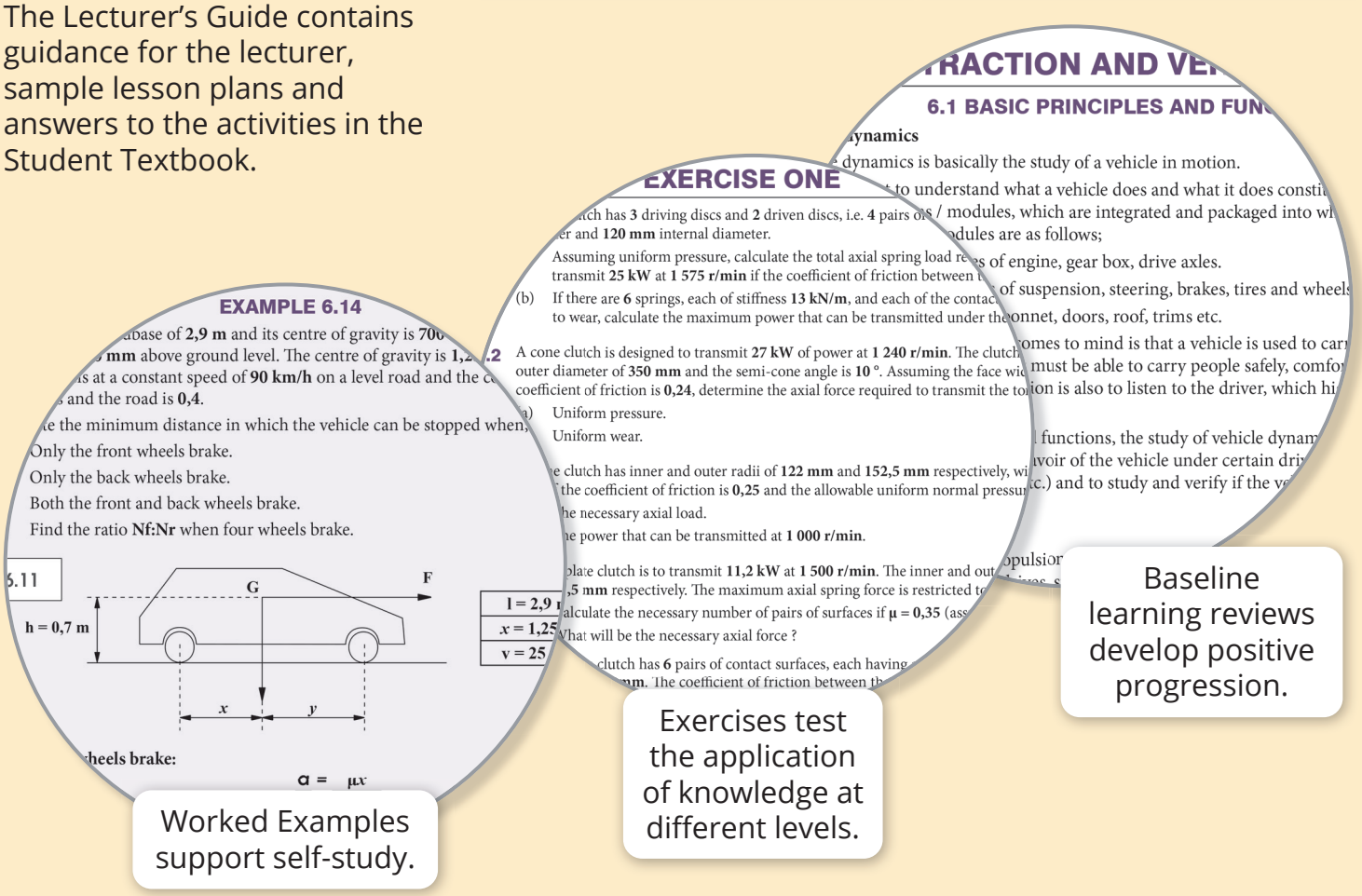
9781485838425	MECHANOTECHNICS N5 STUDENT TEXTBOOK
9781485838432	MECHANOTECHNICS N5 LECTURER GUIDE

MECHANOTECHNICS N6

Shuters Mechanotechnics N6 builds on the introduction given in **Shuters Mechanotechnics N4 and N5.** Students continue to practise workshop procedures and processes, and reinforce the basic principles of mechanical engineering.

Worked examples throughout the book shows students how to apply the theoretical knowledge to practical calculations. Progressive exercises enable students to practise concepts.

The Lecturer's Guide contains guidance for the lecturer, sample lesson plans and answers to the activities in the Student Textbook.



Baseline learning reviews develop positive progression.

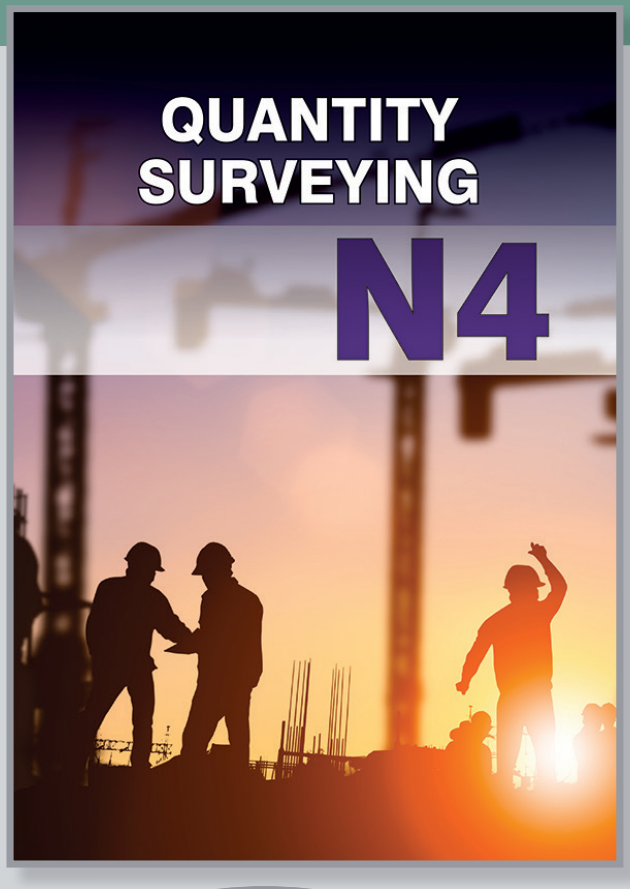
Exercises test the application of knowledge at different levels.

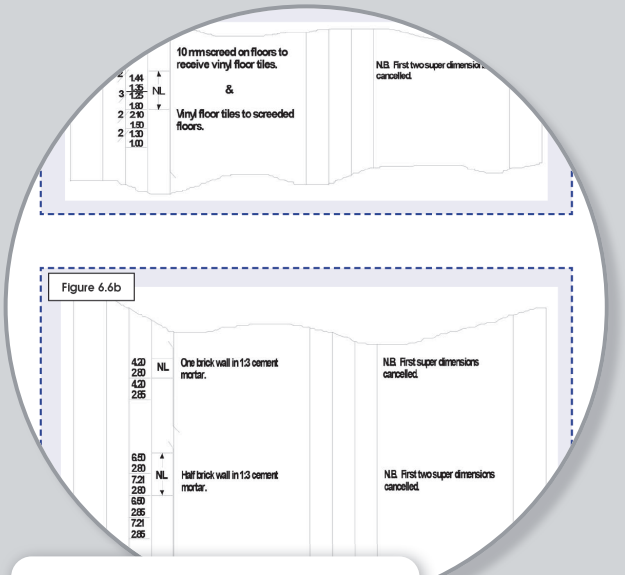
Worked Examples support self-study.

9781776288199	MECHANOTECHNICS N6 STUDENT TEXTBOOK
9781776288205	MECHANOTECHNICS N6 LECTURER GUIDE

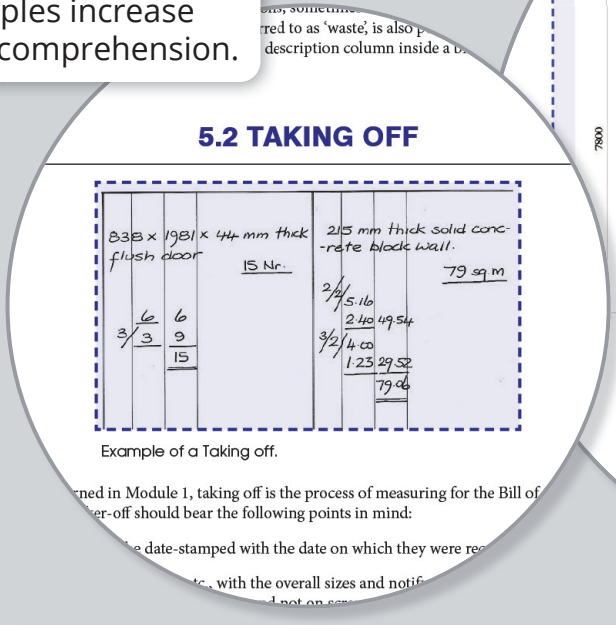
QUANTITY SURVEYING N4

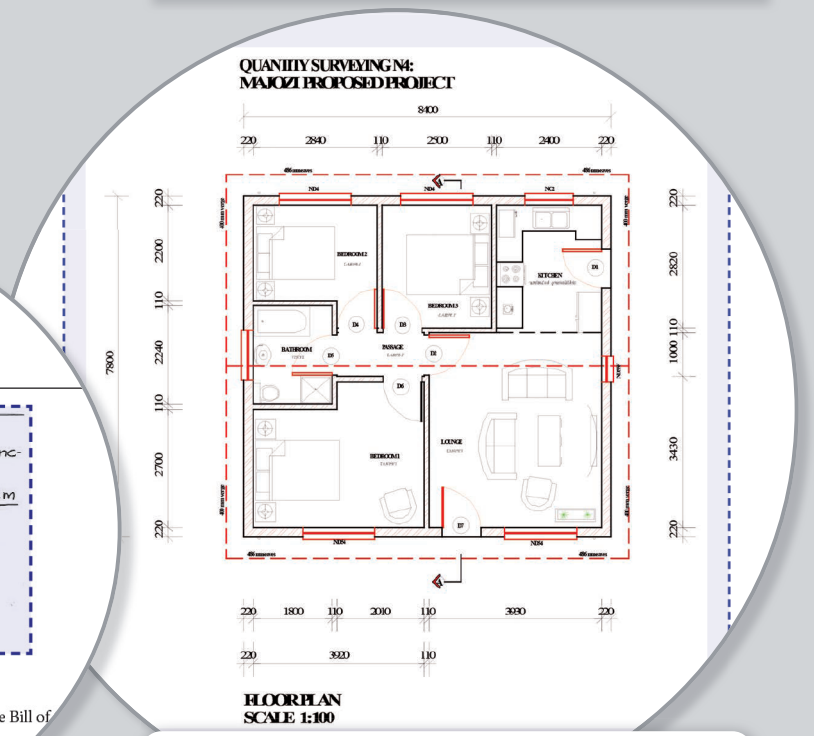
Shuters Quantity Surveying N4 is written according to the latest syllabus. Using this textbook, students will acquire a thorough grounding in the theory and practice of Quantity Surveying at an N4 level. Through the use of examples and activities, students will be able to master the skills and knowledge needed at this level. Resources for the lecturer are available online to assist with the marking of activities and lecture preparation.





Real life practical examples increase student comprehension.



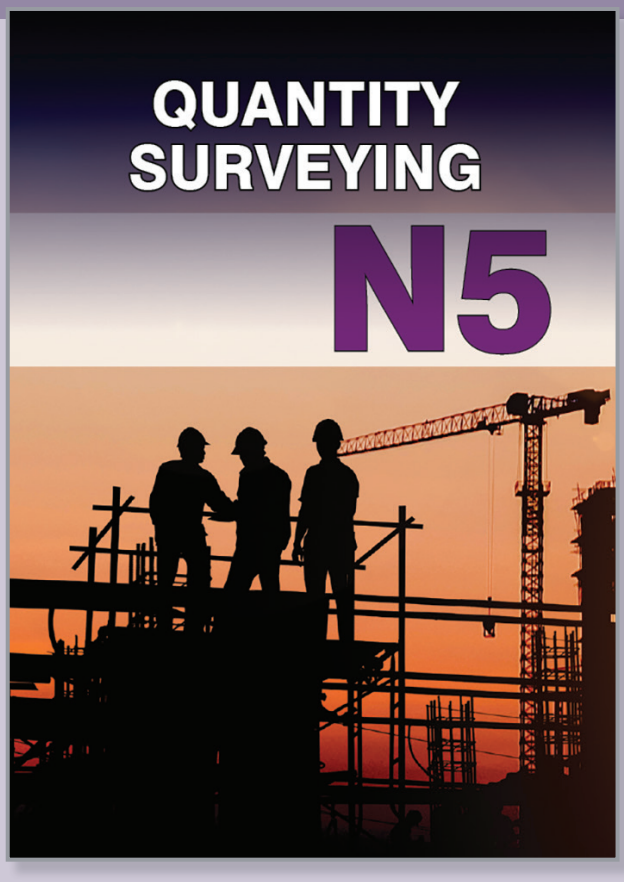


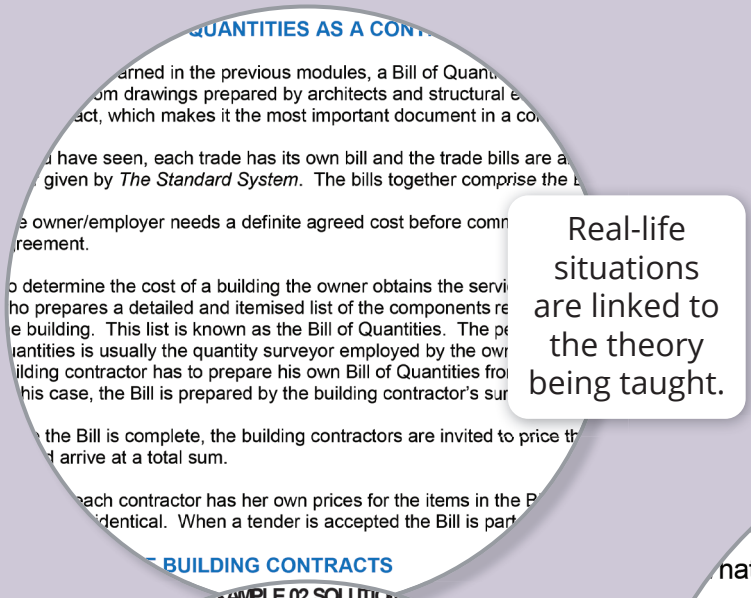
Wide range of measurement exercises broaden learning experience.

9781485836438 | QUANTITY SURVEYING N4 STUDENT TEXTBOOK

QUANTITY SURVEYING N5

Shuters Quantity Surveying N5 is written according to the latest syllabus. Using this textbook, students will acquire a thorough grounding in the theory and practice of Quantity Surveying at an N5 level. Through the use of examples and activities, students will be able to master the skills and knowledge needed at this level. Resources for the lecturer are available online to assist with the marking of activities and lecture preparation.





QUANTITIES AS A CON

arned in the previous modules, a Bill of Quant
om drawings prepared by architects and structural e
act, which makes it the most important document in a co

have seen, each trade has its own bill and the trade bills are a
given by *The Standard System*. The bills together comprise the

e owner/employer needs a definite agreed cost before comm
reement.

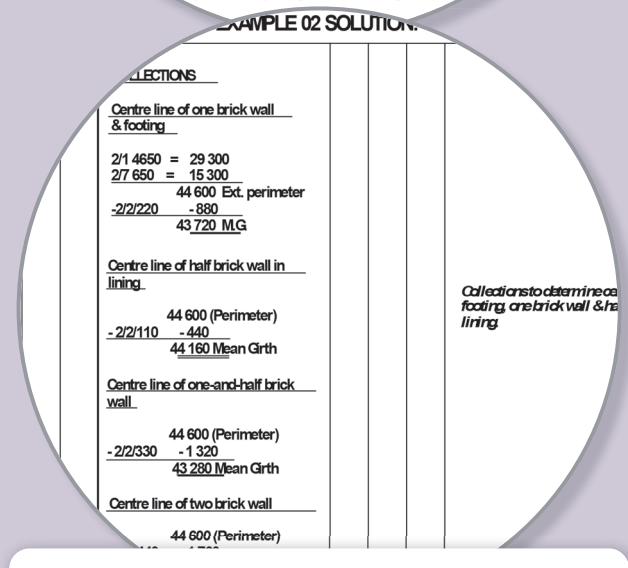
o determine the cost of a building the owner obtains the servi
ho prepares a detailed and itemised list of the components re
e building. This list is known as the Bill of Quantities. The pe
uantities is usually the quantity surveyor employed by the ow
ilding contractor has to prepare his own Bill of Quantities fro
his case, the Bill is prepared by the building contractor's su

the Bill is complete, the building contractors are invited to price th
d arrive at a total sum.

ach contractor has her own prices for the items in the B
dentical. When a tender is accepted the Bill is part

BUILDING CONTRACTS

Real-life situations are linked to the theory being taught.



EXAMPLE 02 SOLUTION

LECTIONS

Centre line of one brick wall & footing

2/1 4650 = 29 300
2/7 650 = 15 300
44 600 Ext. perimeter
-2/2/220 - 880
43 720 M.G

Centre line of half brick wall in lining

44 600 (Perimeter)
- 2/2/110 - 440
44 160 Mean Girth

Centre line of one-and-half brick wall

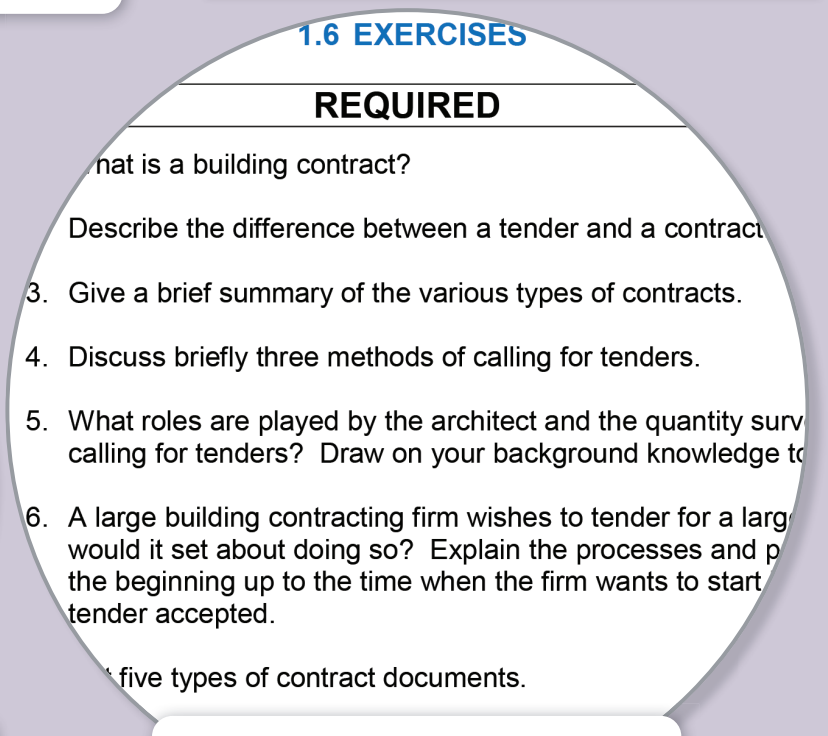
44 600 (Perimeter)
- 2/2/330 - 1 320
43 280 Mean Girth

Centre line of two brick wall

44 600 (Perimeter)

*Collections to determine ce
footing, one brick wall & ha
lining.*

Key skills with Solutions, are presented in comprehensive Examples.



