

2023

Annual Teaching Plans **NATURAL SCIENCES**



Senior Phase



Shuter & Shooter
PUBLISHERS (PTY) LTD



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Shuters Academy

EMPOWERING TOP CLASS TEACHERS

The Shuters Academy was established in 2016 in response to the increasing need for quality Continuous Professional Teacher Development. We are an accredited training provider and our accreditation allows us to conduct either in-person or online training, depending on our client's needs.

- ETDP SETA Accreditation number – ETDP010941
- SACE Provider number – PR 12058

The Shuters Academy is able to provide training in all nine provinces across South Africa. Teachers can earn SACE Continuous Professional Teacher Development points for all our training. We have in excess of 55 learning programmes/workshops available, which are delivered by well-qualified and experienced trainers/facilitators. All learning material is provided to participants during our training.

Our training focuses on most school subjects and covers teaching, learning and assessment methodology as well as effective classroom practice. We also have training programmes/workshops that focus on school and classroom management.

Besides training, the Shuters Academy also offers General Education Project Management in the following areas:

- Needs and impact analysis
- Strategic planning
- Learner support programmes
- Teacher mentoring and coaching
- Individualised training programmes according to identified needs

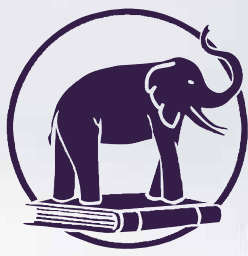
The following are our ETDP SETA accredited learning programmes that are offered as both in-person or online programmes:

- Conduct Outcomes-Based Assessment: Unit Standard – 115753 Level 5 (15 Credits)
- Conduct Moderation of Outcomes-Based Assessment: Unit Standard – 115759 Level 6 (10 Credits)
- Facilitate Learning Using a Variety of Given Methodologies: Unit Standard – 117871 Level 5 (10 Credits)

For more information regarding our training offering please contact:

Vickesh Thandray - (vickesh@shuters.com).





Shuter & Shooter

PUBLISHERS (PTY) LTD

SHUTER & SHOOTER PUBLISHERS (PTY) LTD is a proudly South African publishing company. Established as a bookstore almost 100 years ago, we began publishing IsiZulu novels, poetry and textbooks from the early 1930s.

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.

OUR CORE BUSINESS IS EDUCATION

SHUTER & SHOOTER PUBLISHERS (PTY) LTD publishes over 950 CAPS-approved titles on the Department of Basic Education's national textbook catalogue, as well as an extensive range of supplementary educational materials. After much research and development, we have also added e-learning to our impressive stable of learning and teaching support material.

2017 saw the launch of our exciting new study guide series – *Ace It!* A unique series that focuses on the different ways in which learners learn, *Ace It!* includes study tips for each learning style to help learners excel in their year-end exams.

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

In 2018, Shuter & Shooter concluded a landmark transaction with the Zungu Investments Company (ZICO) which saw the company become one of the largest 100% black-owned educational publishers in South Africa.



INTRODUCTION

Shuter & Shooter is committed to serving the educational needs of a changing South Africa.



- We develop and publish educational material.
- We provide supplementary professional services in the education sector.
- We offer superior customer service and distribution.

Shuter & Shooter is proud to be 100% South African, 100% black-owned and a Level 1 BBBEE company. Please support more local publishers like Shuter & Shooter.



Our products include:

- Textbooks
- Teacher Guides
- Workbooks
- Study Guides
- Core Readers
- Graded Readers
- Phonics Reading Schemes
- TVET Materials
- Dictionaries
- Atlases
- Wall Charts
- Educational Toys and Puzzles
- Reference Books
- E-Books
- Digital Learning Resources

We are also proud to be an accredited training provider, registered with the ETDP SETA and SACE.

Why choose our books?

