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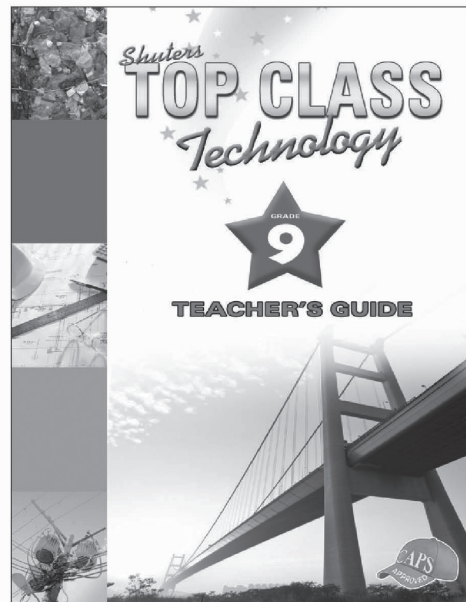
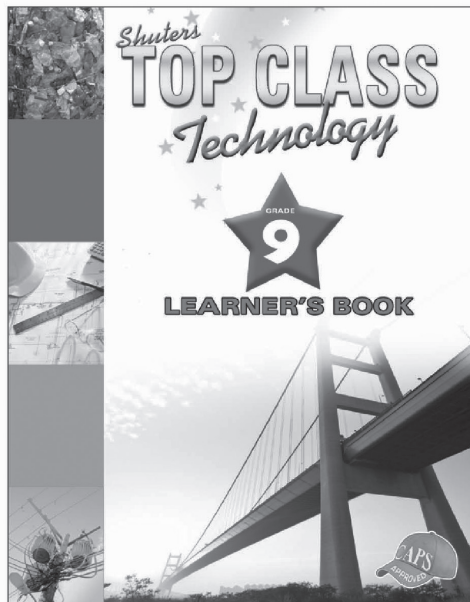
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TERM 1					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
	1	First angle orthographic projection <i>1 week (2 hours)</i>	TG 1-7 LB 1-10		
		First angle orthographic projection: three-dimensional objects on flat paper	TG 5 LB 4		
	2	Design skills <i>1 week (2 hours)</i>	TG 8-11 LB 11-16		
		More complex 3D objects drawn in orthographic projection with instruments	TG 8 LB 12		
		Design problem: flight of stairs and wheelchair ramp	TG 9 LB 13		
	3	Structures <i>1 week (2 hours)</i>	TG 12-28 LB 17-35		
		Forces can be static or dynamic, and loads can be even or uneven	TG 13 LB 21		
		Properties of various construction materials	TG 15 LB 26		
		Formal Assessment Task 1: Mini-PAT <i>6 weeks (12 hours)</i>	TG 17 LB 28		
		Identifying a problem within a given scenario			
		Formal Assessment Task: Test <i>½ week (1 hour)</i>	TG 25 LB 35		

TERM 2					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
	4	Pneumatic systems and hydraulic systems <i>1 week (2 hours)</i>	TG 28-32 LB 37-43		
		Revision of syringe mechanics using two equal sized syringes linked by a tube			
		Action research: two different sizes of syringes linked by a tube and filled with hydraulic fluid	TG 29 LB 38		
		Action research: Pascal's principle	TG 30 LB 40		
	5	The hydraulic press and hydraulic jack <i>1 week (2 hours)</i>	TG 32-35 LB 44-50		
		The hydraulic press (including simple calculations)	TG 33 LB 46		
		The hydraulic jack	TG 33 LB 44		
		Investigation: Design considerations – fit-for-purpose	TG 33 LB 46		
	6	Mechanical systems and control <i>1 week (2 hours)</i>	TG 36-40 LB 51-62		
		Action research: single wheel fixed pulley, single wheel moveable pulley, pulley block system	TG 37 LB 51		
		Investigate: ratchet and pawl, disc brake, bicycle brake and cleat	TG 38-39 LB 55-60		
	7	Gears <i>1 week (2 hours)</i>	TG 40-43 LB 63-70		
		Spur gears of equal size and unequal size counter-rotating	TG 41 LB 64		
		Spur gears using an idler to synchronise rotation	TG 41 LB 66		
		Bevel gears of equal size and unequal size	TG 42 LB 66		
		Rack-and-pinion gear system	TG 42 LB 68		
		Worm gear system	TG 42 LB 68		