1.6 EXERCISES

REQUIRED

hat is a building contract?

Describe the difference between a tender and a contract

3. Give a brief summary of the various types of contracts.

4. Discuss briefly three methods of calling for tenders.

5. What roles are played by the architect and the quantity surv
calling for tenders? Draw on your background knowledge to

6. A large building contracting firm wishes to tender for a larg
would it set about doing so? Explain the processes and p
the beginning up to the time when the firm wants to start
tender accepted.

five types of contract documents.

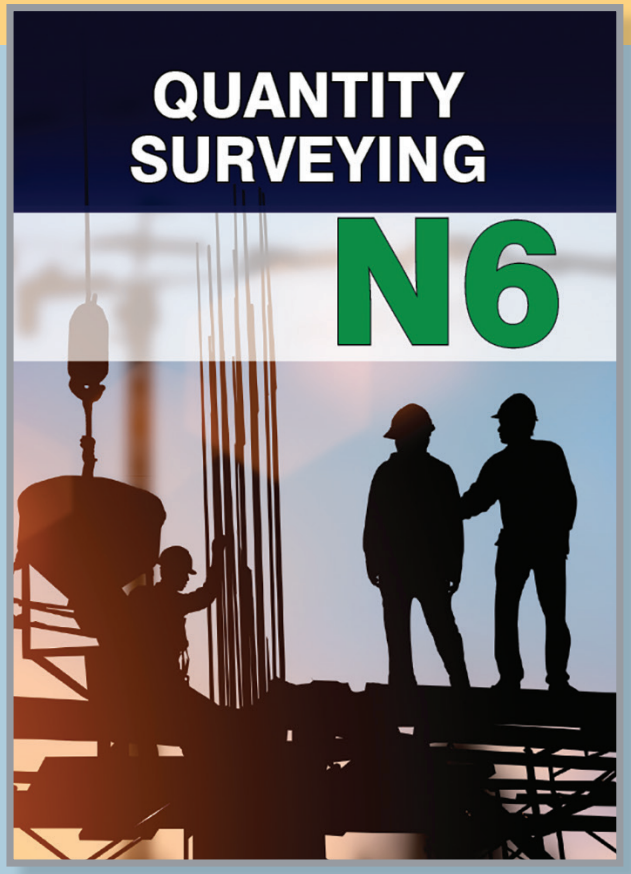
Exercises test the application of knowledge at different levels.

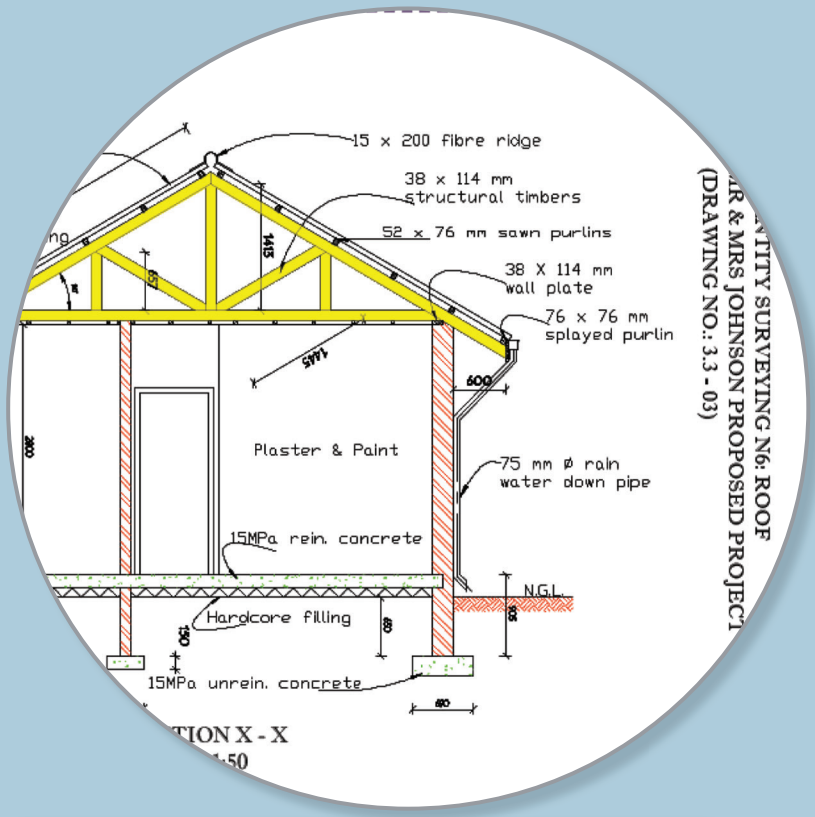
9781485838487 | QUANTITY SURVEYING N5 STUDENT TEXTBOOK

QUANTITY SURVEYING N6

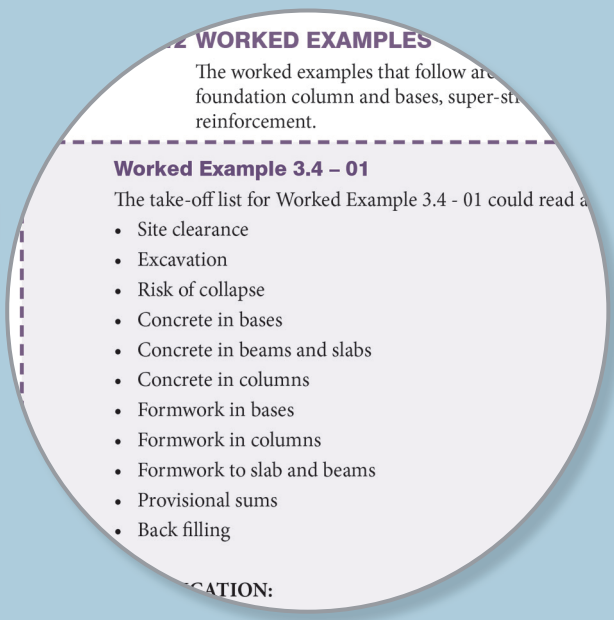
Shuters Quantity Surveying N6 is written according to the latest syllabus. Using this textbook, students will acquire a thorough grounding in the theory and practice of Quantity Surveying at an N6 level. The following areas are covered: Construction process (including communication processes); the Theory of quantity surveying); Measurement as it relates to plumbing, drainage, basements, etc.; and Quantities and Costing.

Through the use of examples and activities, students will be able to master the skills and knowledge needed at this level. Resources for the lecturer are available online to assist with the marking of activities and lecture preparation.





Wide range of measurement exercises broaden learning experience.

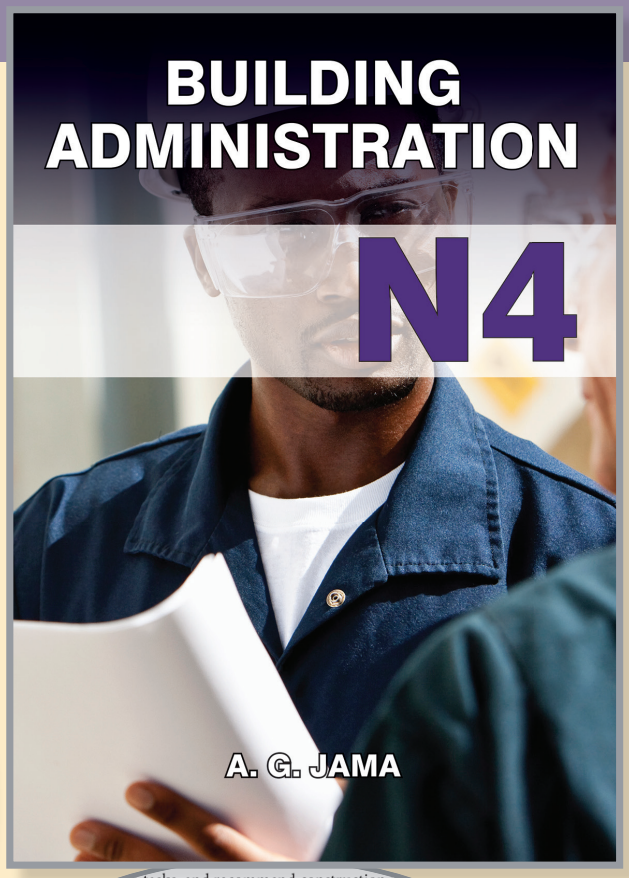


Worked examples show how theory is applied.

9781776288137	QUANTITY SURVEYING N6 STUDENT TEXTBOOK

BUILDING ADMINISTRATION N4

Shuters Building Administration N4 aims to introduce students to the building site. They will learn how to manage and administer construction sites in a real-world situation, and will also understand and be able to adhere to the relevant safety standards and procedures.



Clear diagrams to simplify learning.

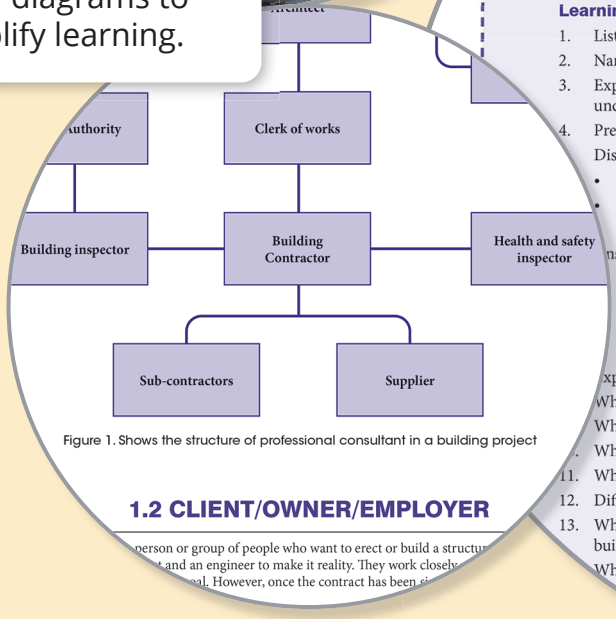


Figure 1. Shows the structure of professional consultant in a building project

1.2 CLIENT/OWNER/EMPLOYER

- Organise and monitor the work of subcontractors on site
- Ensure all works are carried out in line with approved method statements
- Conduct and amend risk assessments and deliver toolbox talks
- Ensure site personnel have job relevant training requirements

ACTIVITY 1 AND QUESTIONS

Learning activity 1

1. List all the professional consultants that you have learned about in this module.
2. Name five duties for each consultant given in Question 1.
3. Explain the meaning of 'professional consultant' in your own words, or according to your understanding.
4. Prepare a line diagram to show the relationship between the members of the professional team.

Discuss the functions of the following professionals in the building industry:

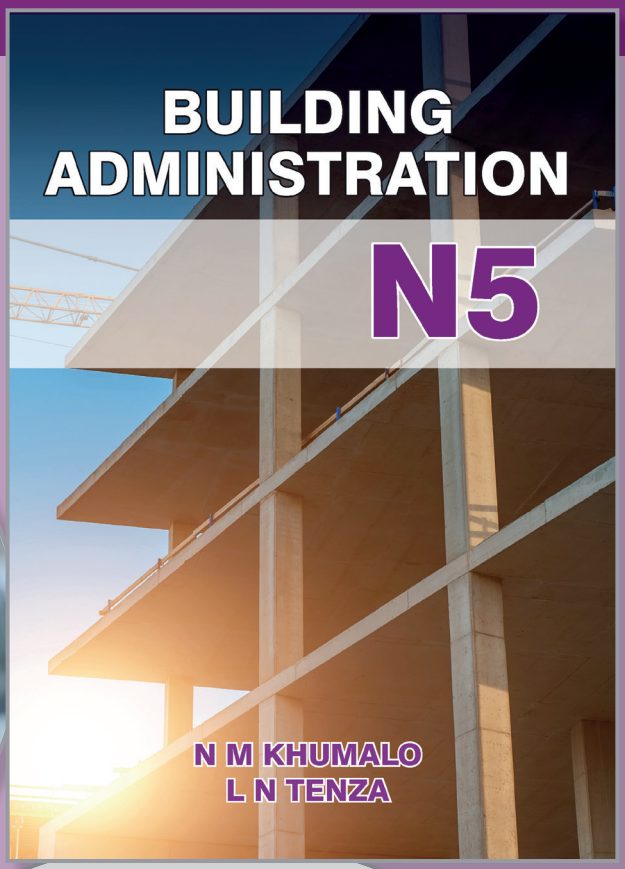
- The architect
- The building inspector
- The quantity surveyor

Activities to test theory and practice

9781776314034 | BUILDING ADMINISTRATION N4 STUDENT TEXTBOOK

BUILDING ADMINISTRATION N5

Shuters Building Administration N5 helps the student to build on the knowledge acquired at N4 level. They will gain a more comprehensive understanding of what is involved in the administration of building projects, with specific reference to South African Industry standards, and health and safety requirements.



...he the entrepre...
...n as a slideshow, to help ...
...s questions that allow the audienc...

Presenting tips and techniq...

The golden rule before presenting and pitch...
stakeholders is that the entrepreneur know...
comprehensive overview of the new ventu...
the entrepreneur or entrepreneurial team...

...nce managers have a clear outline of th...
...ctive visual aids to support the oral pr...
...tation to interested audiences.

...for delivering a suc...

...4.3 MAINTENANCE

...e of maintenance of equipment

... tool that helps to secure reliable and satisfactory production quality, ...
...for the environment.

... **maintenance** is aimed at improving reliability, performance and safety, whils...
...gevity. A well maintained plant allows for maximum output and productivity, re...
...cost.

... **maintenance** must be planned and executed in the least disruptive manner, and s...
...d a matter of critical importance. The operator checks oil, grease, water, loose nuts, ...
...lso checks brakes, lights, fuel, etc.

...aintenance

...chine is withdrawn from its current function, and all worn parts are replaced b...
...fully equipped workshop. This should be properly planned.

...t is on site when required

...nt chart is used to ensure the plant is always on site when requi...
... stage. One copy is sent to the plant supplier (departmen...
...ough the supervisor is agreed upon (e.g. by phone...

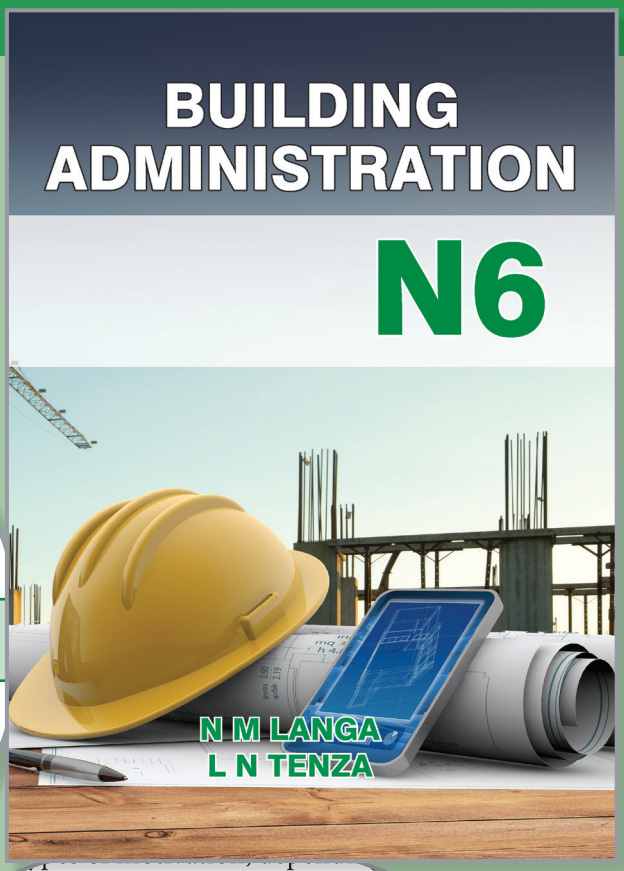
...nd on-site plant maintenance is perfo...

Clear diagrams and photographs enhance the learning material, and test modules at the end of each Module help learners to consolidate their understanding of the subject content.

9781776316007 | BUILDING ADMINISTRATION N5 STUDENT TEXTBOOK

BUILDING ADMINISTRATION N6

Shuters Building Administration N6 helps the students to develop their ability to manage construction sites and to adhere safety standards and procedures. The more legal aspects of tendering, contracts and ethics are explored, as well as safety regulations, work study and staff motivation and development.



Step 2: Invitation to tender

Step 3: Submission of tenders

Step 4: Adjudication of tenders

...xcavation

= 6,7

...e rate for excavation = R95/m³

∴ Cost = 6,72m³ × R95 = R638.40

Concrete foundation

The footing = 0,7m × 0,25m

Volume of concrete foundation = l × w × d

= 22,32m × 0,

= 3,906m³ ⇒

...rate for concrete foundation = R1800/m³

∴ Cost = 3,91m³ × R1800 = R703

...r slab

...otivation, namely:

...tivation: sometimes referred to as 'internal motivati...

...personal factors.

...sic motivation: sometimes referred to as 'external motivation', th...

...n factors outside one's self.

...mple of motivators

Intrinsic Motivation	Extrinsic Motivatio...
Feeling of accomplishment	Money
Enjoyment	Promotion
Knowing you did a good job	Awards
Personal ethics	Recognition
Self-respect	Respect
Meeting a goal you set for yourself	Meeting a goal set by

...s to influence motivation on site:

...evelop loyalty by always being fair.

...ourage teamwork.

...in good working conditions.

...communication is a two-way process.

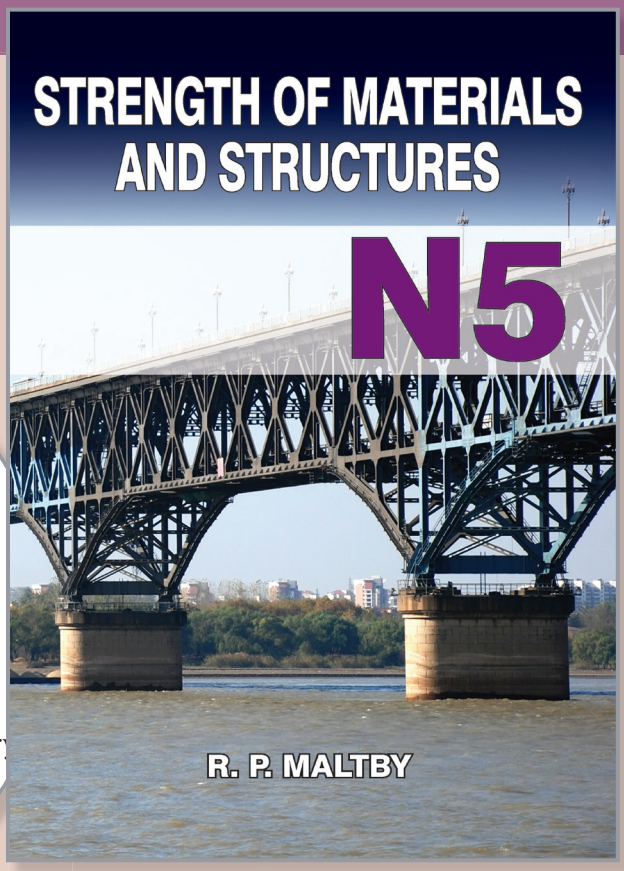
...tion by providing job security.

The theory covered in the book is supported by clear explanations, examples and activities to ensure that learners master the subject content.

9781779921475 | BUILDING ADMINISTRATION N6 STUDENT TEXTBOOK

STRENGTH OF MATERIALS AND STRUCTURES N5

Shuters Strength of Materials and Structures N5 builds on the knowledge that students have attained from their N4 studies. It provides them with both theoretical knowledge as well as practical examples and the chance to apply their knowledge.