- Fully CAPS compliant
- Lots of activities and exercises
- Relevant examples throughout the books
- Simple language, written at the level of the learner
- Easy to plan lessons
- Planning and Tracking Booklets help to make teaching easier

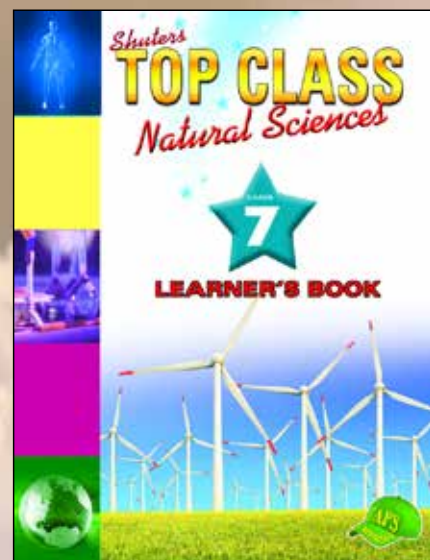
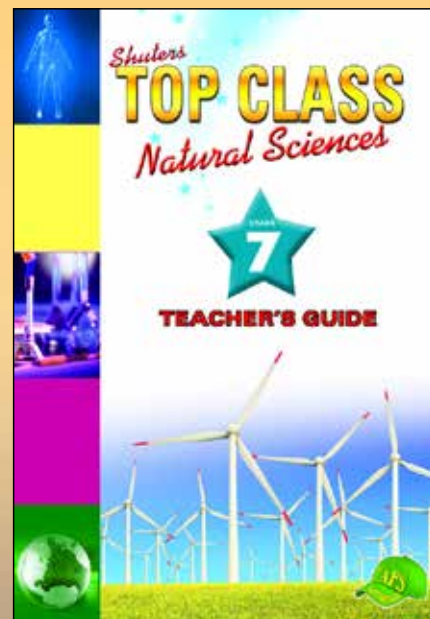
Advantages of using our books

- Improves learners' results
- Assess progress easily
- Reduce the administrative burden
- Helps save planning and preparation time
- Follows the CAPS precisely, making teaching easier
- Most of our titles are also available as e-Books

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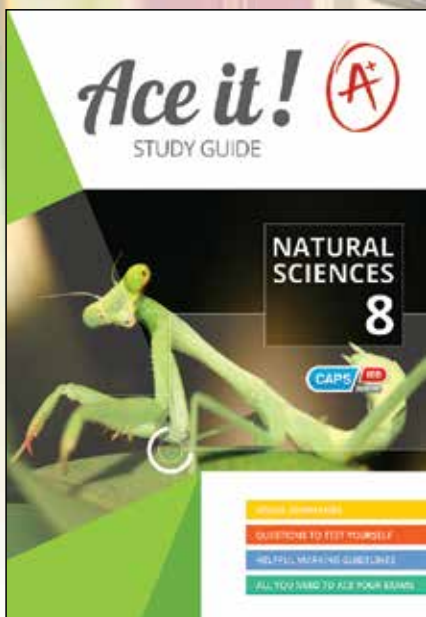
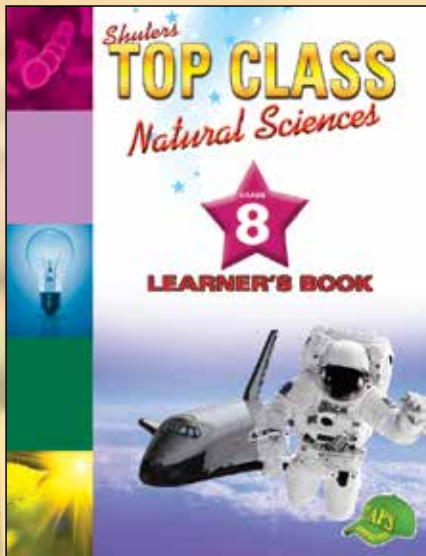
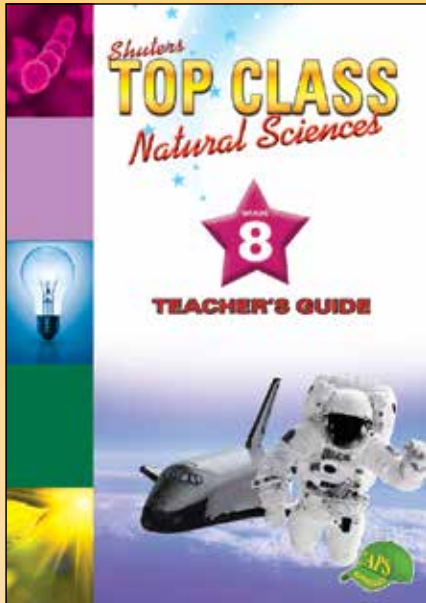
Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 7</i>			
			Unit			
			LB			
			TG			
Life and Living						
The biosphere	- The concept of the biosphere - Requirements for sustaining life	Weeks 1–2	Unit 1: The biosphere	2–11	1–8	
Biodiversity	- Classification of living things - Diversity of animals - Diversity of plants	Weeks 3–6	Unit 2: Biodiversity	12–33	9–24	
Sexual reproduction	- Sexual reproduction in angiosperms - Human reproduction	Weeks 6–9	Unit 3: Sexual reproduction in angiosperms Unit 4: Sexual reproduction in humans	33–59	25–40	
Remediation, Revision, and Consolidation		Weeks 10–11				

