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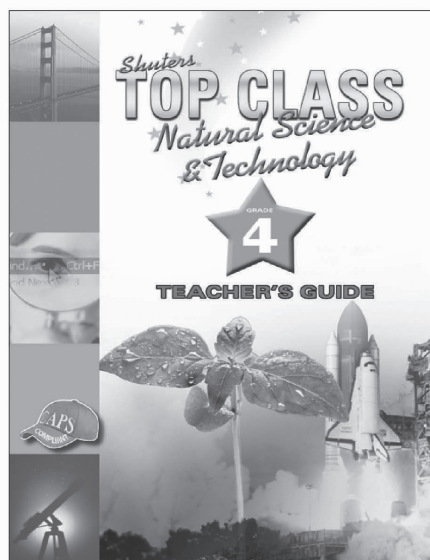
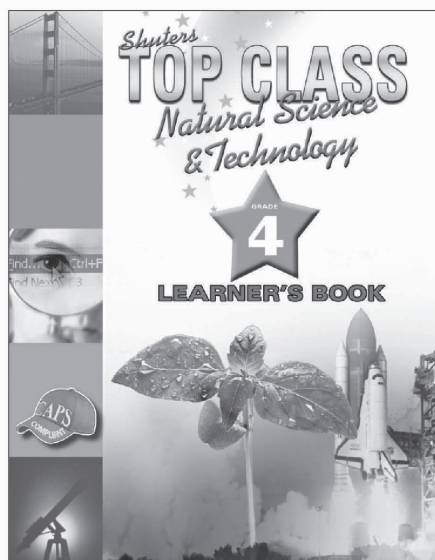
TOP CLASS

*Natural Sciences
and Technology*



Grade

4



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Term 1					
Time	Unit	Topic	Page	Recording	Reflection
2 weeks (7 hours)	1	Living and non-living things	TG – p1 LB – p1		
		Skills: Observing things	TG – p1 LB – p1		
		Living and non-living things	TG – p2 LB – p2		
		Living things	TG – p2 LB – p2		
		Exercise 1	TG – p2 LB – p3		
		Are animals living things?	TG – p3 LB – p3		
		Non-living things	TG – p3 LB – p4		
		Exercise 2	TG – p3 LB – p5		
		Worksheet 1.1	TG – p3		
		Are plants living things?	TG – p4 LB – p5		
		Exercise 3	TG – p4 LB – p6		
		Exercise 4	TG – p5 LB – p6		
		Is a seed a living thing?	TG – p5 LB – p7		
		Activity 1: Are bean seeds living things?	TG – p5 LB – p7		
		Activity 2: Make yeast grow	TG – p6 LB – p8		
		Looking back at Unit 1	TG – p6 LB – p10		
2 ½ weeks (8 ¾ hours)	2	Structure of plants and animals	TG – p7 LB – p11		
		Structure of plants	TG – p7 LB – p11		
		Trees	TG – p8 LB – p11		
		How do we recognise different kinds of trees?	TG – p8 LB – p11		
		Activity 1: Observe a tree by looking, touching and smelling	TG – p8 LB – p12		

Term 1					
Time	Unit	Topic	Page	Recording	Reflection
		Worksheet 2.1	TG – p10		
		Activity 2: Observe plants	TG – p10 LB – p13		
		Activity 3: Draw a plant	TG – p11 LB – p13		
		Exercise 1	TG – p11 LB – p14		
		Comparing plants	TG – p11 LB – p14		
		Worksheet 2.2	TG – p11		
		Activity 4: Compare plants Formal Assessment Task	TG – p12 LB – p15		
		Structure of animals	TG – p13 LB – p16		
		Exercise 2	TG – p13 LB – p16		
		Exercise 3	TG – p13 LB – p16		
		Comparing animals	TG – p14 LB – p17		
		Exercise 4	TG – p14 LB – p18		
		Looking back at Unit 2	TG – p14 LB – p18		
1 week (3 ½ hours)	3	What plants need to grow	TG – p16 LB – p20		
		Conditions for growth	TG – p16 LB – p20		
		New plants can grow from seeds	TG – p17 LB – p21		
		Exercise 1	TG – p17 LB – p21		
		Do seeds need water to germinate?	TG – p17 LB – p21		
		Exercise 2	TG – p17 LB – p22		
		New plants grow from pieces of plants	TG – p18 LB – p22		
		Activity 1: Grow new plants from a stem cutting	TG – p18 LB – p22		
		Looking back at Unit 3	TG – p18 LB – p23		