The Student Textbook contains extensive diagrams, explanations and worked examples to help the students understand the subject content. Exercises at the end of each Module help them to apply the theory learned.

$$F = \frac{\square A}{1 + a\,(Le/k)^2}$$

$$Le = 2L$$

p ratio (SR) = Effective length of strut / Least radius of gyration

$$SR = \frac{Le}{k}$$

r than **120** we call this a column and Euler's theory

0 we call this a strut and Rankine's theor

ection (parallel

) H-section (parallel flange)
as above.

– EXAM TYPE QUESTION

A strut with both ends fixed has a length c
safe working load on the strut is **90 kN**. Th

The Rankine constant is **1/7 500**. Use a fa

(a) The dimensions of the strut.
(b) The safe load for Euler's equation
(c) The slenderness ratio when the c

straight bar of steel **1,5 m** long
in compression till it h

TRAIN ENERGY

TRAIN ENERGY

oduction

When a deformed structure, such as a spring, stretches, then it st
a type of energy known as strain energy. In many cases, this energy
can be converted into other types of energy, such as kinetic energy.

Definition of strain energy

Strain energy is a type of potential energy that is stored in a structural member as a result of elastic deformation. The external work done on such a member when it is deformed from its unstressed state is transformed into, and considered equal to the strain energy stored in it.

Gradually applied loads

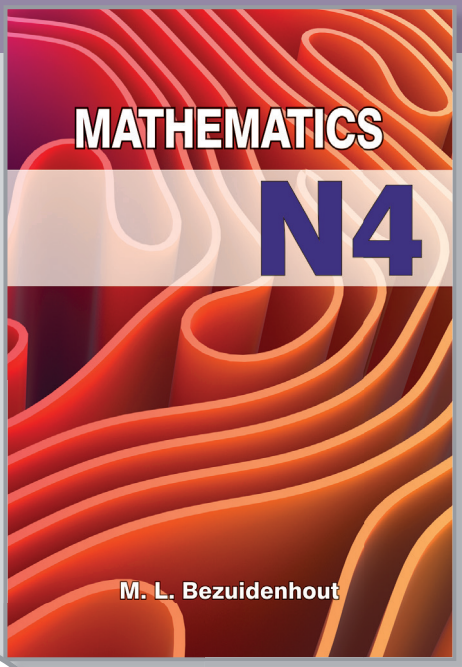
hen a load is gradually applied to a bar and the bar undergoes
ge in length, the load moves as the bar deforms and ther
done by the load on the bar. Since the effect of this
r, the measure of this work done is called

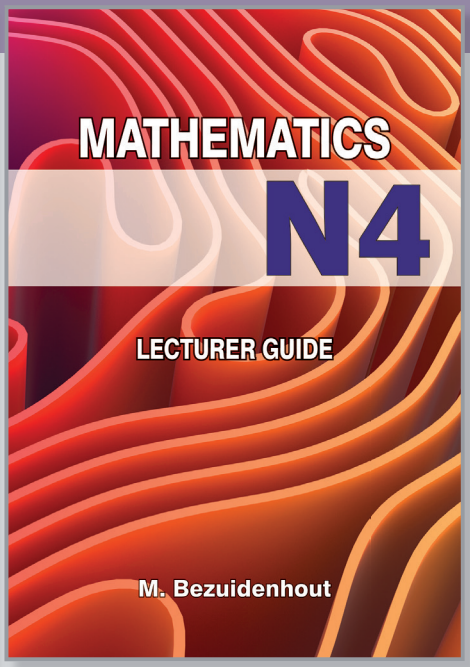
The Lecturer Guide, in addition to containing the answers to the exercises, also contains lesson plans, a teaching plan, e-resources and sample examination papers to help the lecturer.

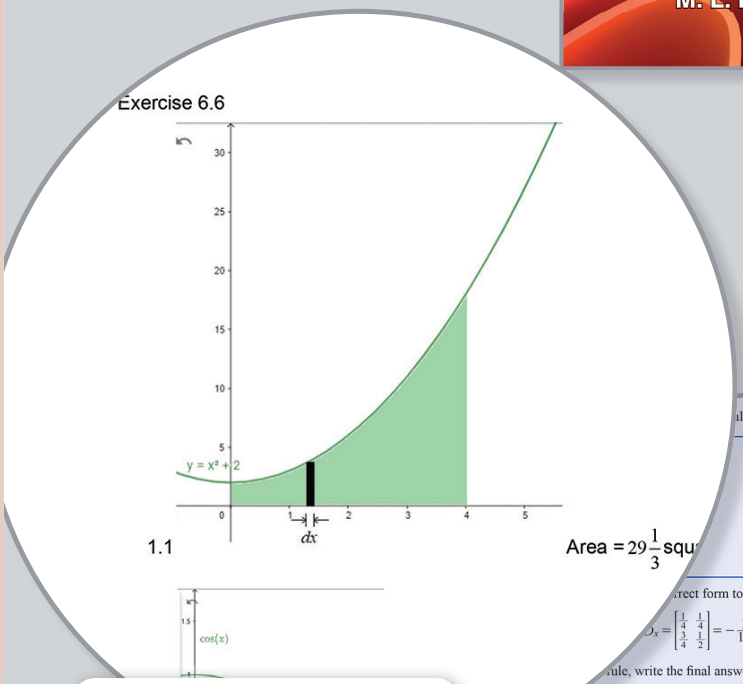
9781776314065	STRENGTH OF MATERIALS AND STRUCTURES N5 STUDENT TEXTBOOK
9781776316625	STRENGTH OF MATERIALS AND STRUCTURES N5 LECTURER GUIDE

MATHEMATICS N4

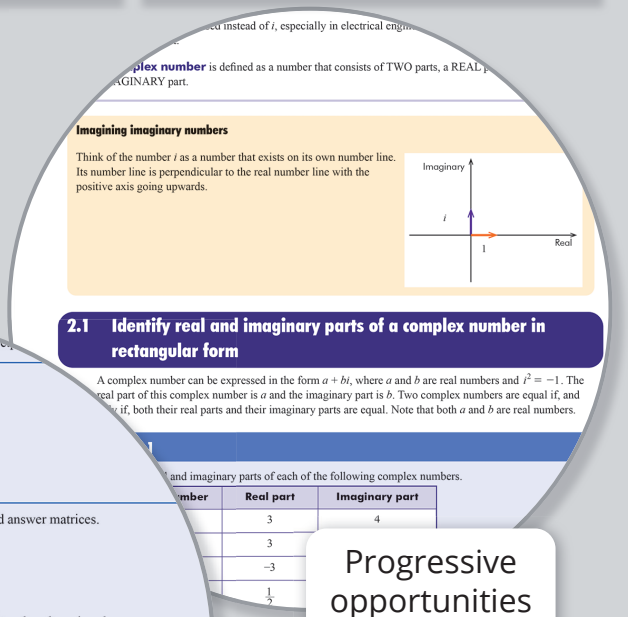
Shuters Mathematics N4 will provide students with the necessary skills needed to identify and calculate mathematical problems they are likely to encounter in industry. They will gain the necessary knowledge to integrate mathematics into their various trade subjects, and provides a foundation for further studies at N5 and N6 level.



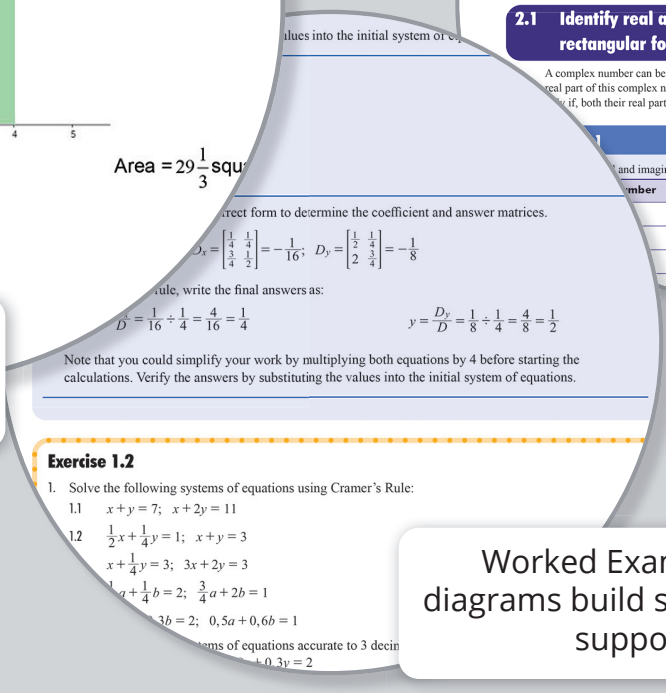




Solutions to the Self Tests are provided in the *Lecturer Guide*.



Progressive opportunities to revise calculations.

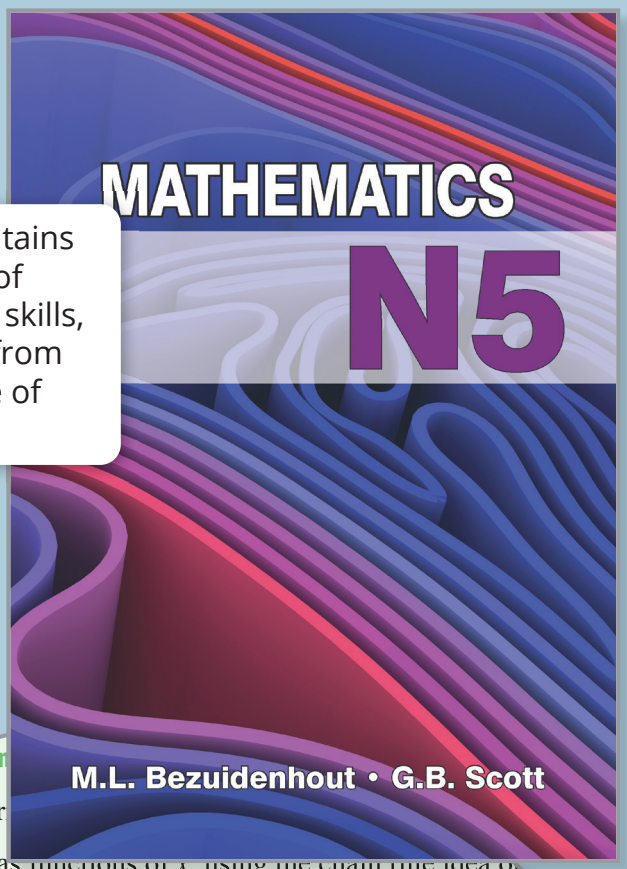


Worked Examples with labelled diagrams build student confidence and support self-study.

9781776315512	MATHEMATICS N4 STUDENT TEXTBOOK
9781776315536	MATHEMATICS N4 LECTURER GUIDE

MATHEMATICS N5

Shuters Mathematics N5 builds on the foundation created by Mathematics N4, taking the student into greater depth as they learn to integrate the mathematical skills and calculations learned into their specific trade subjects.



The Student Textbook contains worked examples, plenty of exercises to hone student skills, and moves progressively from basic calculations to those of greater difficulty.

substituting 0 for h and using

$\lim_{\theta\to 0}\frac{\sin\theta}{\theta}=1$ and/or $\lim_{\theta\to 0}\frac{1-\cos}{\theta}$

Differentiating $f(x)=\cos x$ from first principles

First step for differentiating from 1st principles

- work out $f(x+h)$
- use Compound Angle trig identities f… the expansion

2nd, 3rd and 4th steps for differentiating from 1st principles

$$=\frac{4}{5}(x+h)^{\frac{1}{2}}$$

$$=\frac{4}{5}\left[x^{\frac{1}{2}}+\frac{h}{2x^{\frac{1}{2}}}-\frac{h^2}{8x^{\frac{3}{2}}}+\frac{h^3}{16x^{\frac{5}{2}}}-\right.$$

$$\frac{f(x+h)-f(x)}{h}=\frac{\frac{4}{5}\left[x^{\frac{1}{2}}+\frac{h}{2x^{\frac{1}{2}}}-\frac{h^2}{8x^{\frac{3}{2}}}+\frac{h^3}{16x^{\frac{5}{2}}}\right.}{h}$$

$$=\frac{\frac{4h}{5}\left[\frac{1}{2x^{\frac{1}{2}}}-\frac{h}{8x^{\frac{3}{2}}}+\frac{h^2}{16x^{\frac{5}{2}}}-\right.}{h}$$

$$=\frac{4}{5}\left[\frac{1}{2x^{\frac{1}{2}}}-\frac{h}{8x^{\frac{3}{2}}}+\frac{h^2}{16x^{\frac{5}{2}}}-\right.$$

$$\frac{f(x+h)-f(x)}{h}=\lim_{h\to 0}\frac{4}{5}\left[\frac{1}{2}\right.$$

…reat all y variables as functions of x, using the chain rule idea o…

innermost function as $\frac{dy}{dx}$.

- Use the product and quotient rules as required.
- Solve the equation for $\frac{dy}{dx}$.

Differentiation techniques: Logarithmic differentiation

When differentiating expressions that are complicated by exponents, with a variab…

…the exponent, use the laws of logar…

The Lecturer Guide provides assistance to the lecturer, and solutions to all the calculations and self-test questions.

9781776315550	SHUTERS MATHEMATICS N5 STUDENT BOOK
9781776315581	SHUTERS MATHEMATICS N5 LECTURER GUIDE **(EBOOK ONLY)**

MATHEMATICS N6

Shuters Mathematics N6 provides a foundation for many other areas of learning, particularly in the engineering fields. In this book, the focus is on understanding the strategies and processes for solving problems that engineers encounter, rather than on proofs.

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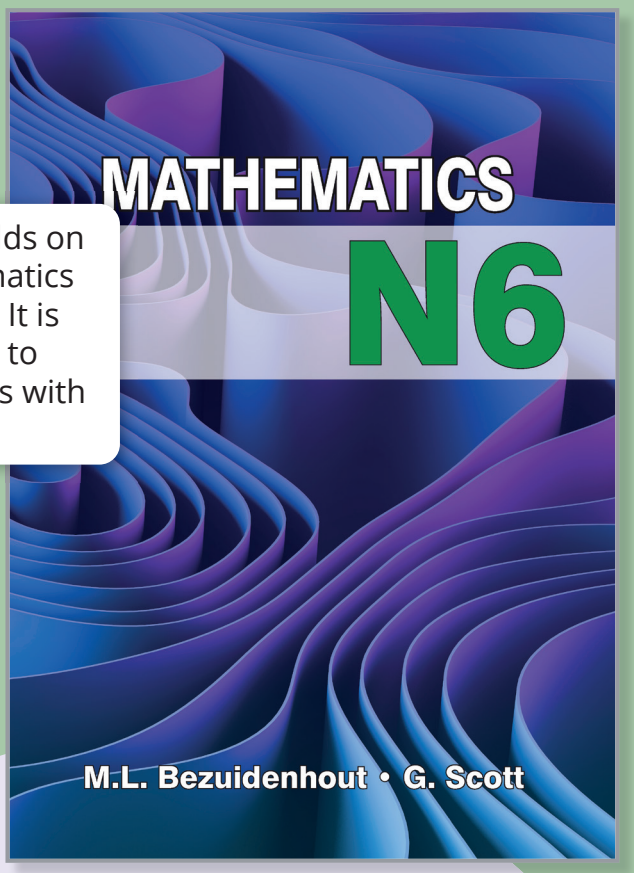


The Student Textbook builds on the foundation of mathematics work done at lower levels. It is aimed at helping students to deal with the examinations with confidence.

ises with integration proble

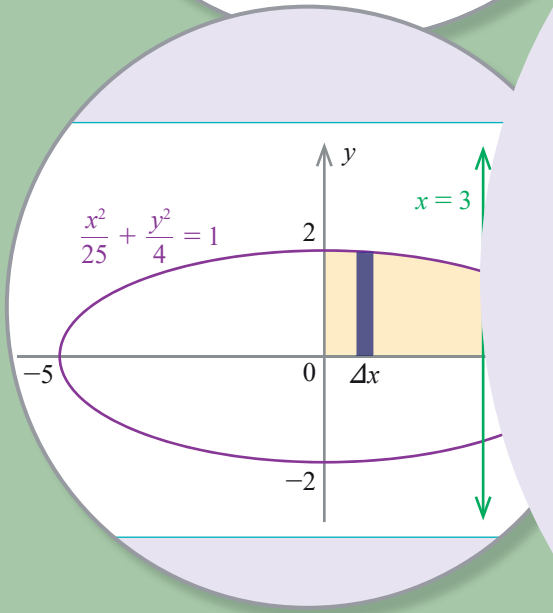
e trigonometric functions

trigonometric functions raised to powers

ou have already dealt with the integration of **tri**
ythagorean identities. These identities enable yo

- $\sin^2$ in terms of $\cos^2$, and vice versa;
- $\tan^2$ in terms of $\sec^2$, and vice versa; and
- $\cot^2$ in terms of cosec^2, and vice versa.

manipulating the integrand in this way,
ion can easily be integrated.



Example 4.1

Find the general solution of $\tan x\frac{dy}{dx} + 2y = x \cdot \operatorname{cosec} x$.

Solution

- Divide all terms of the equation by the coefficient of $\frac{dy}{dx}$ to get it as close to the sta

$$\frac{dy}{dx} + 2(\cot x)y = x \operatorname{cosec} x \cot x$$

- The coefficient of y corresponds to P^x), which we use to construct the integrating

P^x) = 2 cot x and integrating factor $I(x) = e^{\int P(x)dx}$

$= e^{\int 2\cot x\,dx}$

$= e^{2\ln \sin x}$

- Multiply all terms of the st tor, th

$(\sin^2 x)\frac{dy}{dx} + 2(\sin^2 x)$

$(\sin^2 x)\frac{dy}{dx} + 2\sin x$

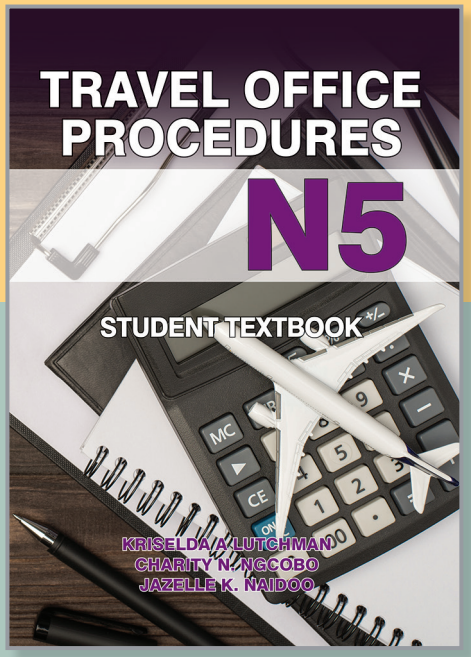
Change the form of the left-hand side, expressing it as the derivative

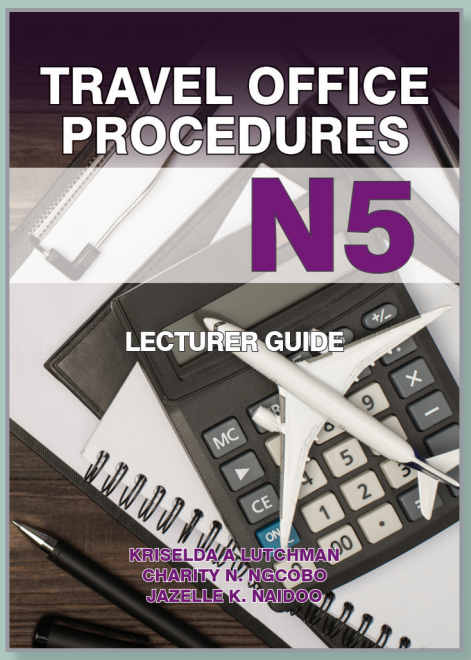
The Lecturer Guide provides assistance to the lecturer, and solutions to all the calculations and self-test questions.