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 7</i>			
			Unit	LB	TG	
Matter and Materials						
Introduction to the Periodic Table of Elements	• Arrangement of elements in the Periodic Table • Some properties of metals, semi-metals, and non-metals	Week 1	Unit 9: Introduction to the Periodic Table of Elements	103–110	70–74	
Properties of materials	• Boiling and melting points • Electrical conductivity • Heat conductivity	Weeks 2–4	Unit 6: Properties of materials	70–83	49–54	
Separating mixtures	• Mixtures • Methods of physical separation • Sorting and recycling materials	Weeks 5–7	Unit 7: Separating mixtures	84–95	55–63	
Acids, bases and neutrals	• Tastes of substances • Properties of acids, bases, and neutrals • Acid-base indicators	Weeks 8–9	Unit 8: Acids, bases and neutrals	96–102	64–69	
Remediation, Revision, and Consolidation		Weeks 10–11				

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 7</i>			
			Unit			
Energy and Change						
Sources of energy	Renewable and non-renewable sources of energy	Week 1	Unit 10: Sources of energy	111–115		75–76
Potential and Kinetic Energy	- Potential energy - Kinetic energy - Potential and kinetic energy in systems - Law of conservation of energy	Weeks 2–3	Unit 11: Potential and kinetic energy	116–129		77–81
Heat transfer	- Heating as a transfer of energy - Conduction - Convection - Radiation	Weeks 4–6	Unit 12: Heat transfer	130–138		82–85
Insulation and energy saving	Using insulating materials	Week 7	Unit 13: Insulation and energy saving	139–136		86–90
Energy transfer to surroundings	Useful and ‘wasted’ energy	Weeks 8–9	Unit 14: Energy transfer to surroundings	147–150		91–93
Remediation, Revision, and Consolidation		Weeks 10–11				

Topic	Content	Time allocation	Where to find it in Top Class Natural Sciences Grade 7			
			Unit	LB	TG	
			Planet Earth and Beyond			
Relationship of the sun to the Earth	- Solar energy and the Earth's seasons - Solar energy and life on Earth - Stored solar energy	Weeks 1–4	Unit 16: Relationship of the sun to the Earth	159–170	97–105	
Relationship of the moon to the Earth	- Relative positions - Gravity - Tides	Weeks 5–8	Unit 17: Relationship to the moon to the Earth	171–181	106–111	
Remediation, Revision, and Consolidation		Weeks 9–10				