Term 1					
Time	Unit	Topic	Page	Recording	Reflection
2 weeks (7 hours)	4	Habitats of animals	TG – p19 LB – p24		
		Skills: Reading with a question in mind	TG – p19 LB – p24		
		Different habitats	TG – p19 LB – p25		
		Where do animals live?	TG – p20 LB – p25		
		Activity 1: Look at animal habitats in your surroundings	TG – p20 LB – p25		
		Worksheet 4.1	TG – p20		
		Exercise 1	TG – p21 LB – p27		
		Need for a habitat	TG – p22 LB – p28		
		Worksheet 4.2	TG – p22		
		Looking back at Unit 4	TG – p22 LB – p30		
2 ½ weeks (8 ¾ hours)	5	Structures for animal shelters	TG – p23 LB – p31		
		Animal shelters	TG – p23 LB – p31		
		Human-made and natural structures	TG – p23 LB – p31		
		Natural structures	TG – p24 LB – p32		
		Exercise 1	TG – p24 LB – p32		
		Human-made structures	TG – p24 LB – p33		
		Exercise 2	TG – p24 LB – p34		
		Animal structures can be shell or frame structures	TG – p25 LB – p34		
Test					
		Worksheet 5.1	TG – p25		
		Exercise 3	TG – p25 LB – p35		
		Case study: Design an animal shelter for Mrs Sibeko's chickens	TG – p26 LB – p35		
		Looking back at Unit 5	TG – p28 LB – p40		

Term 2					
Time	Unit	Topic	Page	Recording	Reflection
3 ½ weeks (12 ¼ hours)	6	Materials around us	TG – p29 LB – p41		
		Solids, liquids and gases	TG – p30 LB – p41		
		Activity 1: Sorting materials and describing them	TG – p30 LB – p43		
		Change of state	TG – p31 LB – p44		
		Activity 2: Heat wax to change its state	TG – p31 LB – p44		
		Exercise 1	TG – p32 LB – p45		
		Activity 3: Melt different solids	TG – p32 LB – p45		
		The changing states of water	TG – p33 LB – p46		
		Exercise 2	TG – p33 LB – p47		
		Worksheet 6.1	TG – p34		
		States of water in nature	TG – p34 LB – p48		
		Exercise 3	TG – p35 LB – p49		
		Worksheet 6.2	TG – p35		
		Looking back at Unit 6	TG – p36 LB – p49		
2 weeks (7 hours)	7	Solid materials	TG – p37 LB – p50		
		Raw and manufactures materials	TG – p37 LB – p50		
		Exercise 1	TG – p38 LB – p53		
		Properties of materials	TG – p38 LB – p54		
		Exercise 2	TG – p38 LB – p54		
		Hard or soft	TG – p38 LB – p55		
		Activity 1: Compare the hardness of different materials	TG – p39 LB – p55		
		Stiff or flexible	TG – p39 LB – p55		
		Activity 2: Compare rulers for flexibility	TG – p39 LB – p56		