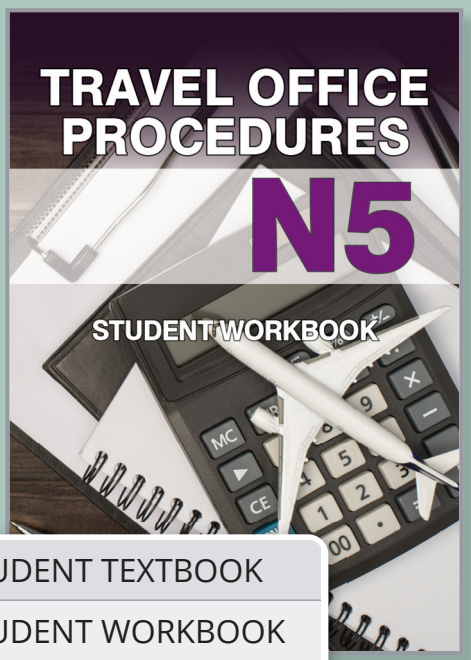
9781779921246	SHUTERS MATHEMATICS N6 STUDENT BOOK
9781779925343	SHUTERS MATHEMATICS N6 LECTURER GUIDE **(EBOOK ONLY)**

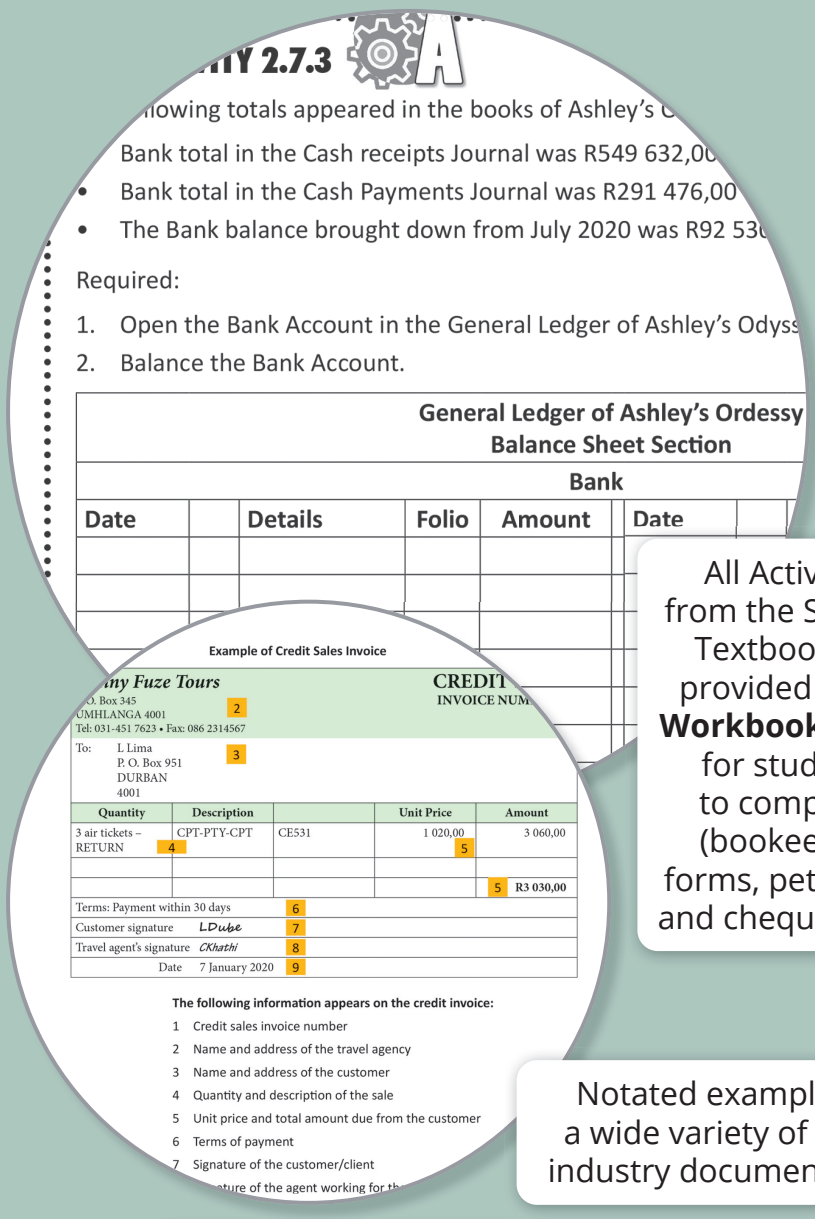
TRAVEL OFFICE PROCEDURES N5

Travel Office Procedures N5 build on the student's knowledge of Travel Office Procedures that was gained at N4 level. They will learn about the financial aspects of a tourism business, and how to perform basic financial transaction recording. This book will teach the student how to understand the various entrepreneurial opportunities in the tourism industry and the financing relevant to these businesses.









ITY 2.7.3 A

…lowing totals appeared in the books of Ashley's O…

- Bank total in the Cash receipts Journal was R549 632,00
- Bank total in the Cash Payments Journal was R291 476,00
- The Bank balance brought down from July 2020 was R92 53…

Required:

1. Open the Bank Account in the General Ledger of Ashley's Odyss…
2. Balance the Bank Account.

General Ledger of Ashley's Ordessy
Balance Sheet Section

Bank

Date		Details	Folio	Amount	Date		

Example of Credit Sales Invoice

…ny Fuze Tours — CREDIT INVOICE NUM…
…O. Box 345
UMHLANGA 4001 (2)
Tel: 031-451 7623 • Fax: 086 2314567

To: L Lima (3)
P. O. Box 951
DURBAN
4001

Quantity	Description		Unit Price	Amount
3 air tickets – RETURN (4)	CPT-PTY-CPT	CE531	1 020,00 (5)	3 060,00
				(5) R3 030,00
Terms: Payment within 30 days (6)				
Customer signature LDuke (7)				
Travel agent's signature CKhathi (8)				
Date 7 January 2020 (9)				

The following information appears on the credit invoice:

1 Credit sales invoice number
2 Name and address of the travel agency
3 Name and address of the customer
4 Quantity and description of the sale
5 Unit price and total amount due from the customer
6 Terms of payment
7 Signature of the customer/client
…ature of the agent working for th…

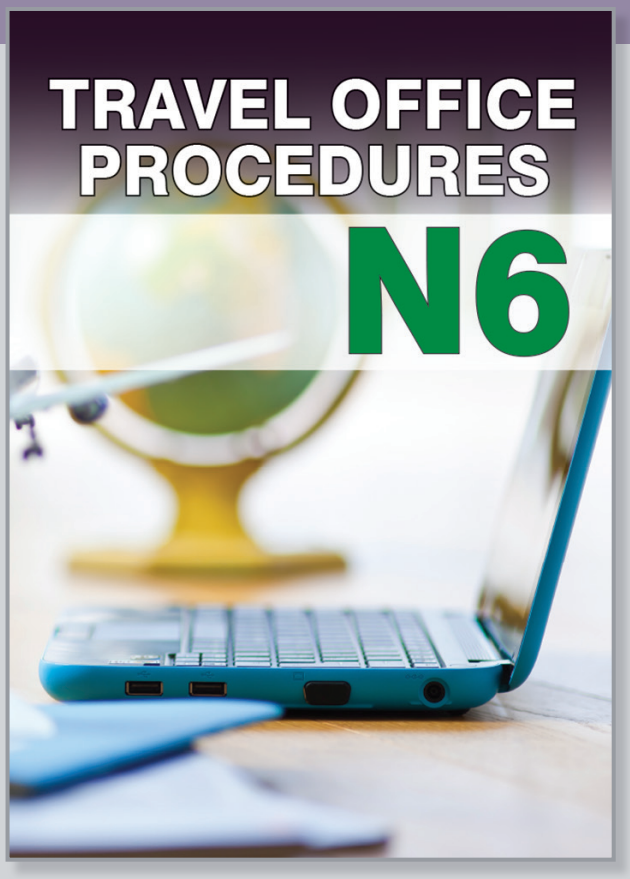
All Activities from the Student Textbook are provided in the **Workbook**, ready for students to complete. (bookeeping forms, petty cash and cheques, etc.)

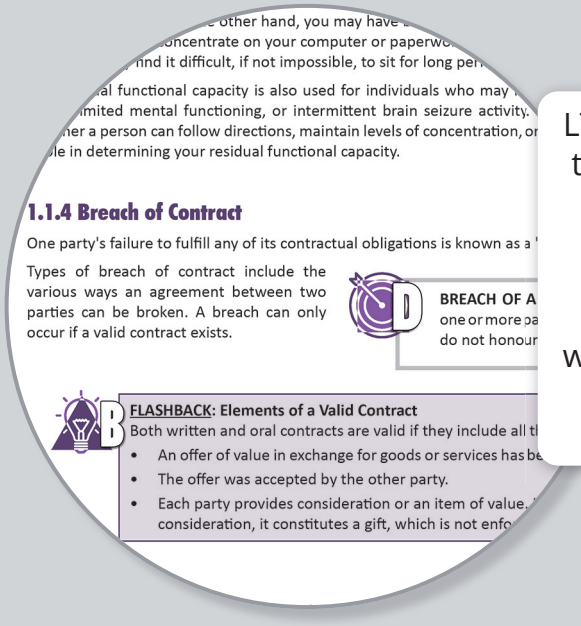
Notated examples of a wide variety of travel industry documentation.

9781485838357	TRAVEL OFFICE PROCEDURES N5 STUDENT TEXTBOOK
9781776288229	TRAVEL OFFICE PROCEDURES N5 STUDENT WORKBOOK
9781776288212	TRAVEL OFFICE PROCEDURES N5 LECTURER GUIDE

TRAVEL OFFICE PROCEDURES N6

Travel Office Procedures N6 has been designed to build on the student's knowledge of Travel Office Procedures that was gained at N5 level. They will learn about the legal aspects of travel as well as how marketing and sales is used in this dynamic industry. Students will gain a knowledge of human resources issues in the travel industry, and explore potential career options available to them.





other hand, you may have
oncentrate on your computer or paperwo
nd it difficult, if not impossible, to sit for long pe
al functional capacity is also used for individuals who may
mited mental functioning, or intermittent brain seizure activity.
her a person can follow directions, maintain levels of concentration, or
le in determining your residual functional capacity.

1.1.4 Breach of Contract

One party's failure to fulfill any of its contractual obligations is known as a

Types of breach of contract include the various ways an agreement between two parties can be broken. A breach can only occur if a valid contract exists.

BREACH OF A
one or more pa
do not honour

FLASHBACK: Elements of a Valid Contract
Both written and oral contracts are valid if they include all t
- An offer of value in exchange for goods or services has be
- The offer was accepted by the other party.
- Each party provides consideration or an item of value.
consideration, it constitutes a gift, which is not enfo

LTSM support tools include on-page *Definitions* and *Bright Idea* inserts which expand specific aspects.

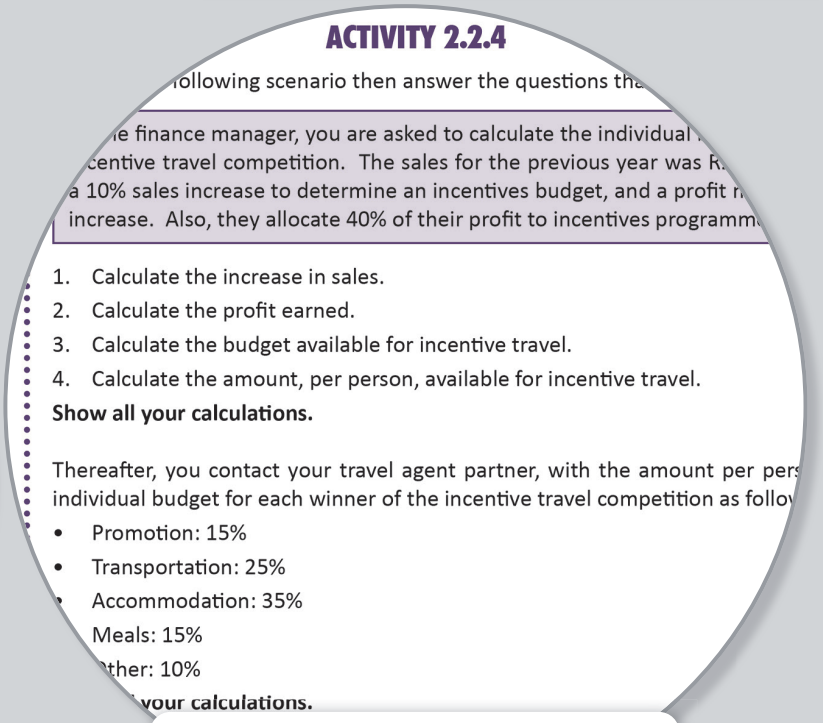
on t. Also, refrain from
e a bad situation worse.
During an emergency, it is their job to ask qu
will provide them with the information that they need
wledge any negative information that might have emerge
etails on what is being done to remedy the problem or situation

Media training: **how to deal with media in a crisis:** *https://www.youtube.com/watch?v=EVujjbGvnaI*

Global safety council: **dealing with the media in emergency situations.** *https://www.youtube.com/watch?v=POwe-omj*

elop the media as a partner to serve the public. Remem
relationship based upon understanding and trust

E-resources such as YouTube videos and websites are provided.



ACTIVITY 2.2.4

ollowing scenario then answer the questions tha

e finance manager, you are asked to calculate the individual
centive travel competition. The sales for the previous year was R
a 10% sales increase to determine an incentives budget, and a profit
increase. Also, they allocate 40% of their profit to incentives programm

1. Calculate the increase in sales.
2. Calculate the profit earned.
3. Calculate the budget available for incentive travel.
4. Calculate the amount, per person, available for incentive travel.

Show all your calculations.

Thereafter, you contact your travel agent partner, with the amount per pers
individual budget for each winner of the incentive travel competition as follo

- Promotion: 15%
- Transportation: 25%
- Accommodation: 35%
- Meals: 15%
- ther: 10%

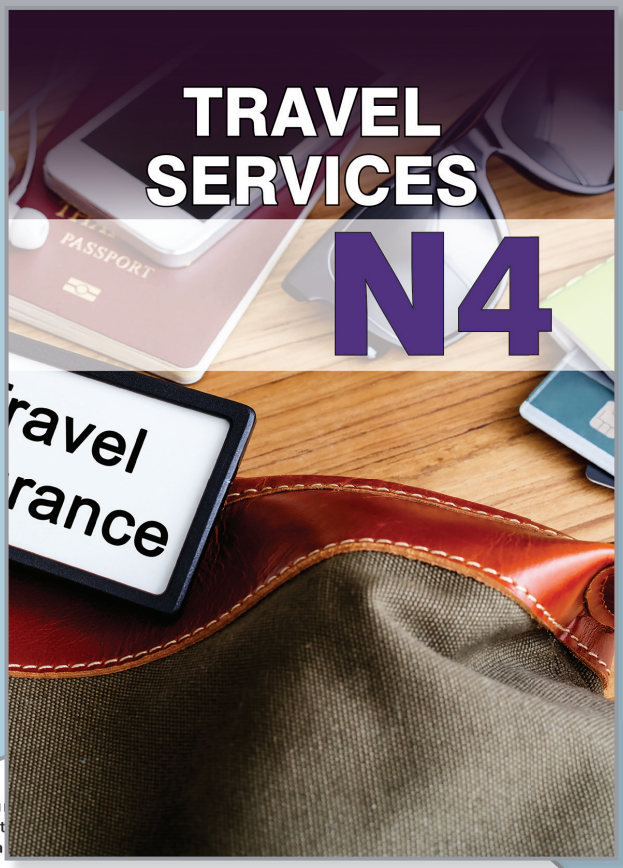
your calculations.

Exercises test the application of knowledge at different levels.

9781776314096	TRAVEL OFFICE PROCEDURES N6 STUDENT TEXTBOOK

TRAVEL SERVICES N4

Shuters Travel Services N4 will prepare students for a career in the tourism industry, with specific reference to travel. The book will give students a thorough knowledge of the terminology and components of the travel industry in South Africa. They will gain the necessary knowledge and skills to give effective passenger service, to advise clients on travel arrangements, calculate fares and complete travel documents correctly.



Real-life situations are linked to the theory being taught.

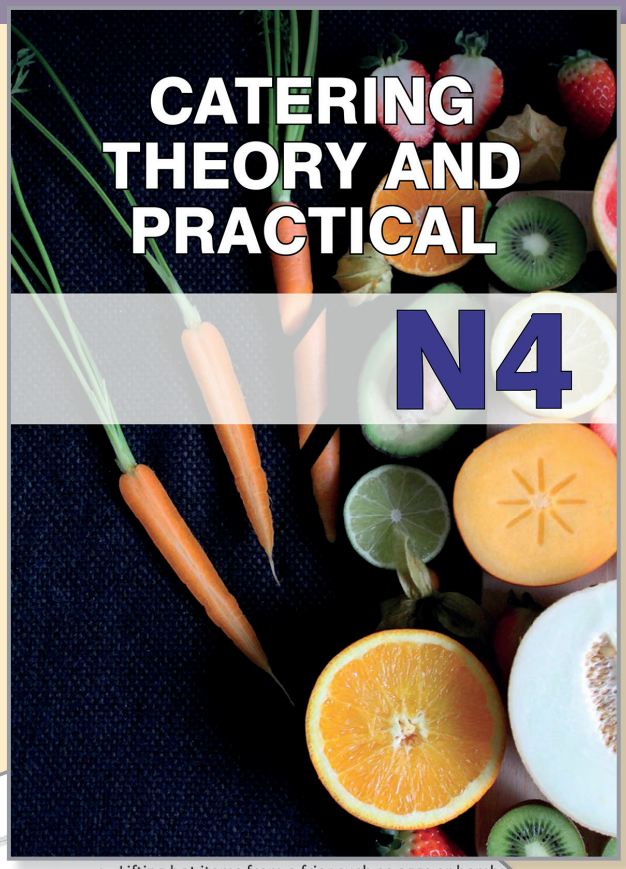
Outcomes are clearly described

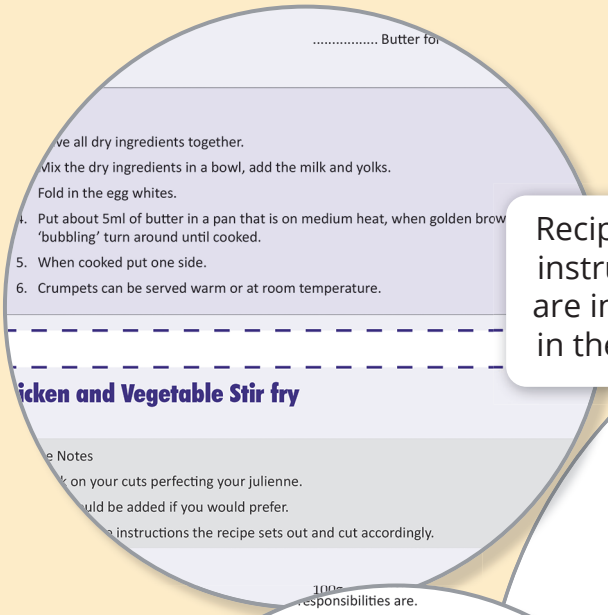
Exercises test the application of knowledge at different levels.