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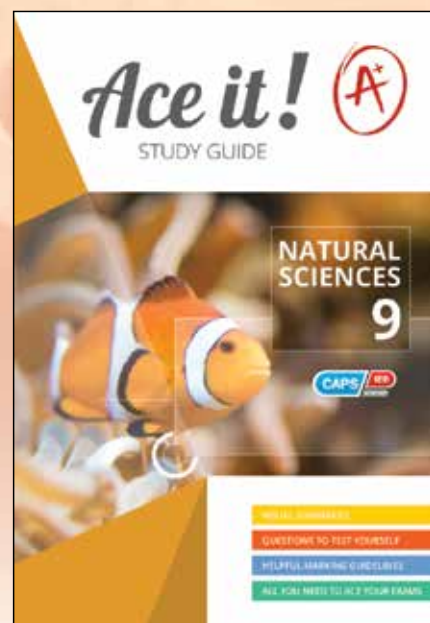
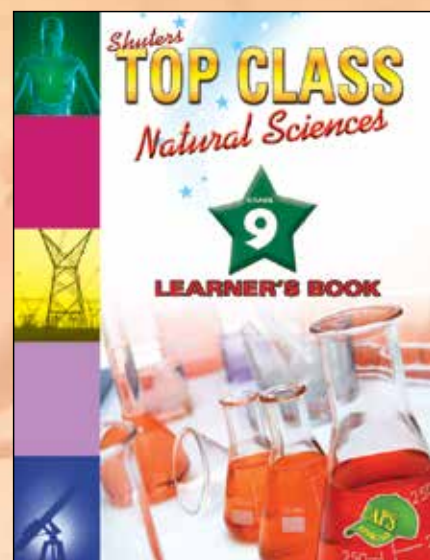
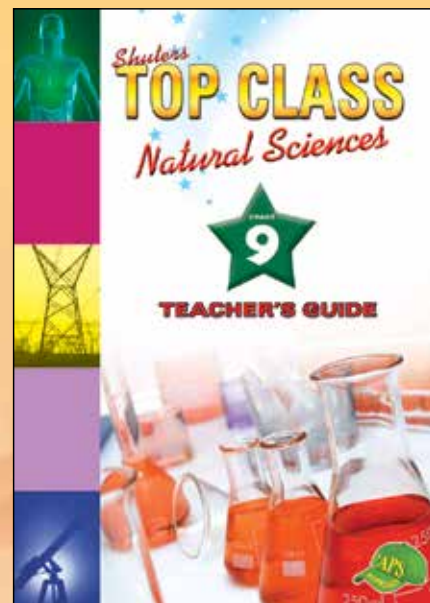
Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 8</i>			
			Unit			
Life and Living						
Photosynthesis and respiration	• Photosynthesis • Respiration	Weeks 1–2	Unit 1: Photosynthesis and respiration	2–10	1–6	
Interactions and interdependence within the environment	• Introduction to ecology • Ecosystems • Feeding relationships • Balance in an ecosystem • Adaptations • Conservation of the ecosystem	Weeks 3–7	Unit 2: Interactions and interdependence within the environment	11–44	7–22	
Micro-organisms	• Types of micro-organisms • Harmful micro-organisms • Useful micro-organisms	Weeks 8–9	Unit 3: Micro-organisms	45–67	23–31	
Remediation, Revision, and Consolidation		Weeks 10–11				

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 8</i>		
			Unit	LB	TG
Introduction to the periodic table of elements	- Arrangement of elements on the periodic table - Some properties of metals, semi-metals, and non-metals	Week 1	From Top Class Natural Sciences Grade 7 Unit 9: Introduction to the Periodic Table of Elements	103–110	70–74
Atoms	- Atoms – building blocks of matter - Sub-atomic particles - The concept of the particle model of matter	Weeks 2–3	Unit 4: Atoms	68–77	30–36
Particle model of matter	- Pure substances - Elements - Compounds - The concept of the particle model of matter - Change of state - Density, mass and volume - Density and states of matter - Density of different materials - Expansion and contraction of materials - Pressure	Weeks 4–8	Unit 5: Particle model of matter	78–94	37–47
Chemical reactions	Reactants and products	Week 9			
Remediation, Revision, and Consolidation		Weeks 10–11			

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 8</i>		
			Unit	LB	TG
Static electricity	Friction and static electricity	Week 1	Unit 7: Static electricity	103–106	53–54
Energy transfer in electrical systems	- Circuits and current electricity - Components of a circuit - Effects of an electric current	Weeks 2–4	Unit 8: Energy transfer in electrical systems	107–117	55–62
Series and parallel circuits	- Series circuits - Parallel circuits	Weeks 5–6	Unit 9: Series and parallel circuits	118–124	63–68
Visible light	- Radiation of light - Spectrum of visible light - Opaque and transparent substances - Absorption of light - Reflection of light - Seeing light - Refraction of light	Weeks 7–9	Unit 10: Visible light	125–139	69–77
Remediation, Revision, and Consolidation		Weeks 10–11			