TERM 2					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
	8	Evaluation skills and communication skills <i>1 week (2 hours)</i>	TG 43-45 LB 71-80		
		Evaluate various items using mechanisms found in the modern kitchen and workshop or garage	TG 43 LB 71		
		Artistic drawing: single vanishing point perspective	TG 44 LB 76		
		Formal Assessment Task 2: Mini-PAT <i>3½ weeks (7 hours)</i>	TG 46 LB 81		
		Problem solving/mechanical advantage			
		Formal Assessment Task: Test <i>½ week (1 hour)</i>	TG 53 LB 88		

TERM 3					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
	9	Electrical systems and control <i>1 week (2 hours)</i>	TG 55-59 LB 90-96		
		Revise 1 – component symbols	TG 56 LB 90		
		Revise 2 – simple circuits	TG 56 LB 94		
		Ohms law quantitatively	TG 57 LB 94		
		Action research: testing Ohm's Law practically	TG 57 LB 95		
	10	Resistor colour codes <i>1 week (2 hours)</i>	TG 59-63 LB 97-100		
		Resistor colour codes	TG 60 LB 97		
	11	Electronic components <i>2 weeks (4 hours)</i>	TG 63-67 LB 101-106		
		Switches	TG 64 LB 101		
		Diodes and LED	TG 64 LB 102		
		Transistors	TG 64 LB 103		
		LDR (Light Dependent Resistor)	TG 66 LB 104		

TERM 3					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
		• Thermistor	TG 66 LB 105		
		• Touch or moisture detector	TG 66 LB 105		
		• Capacitors	TG 66 LB 105		
	12	Simple electronic circuits <i>1 week (2 hours)</i>	TG 67-77 LB 107-113		
		• Simple electronic circuits: draw and assemble	TG 68 LB 107		
		Formal Assessment Task 3: Mini-PAT <i>4 weeks (8 hours)</i>	TG 72 LB 110		
		Innovation: Electronic systems and control			
		Formal Assessment Task: Test <i>½ week (1 hour)</i>	TG 76 LB 113		

TERM 4					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
	13	Preserving metals <i>1 week (2 hours)</i>	TG 78-81 LB 115-121		
		• Painting	TG 79 LB 116		
		• Galvanising	TG 79 LB 118		
		• Electroplating	TG 80 LB 119		
	14	Preserving food <i>1 week (2 hours)</i>	TG 81-85 LB 122-128		
		• Storing grain	TG 82 LB 123		
		• Pickling	TG 83 LB 126		
		• Drying and/or salting	TG 83-84 LB 126-127		
	15	Types of plastics and their uses <i>1 week (2 hours)</i>	TG 85-87 LB 129-134		
		• Types of plastics and their uses	TG 86 LB 129		
		• Investigation: identification of plastic and sorting for recycling	TG 86 LB 131		

TERM 4					
WEEK	UNIT	TOPIC	PAGE	RECORDING	REFLECTION
		Properties of plastic	TG 87 LB 131		
		Reduce, reuse and recycle	TG 87 LB 132		
	16	Remanufacturing waste plastic into pellets for re-use <i>1 week (2 hours)</i>	TG 88-90 LB 135-138		
		Case study: Remanufacturing waste plastic into pellets for reuse	TG 88 LB 135		
		Systems diagram describing a plastics recycling project	TG 89 LB 137		
		Case study: Moulding recycled plastic pellets into products	TG 89 LB 137		
		Formal Assessment Task 4: Mini-PAT <i>3 weeks (6 hours)</i>	TG 91 LB 139		
		Innovation: Electronic systems and control			
		Formal Assessment Task: End-of-year examination <i>1 week (2 hours)</i>	TG 94 LB 142		

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