9781485836568 | TRAVEL SERVICES N4 STUDENT TEXTBOOK

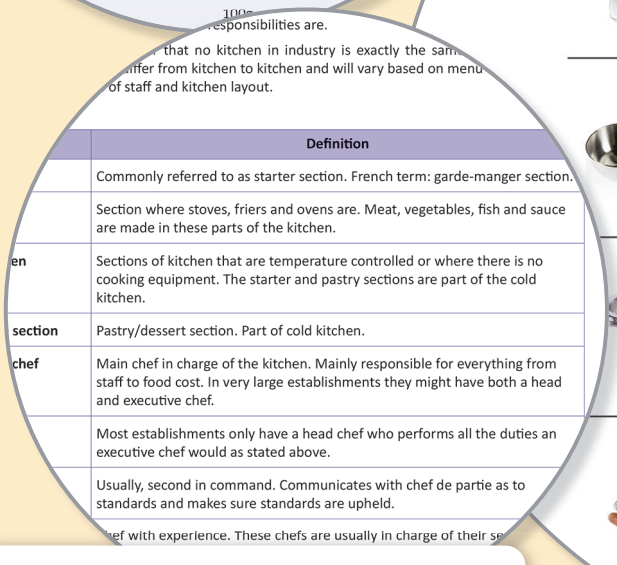
CATERING THEORY AND PRACTICAL N4

Shuters Catering Theory and Practical N4 will empower students with the ability to discuss theoretical concepts in catering, and also to apply the theory and skills learned in the classroom to the preparation of suitable and applicable dishes. Students will master all the basic theory as given in the subject outcomes, and then apply the theory to practical recipes given in the book.

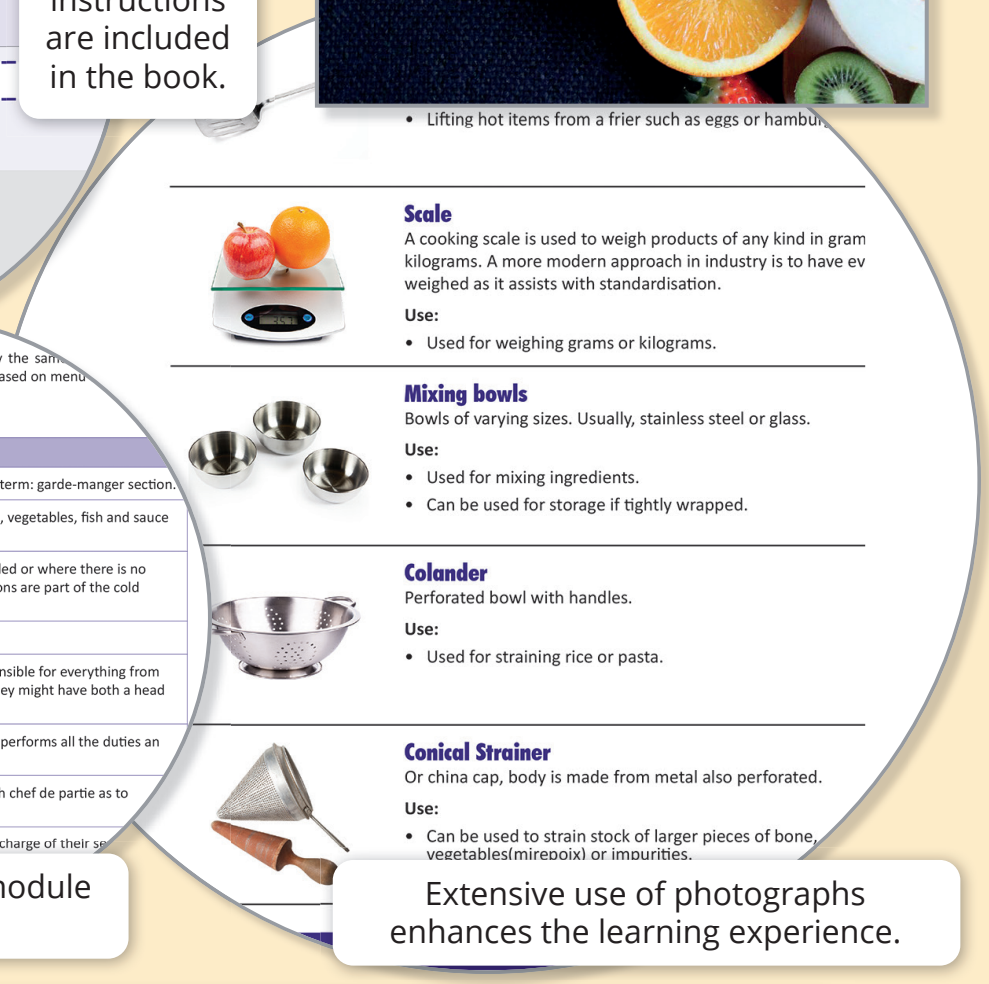




Recipes and instructions are included in the book.



Definitions for terms in each module are given and explained.



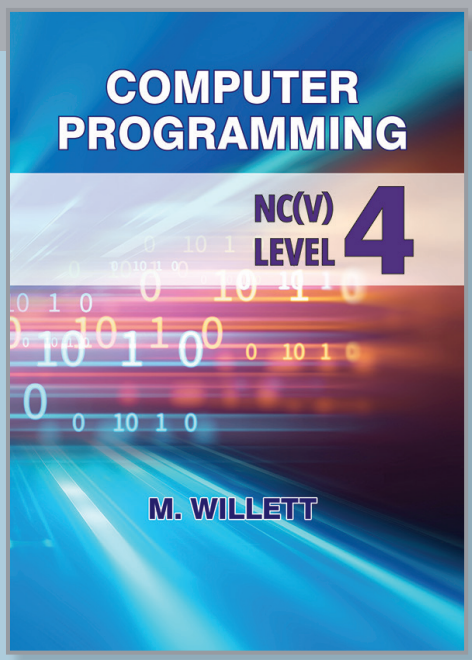
Extensive use of photographs enhances the learning experience.

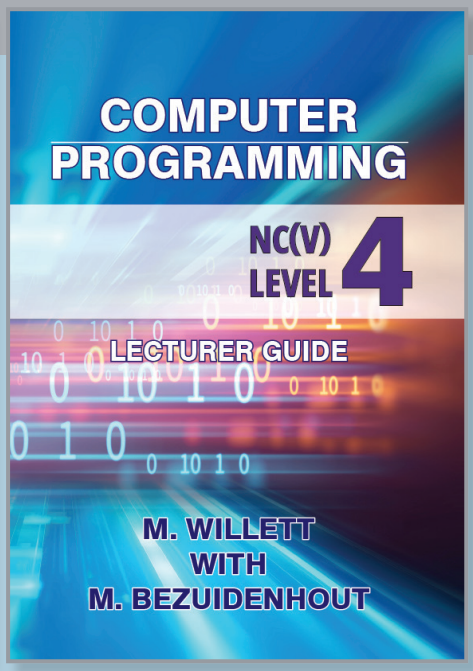
9781776314058 | CATERING THEORY AND PRACTICAL N4 STUDENT TEXTBOOK

COMPUTER PROGRAMMING NC(V)4

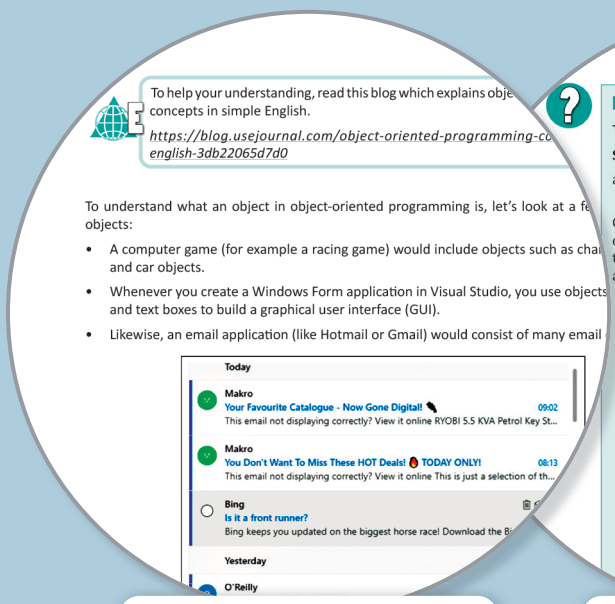
Shuters Computer Progamming NC(V)4 has been written by subject experts, in line with the new syllabus for Computer Programming NC(V) Level 4. The book uses examples and activities to teach how to design user-friendly, computer-based solutions that meet the needs of end users. Students learn how the role of Computer Programming interacts with the broader IT environment. Accessible language and relevant examples make this book easy to use.

The *Lecturer Guide* provides extensive material to assist with lecture preparation and presentation, and includes useful electronic resources.

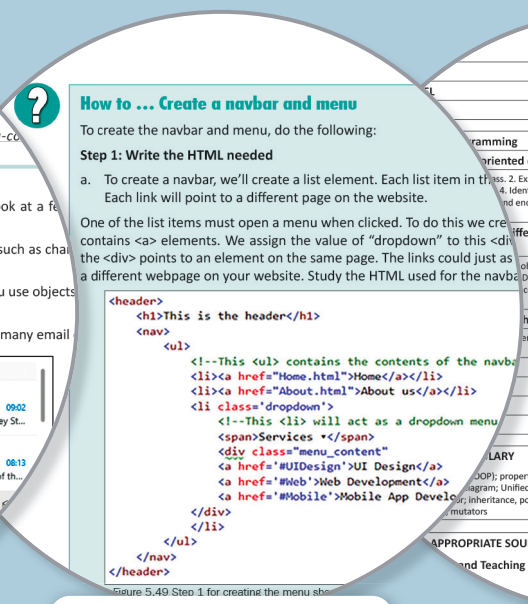




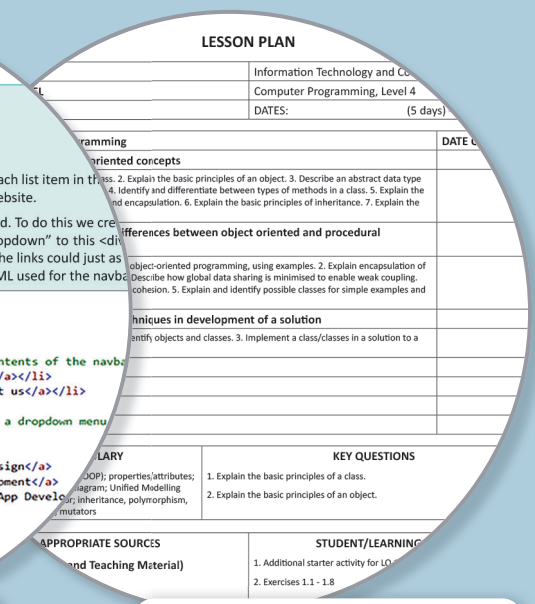
The *Lecturer Guide* has FREE online digital resources, including Extra Activities and Past Exam papers.



E-resources such as YouTube videos and websites are provided.



Expanded examples reinforce the learning experience.



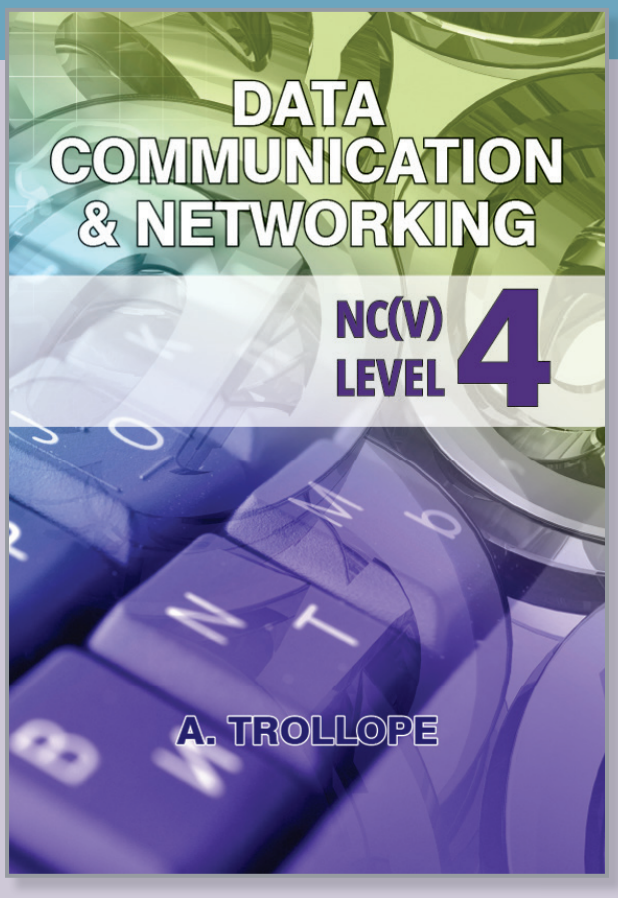
Lecturer Guide – Weekly Year Plan and Lesson Plans per week.

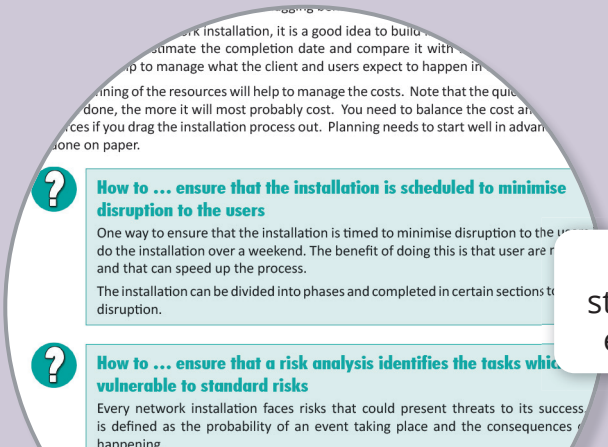
9781485832546	COMPUTER PROGRAMMING NC(V)4 STUDENT TEXTBOOK
9781485834212	COMPUTER PROGRAMMING NC(V)4 LECTURER GUIDE

DATA COMMUNICATION AND NETWORKING NC(V)4

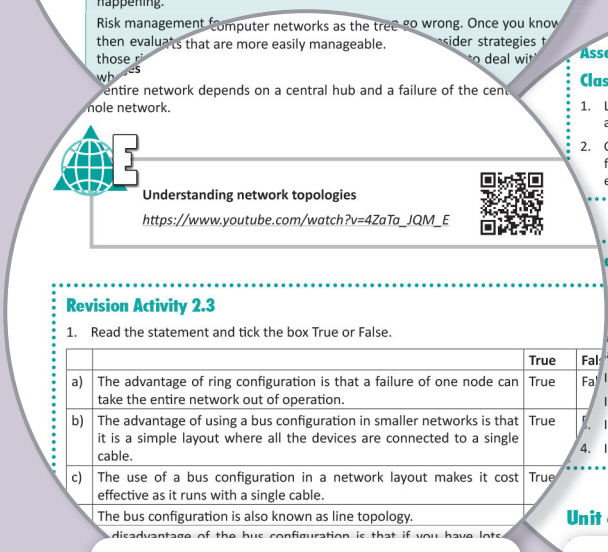
The **Shuters Data Communication and Networking NC(V)4** *Student Textbook* has been written according to the latest NC(V) Level 4 syllabus. This textbook provides students with the content and the context of computer networking (both simple and complex) and how to design and install local area computer networks. Through relevant examples, activities and case studies, students will build up their knowledge and skills to achieve the outcomes of the syllabus.

Lecturer resources are available as a download from the Shuters website.

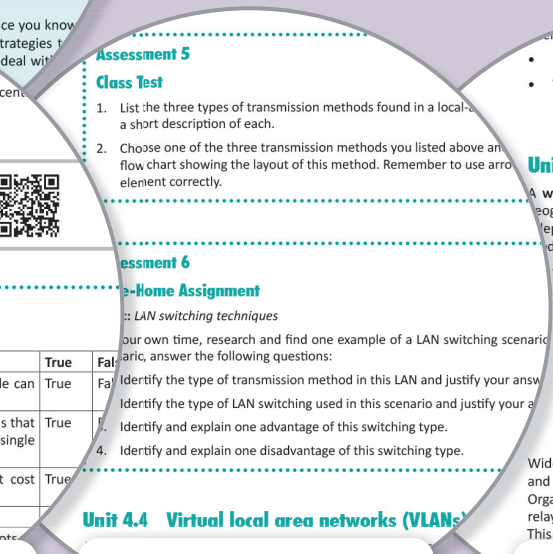




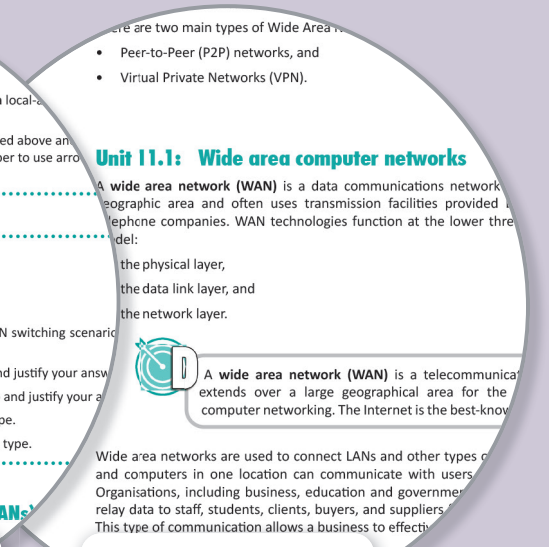
Step-by-step worked examples.



E-resources such as YouTube videos and websites are provided.



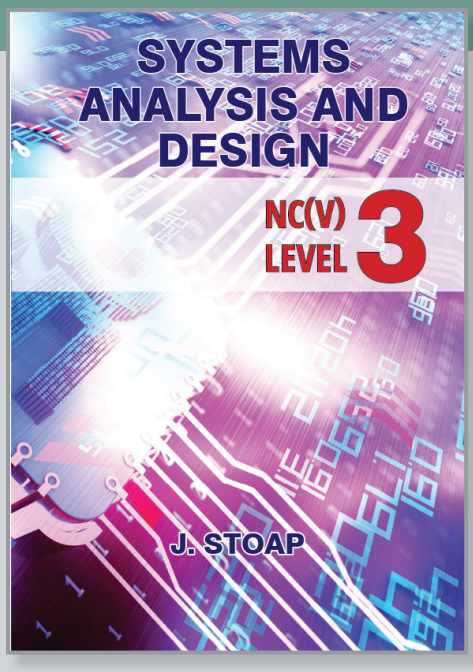
Regular Assessments and Activities improve retention.

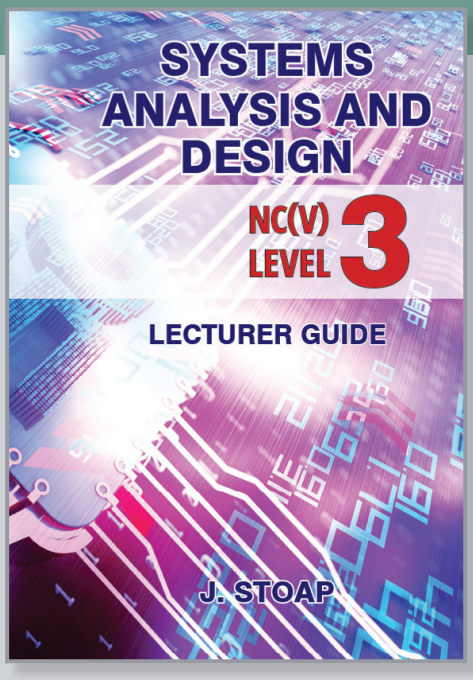


Terminology expanded in Definition boxes.