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 8</i>			
			Unit			
			LB			
			TG			
Planet Earth and Beyond						
The Solar System	• The Sun • Objects around the Sun • Earth's position in the solar system	Weeks 1–3	Unit 11: The Solar System	140–146	78–82	
Beyond the solar system	• The Milky Way Galaxy • Our nearest star • Light years, light hours and light minutes • Beyond the Milky Way Galaxy	Weeks 4–6	Unit 12: Beyond the solar system	147–151	83–85	
Looking into space	• Early viewing of space • Telescopes	Weeks 7–8	Unit 13: Looking into space	152–161	86–90	
Remediation, Revision, and Consolidation		Weeks 9–10				

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Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 9</i>		
			Unit	LB	TG
Life and Living					
Cells as basic units of life	- Cell structure - Differences between plant and animal cells - Draw and label a generalised plant and animal cell - Cells in tissues, organs and systems	Weeks 1–2	Unit 1: Cells as the basic unit of life	2–15	1–9
Overview of systems in the human body	- Nervous system - Muscular-skeletal system - Excretory systems	Week 3	Unit 2: Systems in the human body	16–47	10–16
Systems in the human body: Circulatory and respiratory system	- Breathing, gaseous exchange, circulation, and respiration - Label the respiratory system	Weeks 5–6	Unit 4: Circulatory and respiratory systems	60–71	24–31
Human reproductive system	- Purpose and puberty - Reproductive organs - Stages of reproduction - Label the reproductive system	Weeks 6–7	Unit 3: Human reproduction life	48–59	17–23
Digestive system	- Healthy diet - The alimentary canal and digestion - Label the digestive system	Weeks 8–9	Unit 5: The digestive system	72–84	32–38
Remediation, Revision, and Consolidation		Weeks 9–10			

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 9</i>		
			Unit	LB	TG
Matter and Materials					
Compounds	- The Periodic Table - Names of compounds	Week 1	Unit 6: Compounds	85–90	39–42
Chemical Reactions	Reactants and products	Week 2	From Top Class Natural Sciences and Technology Grade 8 Unit 6: Chemical reactions	95–102	48–52
Chemical Reactions	- Chemical equations to represent reactions - Balanced equations	Week 3	Unit 7: Chemical reactions	91–95	43–46
Reaction of metals with oxygen	- The general reaction of metals with oxygen - Reaction of iron with oxygen - Reaction of magnesium with oxygen - Formation of rust - Ways to prevent rusting	Weeks 4–5	Unit 8: Reactions of metals with oxygen	96–101	47–50
Reactions of non-metals with oxygen	- The general reaction of non-metals with oxygen - Reaction of carbon with oxygen - Reaction of sulfur with oxygen	Weeks 5–6	Unit 9: Reactions of non-metals with oxygen	102–105	51–54
Acids and bases, and pH value	The concept of pH value	Week 7	Unit 10: Acids and bases and pH value	106–111	55–58
Reactions of acids with bases: Part I	Neutralisation and pH	Week 8	Unit 11: Reactions of acids with bases: Parts I, II and III	112–124	59–65
Reactions of acids with bases: Part II	- The general reaction of an acid with a metal oxide (base) - Applications	Week 9			
Remediation, Revision, and Consolidation		Weeks 10–11			

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 9</i>		
			Unit	LB	TG
Energy and Change					
Forces	- Types of forces - Contact forces - Field forces (non-contact forces)	Weeks 1–3	Unit 13: Forces	132–149	70–78
Electric cells as energy systems	Electric cells	Weeks 3–4	Unit 14: Electric cells as energy systems	150–153	79–80
Resistance	- Uses of resistors - Factors that affect resistance in a circuit	Weeks 4–5	Unit 15: Resistance	154–158	81–84
Series and parallel circuits	- Series circuits - Parallel circuits	Weeks 5–7	Unit 16: Series and parallel circuits	159–171	85–90
Safety with electricity	Safety practices	Week 7	Unit 17: Safety with electricity	172–179	91–93
Energy and the national electricity grid	- Electricity generation - Nuclear power in South Africa - National electricity grid	Week 8	Unit 18: Energy and the national electricity grid	180–186	94–99
Cost of electrical power	The cost of power consumption	Week 9	Unit 19: Cost of electrical power	187–196	100–103
Remediation, Revision, and Consolidation		Weeks 10–11			