Term 2					
Time	Unit	Topic	Page	Recording	Reflection
		Strong or weak	TG – p40 LB – p56		
		Light or heavy	TG – p40 LB – p56		
		Activity 3: Compare heavy and light objects	TG – p40 LB – p56		
		Waterproof or absorbent	TG – p40 LB – p57		
		Exercise 3	TG – p40 LB – p58		
		Worksheet 7.1	TG – p42		
		Worksheet 7.2	TG – p42		
		Looking back at Unit 7	TG – p43 LB – p59		
2 weeks (7 hours)	8	Strengthening materials	TG – p44 LB – p60		
		Skills: Following instructions	TG – p44 LB – p60		
		Ways to strengthen materials	TG – p45 LB – p62		
		Folding paper	TG – p45 LB – p62		
		Activity 1: Folding paper to make hollow pillars	TG – p45 LB – p63		
		Activity 2: Investigate which shape of pillar is the strongest Formal Assessment	TG – p45 LB – p50		
		Exercise 1	TG – p46		
		Activity 3: Making paper struts	TG – p46 LB – p65		
		Looking back at Unit 8	TG – p46 LB – p66		
2 ½ weeks (8 ¾ hours)	9	Strong frame structures	TG – p47 LB – p67		
		Struts and frame structures	TG – p47 LB – p67		
		Exercise 1	TG – p48 LB – p68		
		Activity 1: Joining struts to make a strong structure	TG – p48 LB – p69		
		Worksheet 9.1	TG – p48		
Mid-year examination					
		Technology: Design process	TG – p49 LB – p69		
		Worksheet 9.2	TG – p51		

Term 2					
Time	Unit	Topic	Page	Recording	Reflection
		Indigenous structures	TG – p51 LB – p73		
		Example 1 Zulu hut (uguqa)	TG – p51 LB – p73		
		Example 2 Xhosa rontabile	TG – p51 LB – p74		
		Example 3 Nama matjieshius	TG – p52 LB – p75		
		Looking back at Unit 9	TG – p53 LB – p76		

Term 3					
Time	Unit	Topic	Page	Recording	Reflection
2 ½ weeks (8 ¾ hours)	10	Energy and energy transfer	TG – p54 LB – p77		
		What is energy?	TG – p54 LB – p77		
		Exercise 1	TG – p54 LB – p78		
		Energy for life	TG – p56 LB – p78		
		Exercise 2	TG – p56 LB – p78		
		Exercise 3	TG – p56 LB – p79		
		How do we get energy?	TG – p56 LB – p80		
		Energy from the Sun	TG – p57 LB – p80		
		Worksheet 10.1	TG – p58		
		Exercise 4	TG – p58 LB – p82		
		Worksheet 10.2	TG – p59		
		Exercise 5	TG – p59 LB – p83		
		Looking back at Unit 10	TG – p59 LB – p83		
2 ½ weeks (8 ¾ hours)	11	Energy around us	TG – p61 LB – p84		
		Energy	TG – p61 LB – p84		
		Exercise 1	TG – p61 LB – p84		
		Activity 1: Listen for sounds	TG – p63 LB – p86		
		Worksheet 11.1	TG – p63		
		Energy is stored in sources	TG – p64 LB – p86		
		Energy transfer	TG – p64 LB – p87		
		Activity 2: Show the transfer of energy	TG – p64 LB – p88		
		Input and output energy	TG – p65 LB – p91		
		Exercise 2	TG – p65 LB – p91		
		Exercise 3	TG – p66 LB – p92		
		Worksheet 11.1	TG – p66		

Term 3					
Time	Unit	Topic	Page	Recording	Reflection
		Looking back at Unit 11	TG – p67 LB – p92		
2 ½ weeks (8 ¼ hours)	12	Movement and energy in a system	TG – p68 LB – p94		
		Percussion instruments: make a sound by beating or striking	TG – p68 LB – p94		
		Exercise 1	TG – p69 LB – p94		
		Stringed instruments: make a sound by plucking	TG – p69 LB – p94		
		Exercise 2	TG – p69 LB – p94		
		Wind instruments: make a sound by blowing	TG – p69 LB – p95		
		Exercise 3	TG – p69 LB – p96		
		Worksheet 12.1	TG – p70		
		Musical instrument: Design and make a solution Formal Assessment	TG – p70 LB – p96		
		Identify the need or problem	TG – p70 LB – p96		
		Design brief	TG – p70 LB – p97		
		Design specifications	TG – p70 LB – p97		
		Design a solution	TG – p71 LB – p97		
		Sketch the design ideas	TG – p71 LB – p97		
		Make an instrument	TG – p71 LB – p98		
		Evaluate your instrument	TG – p71 LB – p99		
		Worksheet 12.2	TG – p71		
		Looking back at Unit 12	TG – p72 LB – p100		
2 ½ weeks (8 ¾ hours)	13	Energy and sound	TG – p73 LB – p101		
		Exercise 1	TG – p73 LB – p101		
		Vibrations and sound	TG – p74 LB – p101		
		Activity 1: Can sound make other things move?	TG – p74 LB – p102		