9781485832539	DATA COMMUNICATION AND NETWORKING NC(V)4 STUDENT TEXTBOOK

SYSTEMS ANALYSIS AND DESIGN NC(V)3



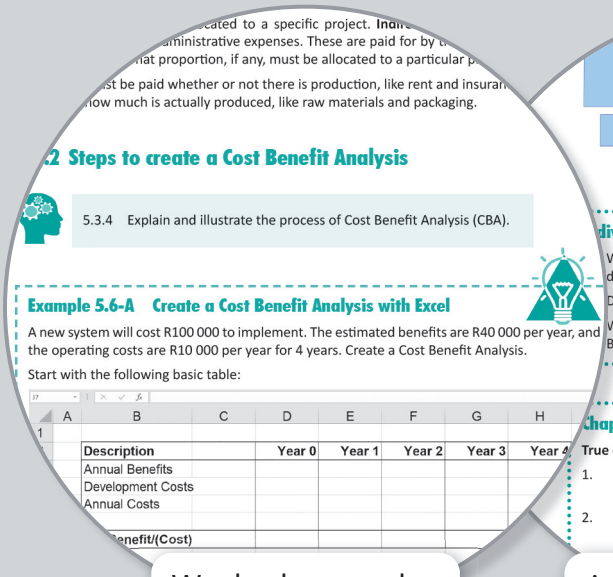


Shuters Systems Analysis and Design NC(V)3 has been written according to the latest syllabus.

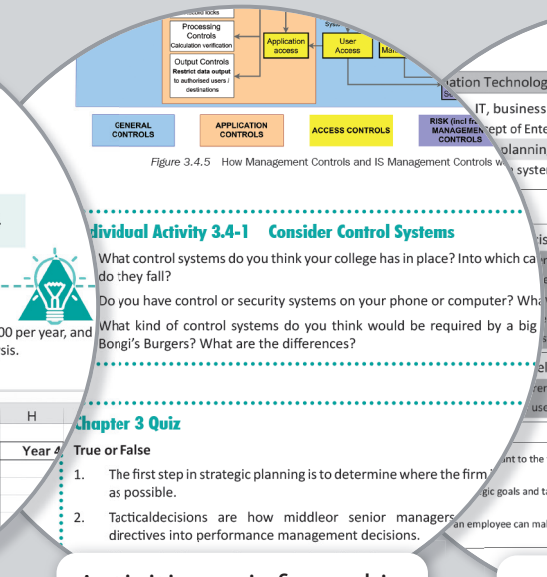
The *Student Book*, written in clear, accessible language, provides a first introduction to organisation systems, information systems and how systems are linked together. Through examples, case studies and activities, the students become familiar with the complexities of this area of study, and develop critical thinking and problem solving skills.

The *Lecturer Guide* provides extensive material to assist lecture preparation and presentation, together with useful electronic resources.

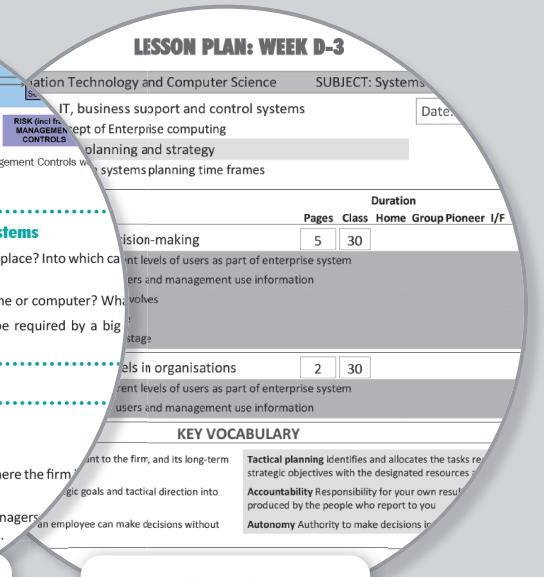
The *Lecturer Guide* has FREE online digital resources, including Extra Activities and Past exam papers.



Worked examples expand Subject Outcomes.



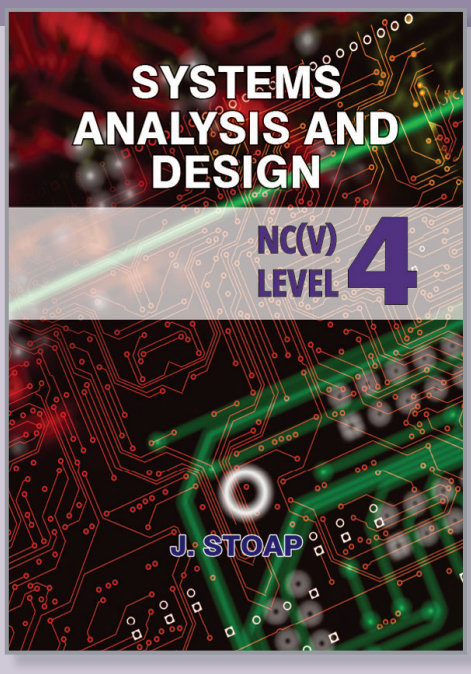
Activities reinforced in comprehensive end-of-chapter Quizzes.

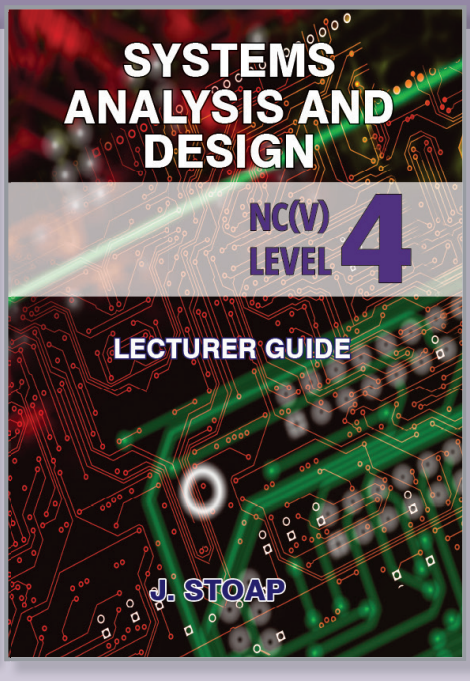


Over 100 Lesson Plans in the Lecturer Guide.

9780796075499	SYSTEMS ANALYSIS & DESIGN NC(V)3 STUDENT TEXTBOOK
9781485834182	SYSTEMS ANALYSIS & DESIGN NC(V)3 LECTURER GUIDE

SYSTEMS ANALYSIS AND DESIGN NC(V)4

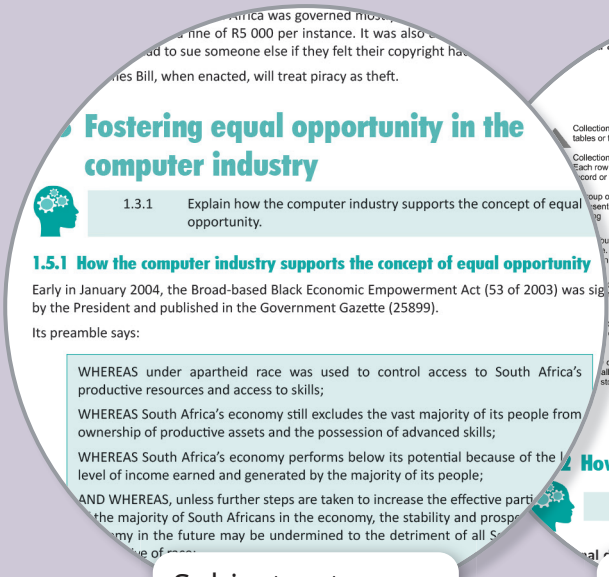




Shuters Systems Analysis and Design NC(V)4 has been written according to the latest syllabus. Based on the knowledge acquired in Level 3, this *Student Textbook* expands further into the subject. Clear, accessible language and up-to-date examples help students to master the subject content: how to conduct a systems analysis, and to design information systems. Using examples, case studies and activities, the students develop their critical thinking and problem solving skills.

The *Lecturer Guide* provides extensive material to assist lecture preparation and presentation, together with useful electronic resources.

The *Lecturer Guide* has FREE online digital resources, including Extra Activities and Past exam papers.


Fostering equal opportunity in the computer industry

1.3.1 Explain how the computer industry supports the concept of equal opportunity.

1.5.1 How the computer industry supports the concept of equal opportunity

Early in January 2004, the Broad-based Black Economic Empowerment Act (53 of 2003) was sig by the President and published in the Government Gazette (25899).

Its preamble says:

WHEREAS under apartheid race was used to control access to South Africa's productive resources and access to skills;

WHEREAS South Africa's economy still excludes the vast majority of its people from ownership of productive assets and the possession of advanced skills;

WHEREAS South Africa's economy performs below its potential because of the l level of income earned and generated by the majority of its people;

AND WHEREAS, unless further steps are taken to increase the effective parti the majority of South Africans in the economy, the stability and prosp my in the future may be undermined to the detriment of all S

Subject outcomes identified and expanded

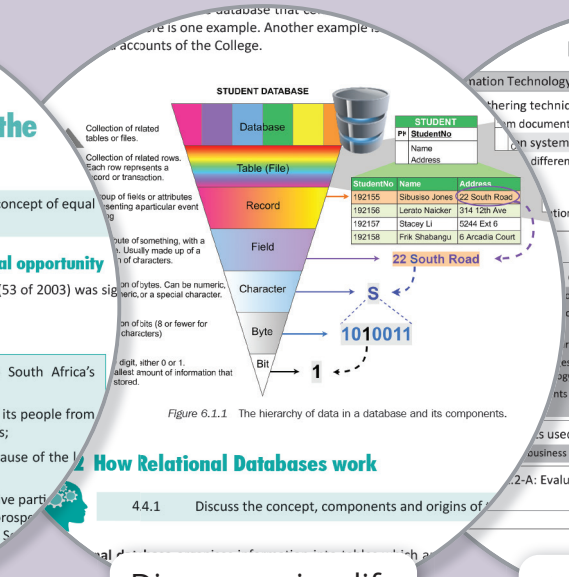
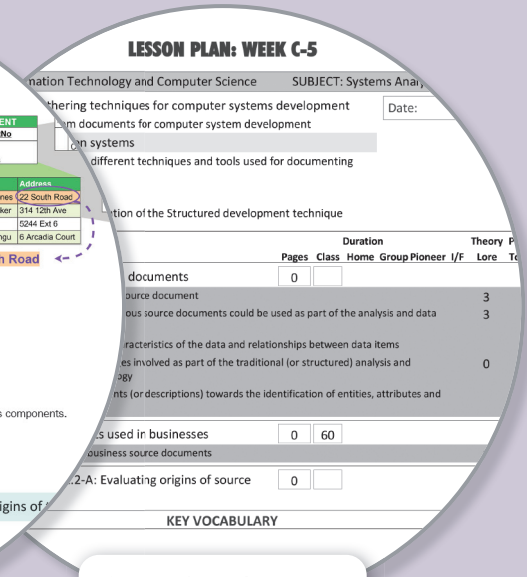


Figure 6.1.1 The hierarchy of data in a database and its components.

2 How Relational Databases work

4.4.1 Discuss the concept, components and origins of

Diagrams simplify complex learning exercises.



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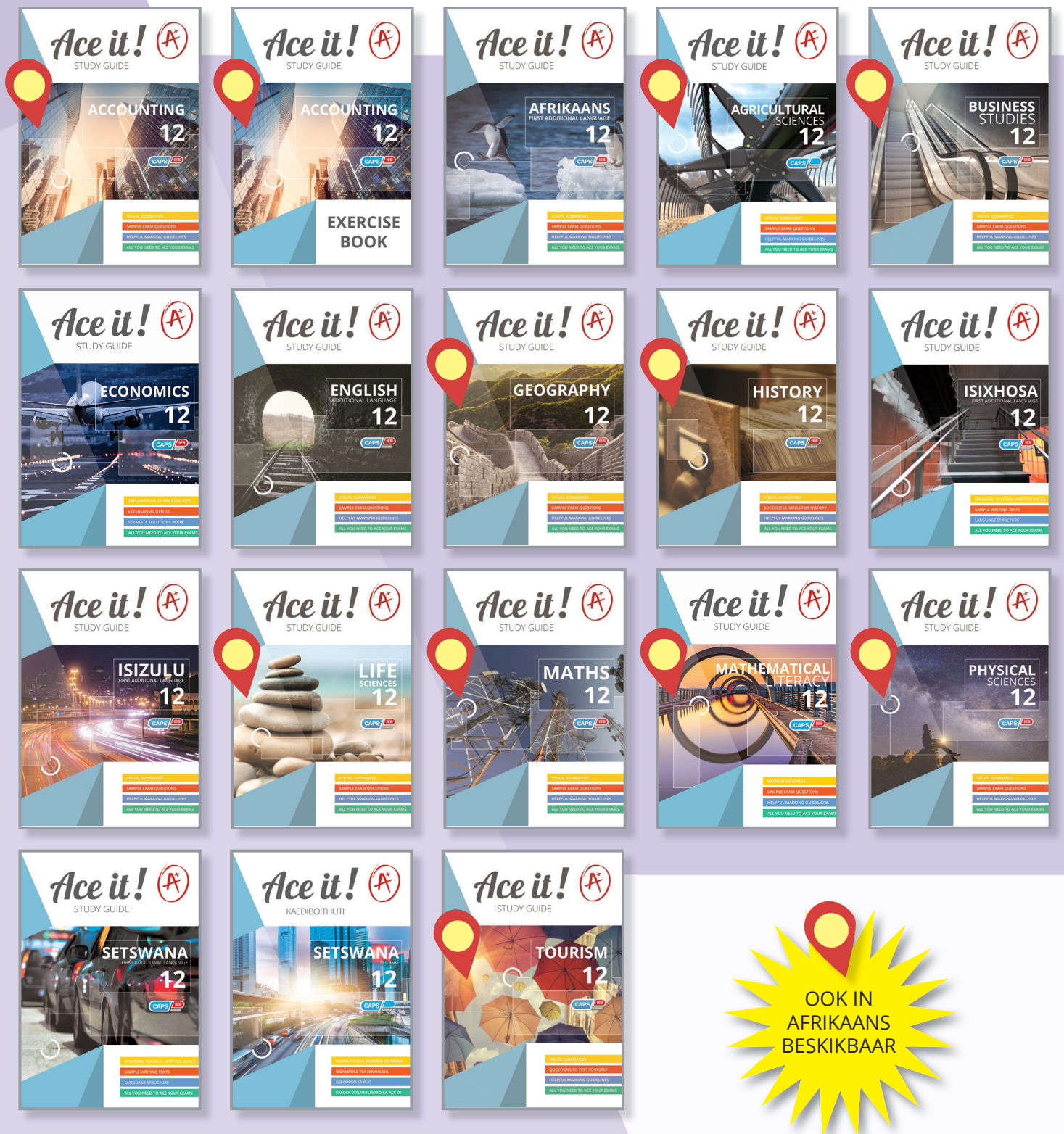

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9781920356361	ACE IT! TOERISME GR 12 *Afrikaans*

Study Guide: Page 16

ACTIVITY 6

CASH RECEIPTS JOURNAL OF PROMISE TRADERS FOR JANUARY 2016 FOL : CRJ 1

DOC NO	D	DETAILS	FOL	ANALYSIS OF RECEIPTS	BANK	SALES	COST OF SALES	SUNDRY LEDGER ACCOUNTS AMOUNT	FOL	DETAILS

CASH PAYMENTS JOURNAL OF PROMISE TRADERS FOR JANUARY 2016 FOL : CPJ 1

DOC NO	D	NAME OF PAYEE	FOL	BANK	TRADING STOCK		SUNDRY LEDGER ACCOUNTS AMOUNT	FOL	DETAILS

Study Guide: Page 17

ACTIVITY 7

GENERAL LEDGER OF MAJESTIC TRADERS
BALANCE SHEET ACCOUNTS SECTION

TRADING STOCK B1

BANK B2

PETTY CASH B3

2.

TANGIBLE ASSETS

DETAILS	LAND AND BUILDINGS	EQUIPMENT	VEHICLES
Carrying value — beginning of the current year			
Cost price			
Accumulated depreciation			
Movements			
Additions at cost			
Disposals at carrying value			
Depreciation for the current year			
Carrying value at the end of the current year			
Cost price			
Accumulated depreciation			

Study Guide: Page 14

ACTIVITY 11

A		B		C		D	
E		F		G		H	
I							

2.

ACCUMULATED DEPRECIATION ON VEHICLES

ASSET DISPOSAL

3.

TANGIBLE ASSETS

DETAILS	VEHICLES
Carrying value — beginning of the current year	
Cost price	
Accumulated depreciation	
MOVEMENTS	
Additions at cost	
Disposals at carrying value	
Depreciation for the current year	
Carrying value at the end of the current year	
Cost price	
Accumulated depreciation	

EXAMINATION PAPER: NOVEMBER

Question 1:

1.1.1 **Production Statement for the year ended 31 August 2017**

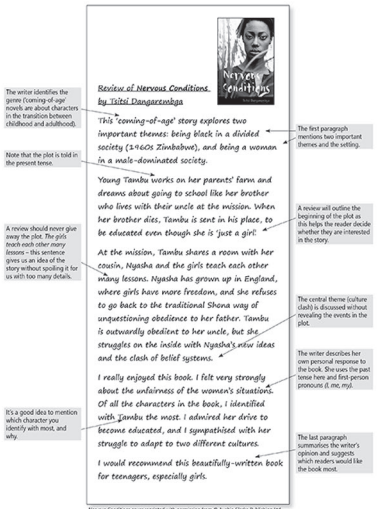
Direct costs	
Total cost of production for the year	

1.1.2 **Factory overhead cost**

Sundry expenses	32 460
Insurance	7 840

1.2.1	Direct materials cost per unit
1.2.2	Reasons for the difference in the direct materials cost per unit
1.2.3	Breakeven point

Pages from ACE IT! Grade 10, 11, 12 ACCOUNTING



Review of Nervous Conditions by Tsitsi Dangarembga

The writer identifies the genre (coming-of-age novels are about characters in the transition between childhood and adulthood).

Note that the plot is told in the present tense.

A review should never give away the plot. *The girls teach each other many lessons* – this sentence gives us an idea of the story without spoiling it for us with too many details.

It's a good idea to mention which character you identify with most, and why.

'This "coming-of-age" story explores two important themes: being black in a divided society (1960s Zimbabwe), and being a woman in a male-dominated society.

The first paragraph mentions two important themes and the setting.

'Young Tambu works on her parents' farm and dreams about going to school like her brother who lives with their uncle at the mission. When her brother dies, Tambu is sent in his place, to be educated even though she is "just a girl."

A review will outline the beginning of the plot as this helps the reader decide whether they are interested in the story.

At the mission, Tambu shares a room with her cousin, Nyasha and the girls teach each other many lessons. Nyasha has grown up in England, where girls have more freedom, and she refuses to go back to the traditional Shona way of unquestioning obedience to her father. Tambu is outwardly obedient to her uncle, but she struggles on the inside with Nyasha's new ideas and the clash of belief systems.

The central theme (culture clash) is discussed without revealing the events in the plot.

I really enjoyed this book. I felt very strongly about the unfairness of the women's situations. Of all the characters in the book, I identified with Tambu the most. I admired her drive to become educated, and I sympathised with her struggle to adapt to two different cultures.

The writer describes her own personal response to the book. She uses the past tense here and first-person pronouns (*I, me, my*).

I would recommend this beautifully-written book for teenagers, especially girls.

The last paragraph summarises the writer's opinion and suggests which readers would like the book most.