Topic	Content	Time allocation	Where to find it in <i>Top Class Natural Sciences Grade 9</i>			
			Unit		LB	TG
Planet Earth and Beyond						
The Earth as a system	Spheres of Earth	Week 1	Unit 20: The Earth as a system	197–200	104–106	
Lithosphere	- Lithosphere - The rock cycle	Weeks 2–3	Unit 21: Lithosphere	201–210	107–111	
Mining of mineral resources	- Extracting ores - Refining minerals - Mining in South Africa	Weeks 4–5	Unit 22: Mining of mineral resources	211–222	112–118	
Atmosphere	- Atmosphere - Troposphere - Stratosphere - Mesosphere - Thermosphere - The greenhouse effect	Weeks 6–7	Unit 23: Atmosphere	223–235	119–124	
Birth, life and death of a star	- The birth of a star - Life of a star - Death of a star	Week 8	Unit 24: Birth, life and death of stars	236–241	125–129	
Remediation, Revision, and Consolidation		Weeks 9–10				

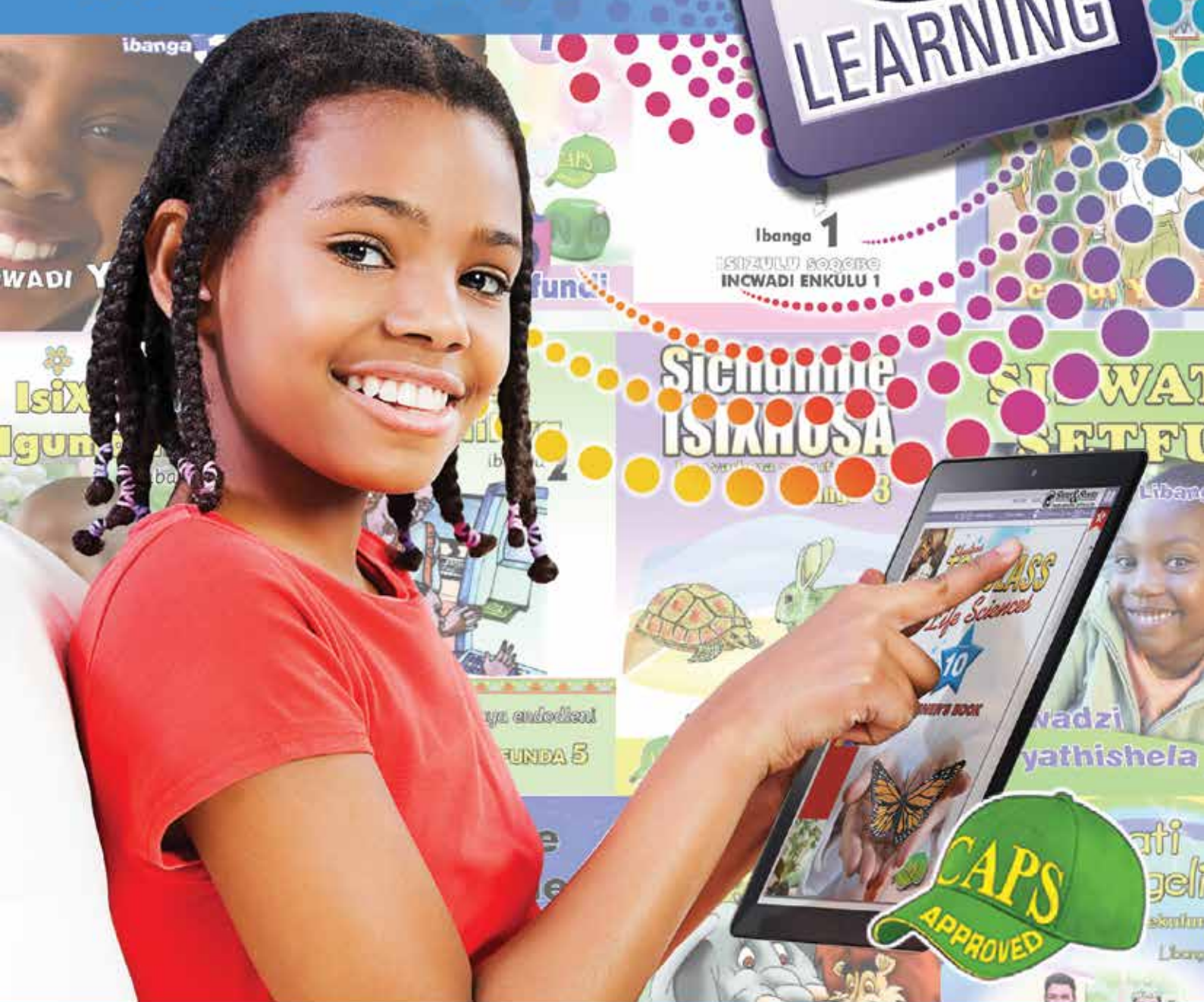
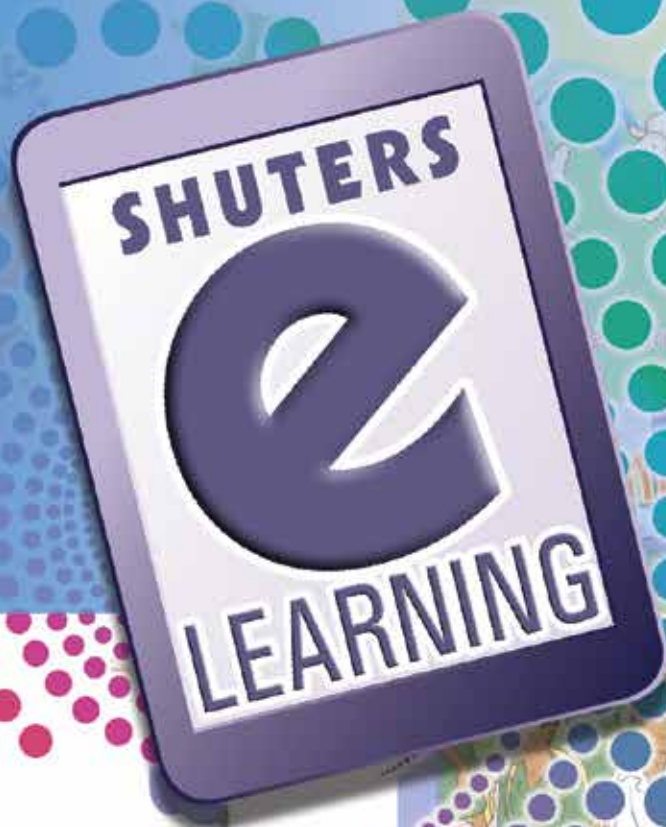
PROGRAMME OF ASSESSMENT