Term 3					
Time	Unit	Topic	Page	Recording	Reflection
		How do we hear vibrations?	TG – p74 LB – p103		
		Exercise 2	TG – p74 LB – p103		
		Activity 2: Hear sound travelling through different materials	TG – p74 LB – p104		
		Exercise 3	TG – p75 LB – p104		
		Making sounds	TG – p75 LB – p105		
		Activity 3: Can you make sounds louder?	TG – p75 LB – p105		
		Activity 4: Making high and low notes	TG – p75 LB – p106		
		Exercise 4	TG – p76 LB – p107		
		Noise pollution	TG – p76 LB – p107		
		What are your rights and responsibilities?	TG – p77 LB – p109		
		Exercise 5	TG – p77 LB – p109		
		Worksheet 13.1	TG – p77		
Test					
		Looking back at Unit 13	TG – p78 LB – p110		

Term 4					
Time	Unit	Topic	Page	Recording	Reflection
2 weeks (7 hours)	14	Planet Earth	TG – p79 LB – p112		
		Features of the Earth	TG – p79 LB – p112		
		Exercise 1	TG – p80 LB – p114		
		Activity 1: Make your own model globe of Earth	TG – p80 LB – p114		
		Habitats of the Earth	TG – p80 LB – p114		
		Exercise 2	TG – p80 LB – p116		
		Exercise 3	TG – p81 LB – p116		
		Worksheet 14.1	TG – p81		
		Earth and space	TG – p81 LB – p117		
		Looking back at Unit 14	TG – p82 LB – p118		
2 weeks (7 hours)	15	The Sun	TG – p84 LB – p119		
		Our closest star	TG – p84 LB – p119		
		Exercise 1	TG – p84 LB – p120		
		Exercise 2	TG – p85 LB – p120		
		Worksheet 15.1	TG – p85		
		Moving around the Sun	TG – p85 LB – p121		
		Activity 1: Show how the Earth orbits the Sun	TG – p85 LB – p121		
		Our Solar System	TG – p86 LB – p122		
		Exercise 3	TG – p86 LB – p123		
		The Sun and life	TG – p87 LB – p123		
		Exercise 4	TG – p87 LB – p124		
		Looking back at Unit 15	TG – p87 LB – p124		

Term 4					
Time	Unit	Topic	Page	Recording	Reflection
2 weeks (7 hours)	16	The Moon	TG – p88 LB – p125		
		Features of the Moon	TG – p88 LB – p125		
		Exercise 1	TG – p88 LB – p125		
		Exercise 2	TG – p89 LB – p126		
		Activity 1: Make a model of the Moon	TG – p89 LB – p126		
		Phases of the Moon	TG – p89 LB – p126		
		Activity 2: Explaining the phases of the Moon	TG – p89 LB – p127		
		Activity 3: Observe and record the changing shape of the light on the Moon	TG – p90 LB – p128		
		Worksheet 16.1	TG – p91		
		Moon stories	TG – p91 LB – p130		
		Looking back at Unit 16	TG – p92 LB – p131		
2 weeks (7 hours)	17	Rocket systems	TG – p93 LB – p132		
		Rocket systems	TG – p93 LB – p132		
		A man on the Moon	TG – p94 LB – p132		
		Case study: Siyabulela Xuza	TG – p94 LB – p134		
		Modelling a rocket	TG – p94 LB – p135		
		Activity 1: Design and make your own rocket model	TG – p95 LB – p135		
		Exercise 1	TG – p95 LB – p137		
		Activity 2: Compare different balloon rockets Formal Assessment	TG – p96 LB – p138		
		Worksheet 17.1	TG – p97 LB – p140		
		Looking back at Unit 17	TG – p97 LB – p140		
End of year examination					