Nervous Conditions cover reprinted with permission from © Ayeba Clarke Publishing Ltd., Oxfordshire, UK. www.ayeba.co.uk

GET THIS!

A review should be 120-150 words.

Writing and Presenting

Reading for information

Informative texts are texts that give you information and facts. For example: textbooks, reference books, websites (such as Wikipedia), leaflets giving advice, and news reports.

Informative writing has the following features:

- It tries to give an objective (neutral) view of the facts.
- No emotive or figurative language.
- Clear, simple sentences and grammar.
- Short paragraphs and short sentences.
- Specific facts and figures – e.g. dates, numbers, percentages.
- Definitions of unfamiliar and technical words.
- References to visual texts (diagrams, maps, graphs) that provide evidence and detail.

The example below is from a Geography textbook:

Melting Ice in the Arctic

The title names the topic.

Every summer, sea ice around the edge of the Arctic Ocean melts. By September, a large area of ocean close to the land has no ice. Scientists have noticed that over the last 30 years, this area has grown, and the area of sea still covered in ice has declined by about 30 per cent (see photo A).

Specific figures and dates giving precise information.

Reference to photo and map for evidence and examples.

The smallest area of ice ever recorded was in 2012. If this trend continues, it is possible that, within decades, the Arctic Ocean could be totally free of ice.

Sea ice is disappearing as a result of rising temperatures. Over the past 50 years, temperatures in the Arctic have risen faster than temperatures anywhere else on the planet (see map B). It is not only sea ice that melts: on the land, glaciers (moving rivers of ice) have been melting too.

Unfamiliar or technical words are defined.

Ice and snow reflect much of the sun's heat back into space, helping to keep the Earth cool. This is called the albedo effect. The problem with melting ice in the Arctic is that it reduces the **albedo effect** – less of the sun's heat is reflected and more is absorbed by the land and sea. The result could be that Arctic temperatures will rise even more.

Facts are given in a neutral way. The writer describes the problem without commenting on it, or expressing any feelings, or suggesting any solutions.

VOCABULARY AND STOCK PHRASES USED IN BURSARY ADVERTS

The following words and phrases are from the advert on page 55:

Bursary scheme: An amount of funding made available for a certain type of bursary.

Application criteria: The criteria / conditions you have to meet to be eligible to apply.

References to be obtained: You need to ask someone to write you a reference – i.e. A letter from someone who knows you well (your referee) who will testify that you are a suitable candidate for the bursary.

Must be confirmed by a referee: Your referee must provide evidence that you meet the criteria.

Additional documents: Further papers, forms, letters, certificates, identity documents, etc.

Submission of applications: The process of submitting (completing and sending in) your application application forms: a form prepared specifically for the bursary application – you usually have to get this from the bursary provider or from their website, and may not apply without filling in this form.

Enquiries: Who to call if you have any questions about the bursary.

Obligation: The duties and responsibilities of the person receiving the bursary.

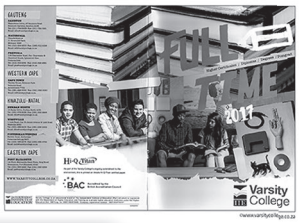
As specified in the bursary contract: The way something is stated or defined in the legal contract you sign when you accept the bursary and agree to its conditions (e.G. Agreeing to work for the provider afterwards).

Correspondence will be limited to successful candidates only: You will only hear from the provider if they decide to offer you a bursary.

Reading a flyer for a tertiary institution

Brochures and flyers for tertiary institutions will use the same techniques as advertisers. For example, you can analyse the Varsity College flyer below using the AIDA (*attention, interest, desire, action*) formula.

Attention	What visuals and catchy words make you stop and look?
Interest	Once you've stopped to look, what catches your interest and makes you read on?
Desire	What images and language make you want to attend the college?
Action	What information can you act on? (contact details, admission requirements, application procedures, closing date, etc.)



The front and back cover are designed to attract your interest and make the college look appealing. Images of happy, busy students make the college seem to be a fun place where you'll make friends.

The most important information is given in key words and bold fonts that stand out.

Pages from ACE IT! Grade 10, 11, 12 ENGLISH

D. Exponential Graph: $y = b^x$; $y = a.b^x + q$

To draw:

- For all exponential graphs use the table below to determine points to plot.

x	-1	**0**	**1**
y			

Plot these points and join them.

- $y = q$ is a horizontal asymptote. If $q = 0$, the x-axis is the asymptote.
- If $a > 0$, the graph lies above the asymptote.
- If $a < 0$ the graph lies below the asymptote.
- If $b > 1$ the graph is increasing.
- If $0 < b < 1$ the graph is decreasing.
- Exponential graphs do not have axes of symmetry.

Quick check after drawing: If $a > 0$, $b > 1$:

If $a > 0$, $0 < b < 1$:

If $a < 0$, $b > 1$:

If $a < 0$, $0 < b < 1$:

EXAMPLE:

1. Draw the graphs of:
   a. $f(x) = 2^x$ b. $g(x) = 2^x + 1$ c. $h(x) = \left(\frac{1}{2}\right)^x$ d. $k(x) = \left(\frac{1}{2}\right)^x - 3$
   e. $j(x) = -2.2^x$ f. $m(x) = -1.\left(\frac{1}{2}\right)^x + 2$
2. Write down the following:
   a. Domain of $f(x)$ and $k(x)$
   b. Range of $g(x)$; $j(x)$ and $m(x)$
   c. Equations of the asymptotes of $h(x)$ and $k(x)$
   d. Intercepts on the axes of $m(x)$ and $k(x)$.

ANSWER

1. a. $f(x) = 2^x$

Asymp $y = 0$

x	-1	0	1
y	$\frac{1}{2}$	**1**	**2**

Nature of roots

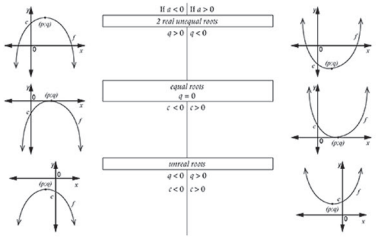
A line and a curve intersect in 3 ways:

No intersection – roots unreal

Line is a tangent – roots equal

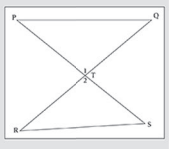
Cutting twice – 2 real, unequal roots

Consider the quadratic function $f(x) = ax^2 + bx + c$ and the x-axis.



Example

1. In the diagram PQ ∥ RS.
   1.1 Prove ΔPQT ||| ΔSRT
   1.2 Hence show that PQ.RT = QT.SR
   1.3 If it is further given that QT = ST show that $QT^2 = PT.RT$



Solution

1.1 In ΔPQT and ΔSRT

1. $\hat{P} = \hat{S}$	PQ ∥ RS ; alt <'s
2. $\hat{Q} = \hat{R}$	PQ ∥ RS ; alt <'s
3. $T_1 = T_2$	vert. opp. <'s
∴ΔPQT ||| ΔSRT	A; A; A

1.2 ΔPQT ||| ΔSRT — Proved above

$\therefore \frac{PQ}{SR} = \frac{QT}{RT} = \frac{PT}{ST}$

$\frac{PQ}{SR} = \frac{QT}{RT}$

∴PQ.RT = QT.SR — (from cross-multiplication)

1.3 ΔPQT ||| ΔSRT — Proved above

$\therefore \frac{PQ}{SR} = \frac{QT}{RT} = \frac{PT}{ST}$

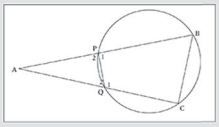
$\frac{QT}{RT} = \frac{PT}{ST}$

QT.ST = PT.RT — Given QT = ST

QT.QT = PT.RT

$QT^2 = PT.RT$

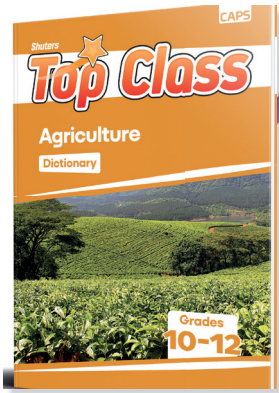
2. In the diagram below, PQCB is a cyclic quadrilateral. Chords BP and CQ are produced to meet at A such that AQ = BC.

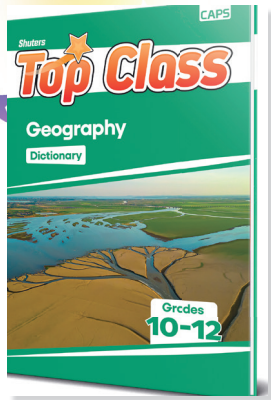


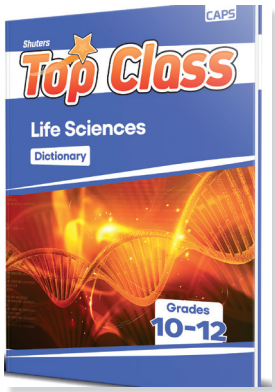
Prove $AQ^2 = AB.PQ$.

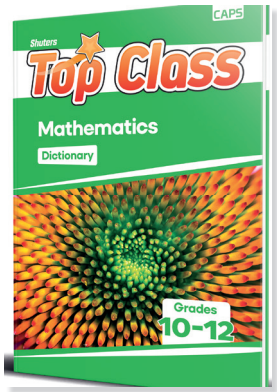
Pages from ACE IT! Grade 10, 11, 12 MATHEMATICS

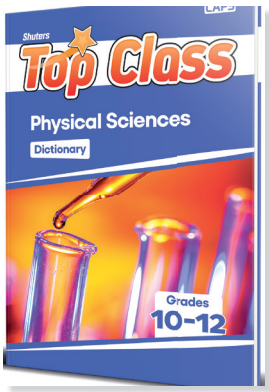
Shuters TOP CLASS Dictionaries











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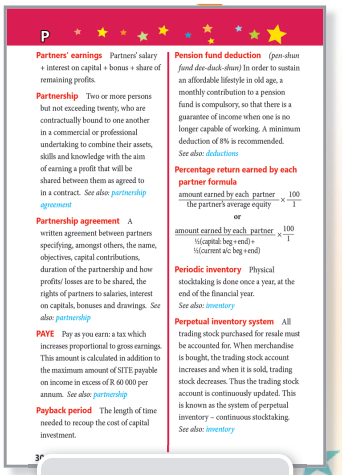


Partners' earnings Partners' salary + interest on capital + bonus + share of remaining profits.

Partnership Two or more persons but not exceeding twenty, who are contractually bound to one another in a commercial or professional undertaking to combine their assets, skills and knowledge with the aim of earning a profit that will be shared between them as agreed to in a contract. *See also: partnership agreement*

Partnership agreement A written agreement between partners specifying, amongst others, the name, objectives, capital contributions, duration of the partnership and how profits/ losses are to be shared, the rights of partners to salaries, interest on capitals, bonuses and drawings. *See also: partnership*

PAYE Pay as you earn: a tax which increases proportional to gross earnings. This amount is calculated in addition to the maximum amount of SITE payable on income in excess of R 60 000 per annum. *See also: partnership*

Payback period The length of time needed to recoup the cost of capital investment.

Pension fund deduction *(pen-shun fund dee-duck-shun)* In order to sustain an affordable lifestyle in old age, a monthly contribution to a pension fund is compulsory, so that there is a guarantee of income when one is no longer capable of working. A minimum deduction of 8% is recommended. *See also: deductions*

Percentage return earned by each partner formula

$$\frac{\text{amount earned by each partner}}{\text{the partner's average equity}} \times \frac{100}{1}$$

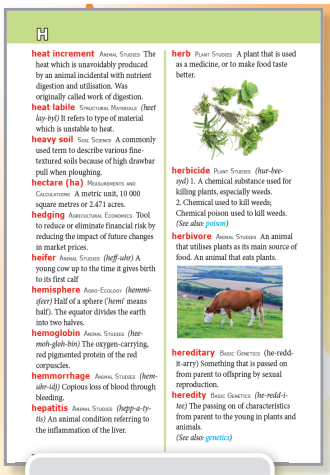
or

$$\frac{\text{amount earned by each partner}}{\frac{1}{2}(\text{capital beg + end}) + \frac{1}{2}(\text{current a/c beg + end})} \times \frac{100}{1}$$

Periodic inventory Physical stocktaking is done once a year, at the end of the financial year. *See also: inventory*

Perpetual inventory system All trading stock purchased for resale must be accounted for. When merchandise is bought, the trading stock account increases and when it is sold, trading stock decreases. Thus the trading stock account is continuously updated. This is known as the system of perpetual inventory – continuous stocktaking. *See also: inventory*

ACCOUNTING



heat increment Animal Studies The heat which is unavoidably produced by an animal incidental with nutrient digestion and utilisation. Was originally called work of digestion.

heat labile Structural Materials *(heet lay-byl)* It refers to type of material which is unstable to heat.

heavy soil Soil Science A commonly used term to describe various fine-textured soils because of high drawbar pull when ploughing.

hectare (ha) Measurements and Calculations A metric unit, 10 000 square metres or 2.471 acres.

hedging Agricultural Economics Tool to reduce or eliminate financial risk by reducing the impact of future changes in market prices.

heifer Animal Studies *(heff-uhr)* A young cow up to the time it gives birth to its first calf

hemisphere Agro-Ecology *(hemmi-sfeer)* Half of a sphere (*hemi*' means half). The equator divides the earth into two halves.

hemoglobin Animal Studies *(hee-moh-gloh-bin)* The oxygen-carrying, red pigmented protein of the red corpuscles.

hemmorrhage Animal Studies *(hemm-uhr-idj)* Copious loss of blood through bleeding.

hepatitis Animal Studies *(hepp-a-ty-tis)* An animal condition referring to the inflammation of the liver.

herb Plant Studies A plant that is used as a medicine, or to make food taste better.

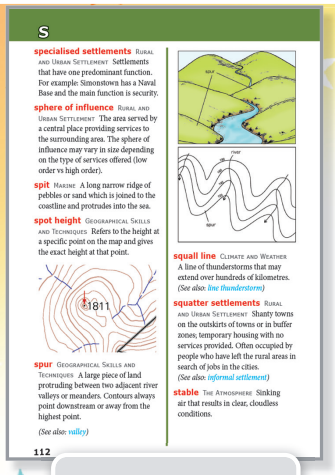
herbicide Plant Studies *(hur-bye-syd)* 1. A chemical substance used for killing plants, especially weeds. 2. Chemical used to kill weeds; Chemical poison used to kill weeds. *(See also: poison)*

herbivore Animal Studies An animal that utilises plants as its main source of food. An animal that eats plants.

hereditary Basic Genetics (he-redd-it-arry) Something that is passed on from parent to offspring by sexual reproduction.

heredity Basic Genetics *(he-redd-i-tee)* The passing on of characteristics from parent to the young in plants and animals. *(See also: genetics)*

AGRICULTURE



specialised settlements Rural and Urban Settlement Settlements that have one predominant function. For example: Simonstown has a Naval Base and the main function is security.

sphere of influence Rural and Urban Settlement The area served by a central place providing services to the surrounding area. The sphere of influence may vary in size depending on the type of services offered (low order vs high order).

spit Marine A long narrow ridge of pebbles or sand which is joined to the coastline and protrudes into the sea.

spot height Geographical Skills and Techniques Refers to the height at a specific point on the map and gives the exact height at that point.

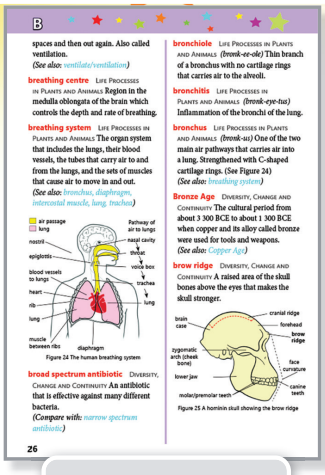
spur Geographical Skills and Techniques A large piece of land protruding between two adjacent river valleys or meanders. Contours always point downstream or away from the highest point. *(See also: valley)*

squall line Climate and Weather A line of thunderstorms that may extend over hundreds of kilometres. *(See also: line thunderstorm)*

squatter settlements Rural and Urban Settlement Shanty towns on the outskirts of towns or in buffer zones; temporary housing with no services provided. Often occupied by people who have left the rural areas in search of jobs in the cities. *(See also: informal settlement)*

stable The Atmosphere Sinking air that results in clear, cloudless conditions.

GEOGRAPHY



spaces and then out again. Also called ventilation. *(See also: ventilate/ventilation)*

breathing centre Life Processes in Plants and Animals Region in the medulla oblongata of the brain which controls the depth and rate of breathing.

breathing system Life Processes in Plants and Animals The organ system that includes the lungs, their blood vessels, the tubes that carry air to and from the lungs, and the sets of muscles that cause air to move in and out. *(See also: bronchus, diaphragm, intercostal muscle, lung, trachea)*

Figure 24 The human breathing system

broad spectrum antibiotic Diversity, Change and Continuity An antibiotic that is effective against many different bacteria. *(Compare with: narrow spectrum antibiotic)*

bronchiole Life Processes in Plants and Animals *(bronk-ee-ole)* Thin branch of a bronchus with no cartilage rings that carries air to the alveoli.

bronchitis Life Processes in Plants and Animals *(bronk-eye-tus)* Inflammation of the bronchi of the lung.

bronchus Life Processes in Plants and Animals *(bronk-us)* One of the two main air pathways that carries air into a lung. Strengthened with C-shaped cartilage rings. (See Figure 24) *(See also: breathing system)*

Bronze Age Diversity, Change and Continuity The cultural period from about 3 300 BCE to about 1 300 BCE when copper and its alloy called bronze were used for tools and weapons. *(See also: Copper Age)*

brow ridge Diversity, Change and Continuity A raised area of the skull bones above the eyes that makes the skull stronger.

Figure 25 A hominin skull showing the brow ridge

LIFE SCIENCES

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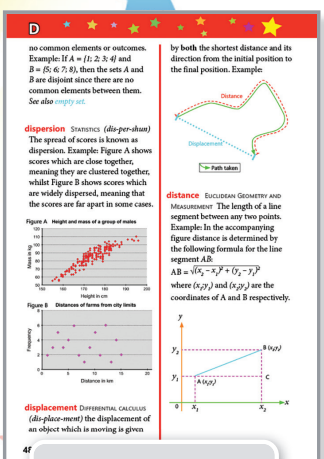


no common elements or outcomes. Example: If $A = \{1; 2; 3; 4\}$ and $B = \{5; 6; 7; 8\}$, then the sets *A* and *B* are disjoint since there are no common elements between them. *See also empty set.*

dispersion Statistics *(dis-per-shun)* The spread of scores is known as dispersion. Example: Figure A shows scores which are close together, meaning they are clustered together, whilst Figure B shows scores which are widely dispersed, meaning that the scores are far apart in some cases.

displacement Differential Calculus *(dis-place-ment)* the displacement of an object which is moving in given by **both** the shortest distance and its direction from the initial position to the final position. Example

distance Euclidean Geometry and Measurement The length of a line segment between any two points. Example: In the accompanying figure distance is determined by the following formula for the line segment *AB*:

$AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

where $(x_1; y_1)$ and $(x_2; y_2)$ are the coordinates of A and B respectively.