Grade 7		
Term	Assessment task	Page references
1	Practical task/Investigation	LB page 37 TG page 27
	Test	TG page 146
2	Practical task/Investigation	LB page 101 TG page 67
	Test	TG page 148
3	Project	LB page 115 TG page 76
	Test	TG page 150
4	Test	LB page 193 TG page 161

Grade 8		
Term	Assessment task	Page references
1	Practical Task	LB page 6 TG page 3
	Test	TG page 110
2	Practical Task	LB page 82 TG page 41
	Test	TG page 111
3	Project	LB page 131 TG page 73
	Test	TG page 113
4	Test	LB page 167 TG page 123

Grade 9		
Term	Assessment task	Page references
1	Practical Task/Investigation	LB page 70 TG page 29
	Test	TG page 150
2	Practical Task/Investigation	LB page 110 TG page 57
	Test	TG page 152
3	Project	LB page 142 TG page 74
	Test	TG page 153
4	Test	LB page 246 TG page 166

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Ace it!

STUDY GUIDES



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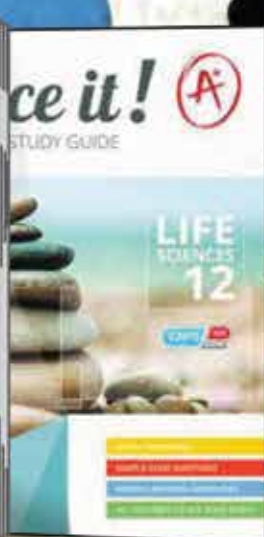
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