MATHEMATICS

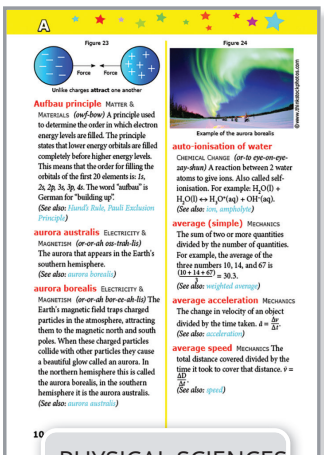


Figure 23

Unlike charges attract one another

Aufbau principle Matter & Materials *(owf-bow)* A principle used to determine the order in which electron energy levels are filled. The principle states that lower energy orbitals are filled completely before higher energy levels. This means that the order for filling the orbitals of the first 20 elements is: 1*s*, 2*s*, 2*p*, 3*s*, 3*p*, 4*s*. The word "aufbau" is German for "building up". *(See also: Hund's Rule, Pauli Exclusion Principle.)*

aurora australis Electricity & Magnetism *(or-or-ah aus-truh-lis)* The aurora that appears in the Earth's southern hemisphere. *(See also: aurora borealis)*

aurora borealis Electricity & Magnetism *(or-or-ah bor-ee-ah-lis)* The Earth's magnetic field traps charged particles in the atmosphere, attracting them to the magnetic north and south poles. When these charged particles collide with other particles they cause a beautiful glow called an aurora. In the northern hemisphere this is called the aurora borealis, in the southern hemisphere it is the aurora australis. *(See also: aurora australis)*

Figure 24

Example of the aurora borealis

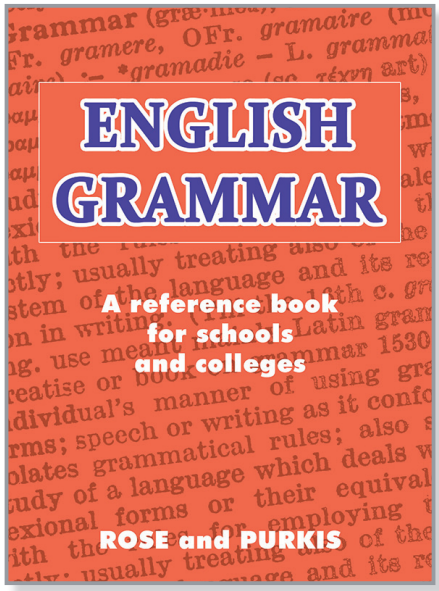
auto-ionisation of water Chemical Change *(or-to eye-on-eye-zay-shun)* A reaction between 2 water atoms to give ions. Also called self-ionisation. For example: $H_2O(l) + H_2O(l) \leftrightarrow H_3O^+(aq) + OH^-(aq)$. *(See also: ion, amphoyte)*

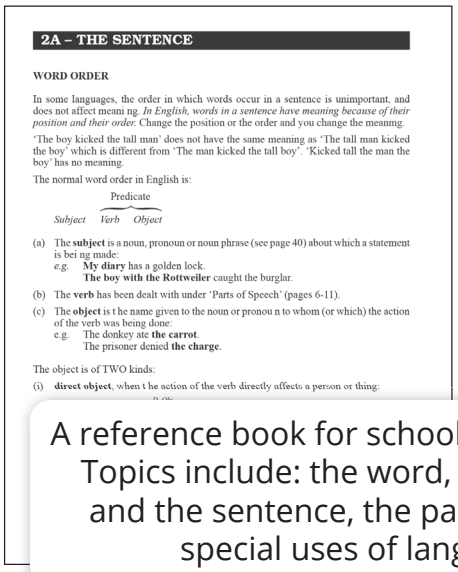
average (simple) Mechanics The sum of two or more quantities divided by the number of quantities. For example, the average of the three numbers 10, 14, and 67 is $\frac{(10+14+67)}{3} = 30.3$. *(See also: weighted average)*

average acceleration Mechanics The change in velocity of an object divided by the time taken. $\bar{a} = \frac{\Delta v}{\Delta t}$ *(See also: acceleration)*

average speed Mechanics The total distance covered divided by the time it took to cover that distance. $\bar{v} = \frac{\Delta D}{\Delta t}$. *(See also: speed)*

PHYSICAL SCIENCES





2A – THE SENTENCE

WORD ORDER

In some languages, the order in which words occur in a sentence is unimportant, and does not affect meaning. *In English, words in a sentence have meaning because of their position and their order.* Change the position or the order and you change the meanng.

'The boy kicked the tall man' does not have the same meaning as 'The tall man kicked the boy' which is different from 'The man kicked the tall boy'. 'Kicked tall the man the boy' has no meaning.

The normal word order in English is:

Predicate

Subject *Verb* *Object*

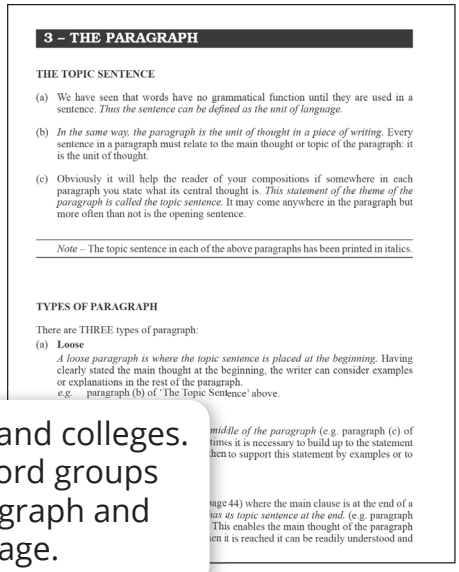
(a) The **subject** is a noun, pronoun or noun phrase (see page 40) about which a statement is bei ng made:
e.g. **My diary** has a golden lock.
The boy with the Rottweiler caught the burglar.

(b) The **verb** has been dealt with under 'Parts of Speech' (pages 6-11).

(c) The **object** is t he name given to the noun or pronou n to whom (or which) the action of the verb was being done:
e.g. The donkey ate **the carrot**.
The prisoner denied **the charge**.

The object is of TWO kinds:

(i) **direct object**, when t he action of the verb directly affects a person or thing:



3 – THE PARAGRAPH

THE TOPIC SENTENCE

(a) We have seen that words have no grammatical function until they are used in a sentence. *Thus the sentence can be defined as the unit of language.*

(b) *In the same way, the paragraph is the unit of thought in a piece of writing.* Every sentence in a paragraph must relate to the main thought or topic of the paragraph: it is the unit of thought.

(c) Obviously it will help the reader of your compositions if somewhere in each paragraph you state what its central thought is. *This statement of the theme of the paragraph is called the topic sentence.* It may come anywhere in the paragraph but more often than not is the opening sentence.

Note – The topic sentence in each of the above paragraphs has been printed in italics.

TYPES OF PARAGRAPH

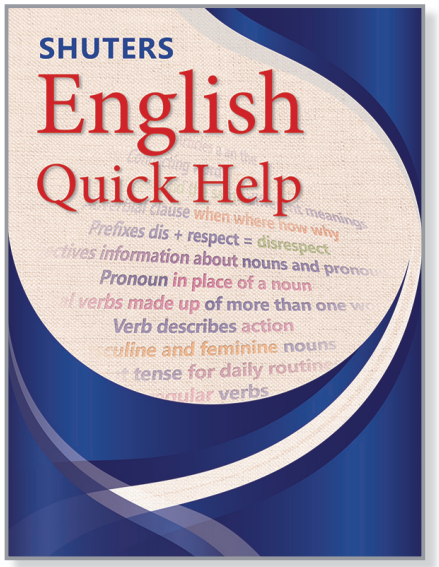
There are THREE types of paragraph:

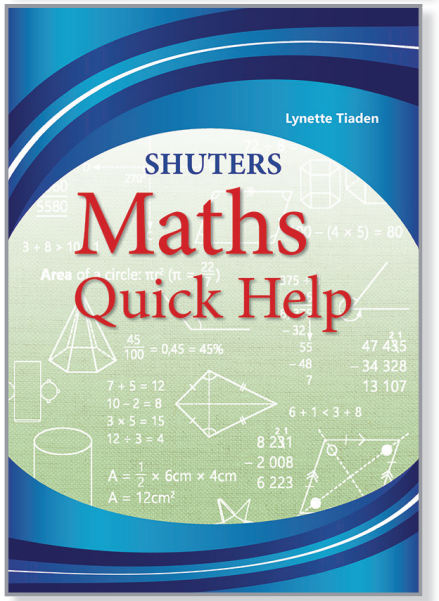
(a) **Loose**
A loose paragraph is where the topic sentence is placed at the beginning. Having clearly stated the main thought at the beginning, the writer can consider examples or explanations in the rest of the paragraph.
e.g. paragraph (b) of 'The Topic Sentence' above.

middle of the paragraph (e.g. paragraph (c) of
times it is necessary to build up to the statement
hen to support this statement by examples or to

age 44) where the main clause is at the end of a
as its topic sentence at the end. (e.g. paragraph
This enables the main thought of the paragraph
en it is reached it can be readily understood and

A reference book for schools and colleges. Topics include: the word, word groups and the sentence, the paragraph and special uses of language.





Non-finite verbs

Non-finite verbs do not have subject, number or tense. They do not stand alone in a sentence. You get different types of non-finite verbs:

- Infinitives
- Participles: past participles and present participles.

Here is a summary of these verbs:

Infinitive	**Past Participle**	**Present Participle**
Always starts with *to* An infinitive must have a finite verb in front of it in order to make sense: *I **want** to walk.*	Regular verbs: simple past tense form: add **-ed**; Irregular verbs: new form These verbs follow auxiliary verbs such as *had, has, have, was, were* *I **had walked** to the office.* *I **have bought** you a present.*	Base word + continuous form: **-ing** A present participle needs an auxiliary verb in order to make sense in a sentence: *I **am walking** towards you.*
to walk **to** bark **to** be **to** become	walk**ed** bark**ed** be**en** be**came**	walk**ing** bark**ing** be**ing** becom**ing**

Notepad: Even though the participles are called *past* and *present* they do not belong in any tense. For example: *I was studying when you phoned.* (It took place in the past, but uses a present participle: *studying*.)

42

Percentages

A percentage is a fraction out of 100. We only write the numerator, followed by a percentage symbol: %.

For example: $\frac{23}{100}$ = 23% and $\frac{7}{100}$ = 7%

Method to convert percentages to common fractions

For example: 84%

1. The digits before the % sign are the numerator of the fraction. The denominator is always 100.
   84% = $\frac{84}{100}$
2. Simplify the fraction.
   84% = $\frac{84 \div 2}{100 \div 2}$ = $\frac{42 \div 2}{50 \div 2}$ = $\frac{21}{25}$

Method to convert common fractions to percentages

For example: $\frac{3}{20}$

1. Find the number that you must multiply by the denominator to make it 100.
   20 × 5 = 100
2. Find an equivalent fraction for $\frac{3}{20}$ with 100 as the denominator. Multiply the numerator and denominator by 5.
   $\frac{3}{20}$ = $\frac{3 \times 5}{20 \times 5}$ = $\frac{15}{100}$
3. Write only the numerator and a percentage symbol.
   $\frac{3}{20}$ = 15%

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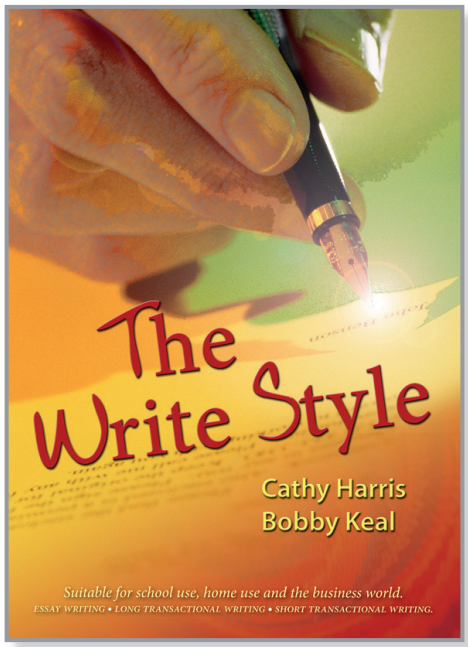

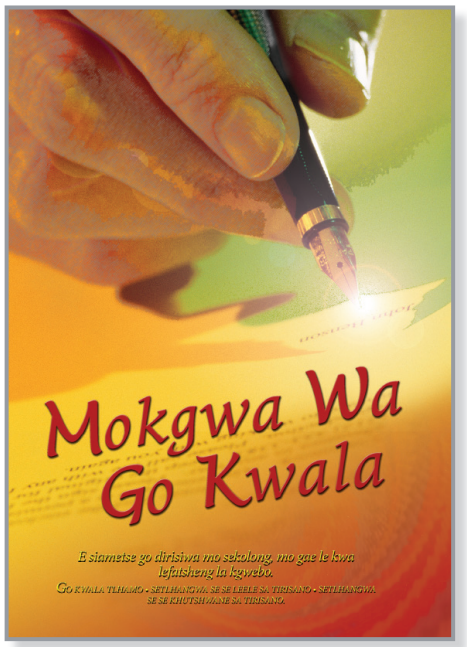

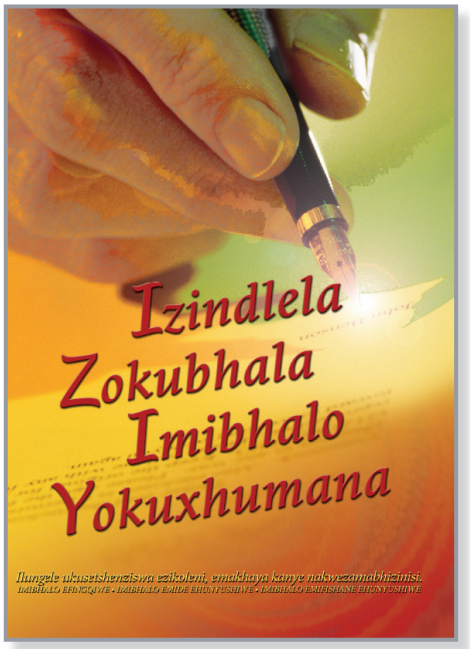

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MOKGWA WA GO KWALA
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Each genré has: Model text; Genré-specific criteria; Language and structural requirements; Evaluation summaries.

STRUCTURE (Cont)	FRIENDLY LETTER *(Cont)*	LANGUAGE (Cont)
First paragraph gives background and reason for writing: To give thanks for the generous gift	Thank you so much for your extremely generous gift of five hundred rand. It was such a wonderful surprise to see you and Uncle Jacob last Sunday when I was visiting Mum and Dad, and I was so glad you could both join us for my birthday lunch. You're looking younger and younger every year, and it is difficult to believe you're turning eighty in a few days time.	Informality is shown with contractions: You're Personal pronouns indicate close relationship between correspondents: I; you; your; my
Expansion on reason for writing: I went to the shopping mall	It was such fun spending my birthday money from you. After a hard week at work, my friends and I went shopping at the mall on Saturday. Your money allowed me to buy a beautiful maroon jersey, which I had been admiring at Truworths for a long time. I have already worn it, and it's as soft and snuggly as it looks. The rest of the money was spent on a delicious meal at Spritzas. It really was an awesome morning. Thanks so much!	Use of colloquial expressions shows informal tone: such fun; snuggly; awesome; thanks Use of simple past tense to recount events: went; had; allowed; have worn; was spent, was Use of exclamation mark shows informality
General news and reference to common knowledge indicates close relationship: Uncle Jacob; the Christmas period; the beach; together as a family.	I look forward to seeing you both over the Christmas period. Please do try to come to the beach with us, as this will be the last time we'll all be together as a family, since Spha and Londi are leaving for their long-awaited travels at the beginning of January – I only hope they don't get lost, after what happened last year!	Use of humour emphasises informality: I only hope they don't get lost, after what happened last year!
Concluding paragraph is brief and relates back to reason for writing: *Thank you*	Once again, thank you so much for your generosity.	
Informal salutation. *Lots of love* No surname is included where the relationship is close. *Happiness*	Lots of love Happiness	

EVALUATION:
The criteria for this genre have been met. The tone is relaxed and informal, as indicated by the use of humour, contractions, and colloquialisms. The address, salutation, and greeting are present and correctly laid out. The letter consists of more than three paragraphs.

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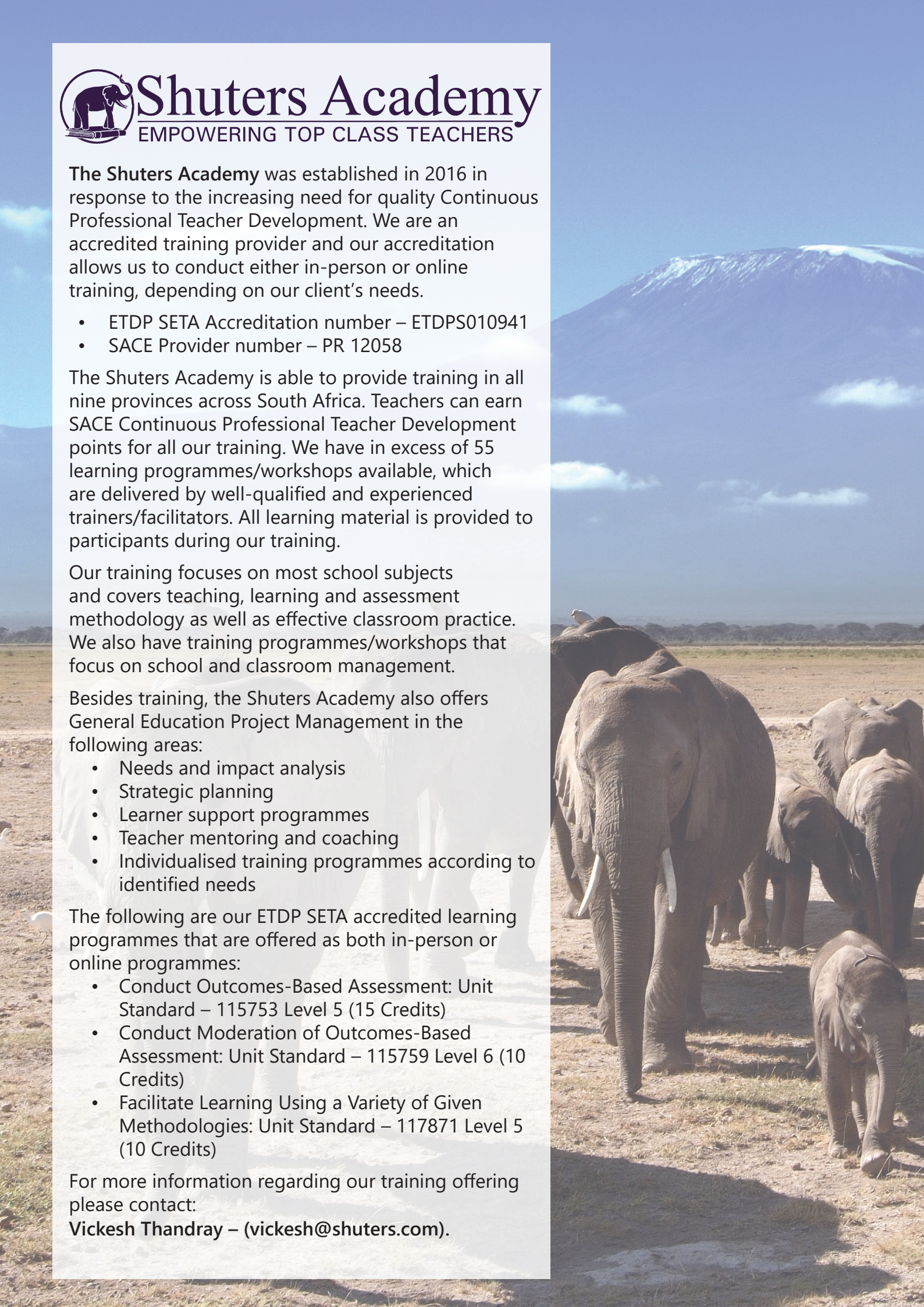

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