Year 7 Sources, origins and properties of polymers APPROXIMATE DURATION (Lesso Sources, origins and properties of polymers ABOUTCES, origins and properties of polymers ABOUTCES, origins and properties of polymers Lettronic Components 1 Electronic Systems Using Circuit Wizard Manufacturing a wooden housing 2		2	3	4 5	5 6	7	8	1 2	3	4 5	6	7	1	2	3 4	5	5 1	2 3	4	5 6	1 2	3	4 5	1	2 3	4	5 6	
Year 7 Year 7 Sources, origins and properties of polymers Amunifacturing processes for polymers Electronic Systems Summary OF KNOWLEDGE ACQUISITION DURATION (Lesso DURAT	ons)	2	3	4 !	5 6	7	8	1 2	3	4 5	6	7	1	2	3 4	5	5 1	2 3	4	5 6	1 2	3	4 5	i 1	2 3	4	5 6	
1	1	2	3	4 5	5 6	7	8	1 2	3	4 5	6	7	1	2	3 4	5	5 1	2 3	4	5 6	1 2	3	4 5	1	2 3	4	5 6	
1																												7
Manufacturing processes for polymers 1																												
3 Electronic Components 1																												
2																												
5 Manufacturing a wooden housing 2																												
5 Manufacturing a wooden housing 2																												
6 Soldering and populating a circuit board 5																												
8 Writing an Evaluation 1																												
Types of movement 1																												
Cams and complex cam systems 1																												
11 Mechanical Systems Levers and linkages 3																												
12 Pulleys 1																												
13 Gears and gear trains 2																												
14 Famous and historical buildings 1																												
15 Design briefs and client profiling 1																												
16 Where do ideas come from? Researching and analysing the work of others. 2																												
17 Architecture Writiting a specification 1																												
18 Drawing to scale site and floor plans. 2																												
19 Drawing, rendering and annotating elevations 2																												
20 Constructing an architectural model 6																												
Year 8 36																												
Task analysis and designing to meet a design brief 1																												
2 Key features and artists of the Art Deco design movement. 2																												
3 Electronic Systems Using 2D design 3																												
4 PCB Assembly, Testing, Fault Finding and correction. 5																												
5 Construct a wooden jointed box 2																												
6 Create a basic manufacturing specification 3																						$oldsymbol{\perp}$				$\perp \perp \downarrow$	\perp	$oldsymbol{\perp}$
7 Mechanical systems 1																												Ш
8 Ergonomics 1						Ш													$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}}$			\perp				$\perp \perp$	\perp	╨
9 Mechanical Systems Properties of materials 1																			$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}}$			\perp				$\perp \perp$	\perp	╨
10 Manufacturing processes for timber 1																			\perp			\perp				$oldsymbol{oldsymbol{\sqcup}}$		$\perp \!\!\! \perp \!\!\! \perp$
Documenting a manufacturing process with QA, QC and H&S 5		Ш	[\perp					\perp	╨
Testing and Evaluating a final product 1		Ш				Ш																\perp					\perp	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}}}$
Types of structures 1																												Ш
14 How forces act upon structures and how to reinforce them 1		Ш				Ш																\perp				$\perp \perp \mid$		Ш
16 Architecture Ecological architecture 1																										Ш		Ш
17 Landscape architecture 1																										Ш		$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}$
18 Looking at the work of Zaha Hadid 1																												
19 Designing a communal building and surrounding area 5																												
Year 9 36																												
1 Writing a design brief																												

lsometric drawing, presentation skills and advanced rendering skills Designing in a modernist style The modelling process as a part of iterative design CAD circuit wizard and Electronics theory PCB Assembly, Testing, Fault Finding and programming Assembly of case and final assembly of product. Producing a manufacturing specification 3 Producing a manufacturing specification 3	
The modelling process as a part of iterative design 5 Electronic Systems CAD circuit wizard and Electronics theory PCB Assembly, Testing, Fault Finding and programming Assembly of case and final assembly of product. 3 Assembly of case and final assembly of product. 3	
Electronic Systems CAD circuit wizard and Electronics theory 2 PCB Assembly, Testing, Fault Finding and programming 6 Assembly of case and final assembly of product. 3	
6 PCB Assembly, Testing, Fault Finding and programming 6 Assembly of case and final assembly of product. 3	
Assembly of case and final assembly of product.	
Producing a manufacturing specification 3	
g Testing and Evaluating a final product 2	
Learning about transforming the use of spaces for social and environmental benefits.	
Industrial Project Producing proposal drawings. 3	
Producing architectural models. 4	
Presentation of proposal to potential client.	
Year 10 DESIGN AND TECHNOLOGY GCSE 36 36 36	
1 Robotics, automation and production in industry. 1	
2 Production techniques and systems- automation. 1	
3 Enterprise, market pull and technology push. 1	
4 People society and culture. 1	
New and Emerging Sustainability and the environment.	
Technologies Critical evaluation of new and emerging technologies- planned obsolescence.	
7 Design for maintenance.	
8 Ethics. 1	
9 The environment. 1	
10 Energy Generation Renewable and non-renewable resources. 1	
and Storage Nuclear energy, energy storage, kinetic pumped storage systems and alkaline and rechargeable batteries.	
	
12 Systems Approach to Input, process and output components 1 13 Designing Systems diagrams 1	
10	
Mechanical Devices Types of motion 1 Levers linkages and rotary systems 1	
10 Section, immigration rotating displacement.	
16 Modern materials 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
17 Developments in	
18 Composite materials 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+++++++++
19 Technical Textiles 1 I I I I I I I I I I I I I I I I I I	-
20 Material properties definitions 1	+++++++++
21 Materials and their working properties and categorisation of timbers 1	++++++++
22 Properties and categorisation of polymers 1	+++++++++
23 Properties and categorisation of metals 1	
24 Analysis of a given context 2	
25 Development of a design brief 1	
26 Questionnaire, survey and interview design 2	
27 Client profiling 2	
28 Research and analysis of existing products 3	
29 Research and analysis of influential designers and design movements. 3	
30 Writing a justified specification 3	
31 Generating design ideas-sketching and CAD 6	

				1 1	- 1	1	1 1			1 1		1 1		-			1 1	- 1	I I	-		1 1		1 1	$\overline{}$	T = T		$\overline{}$
32	Mini NEA	Generating design ideas- starting with the properties of a material	3	₩		-	\vdash				_						+					1		1	\vdash	+	$-\!\!+\!\!\!-\!\!\!\!+$	Н
33	Assignment	Generating design ideas- inspired by an iconic design	3																						\vdash	\sqcup	\perp	ш
34		Generating design ideas-thumbnail sketches	3																						$oldsymbol{oldsymbol{\sqcup}}$	$oxed{oxed}$		ш
35		Generating design ideas-card modelling	10																									ш
36		Generating design ideas- from a theme	3																						1			1
37		Idea Development	6																									ī
38		Working Drawings	6																						ΙĪ			
20		Manufacturing Specification	12							1 1	1																\neg	П
39						+					-																	\Box
40		Manufacture	20	\vdash		+-		_		+ +	-					_												-1
41		Planning and carrying out Testing	3	++		-	\vdash			+		+-1		++			+	_	1	_		++		1	$\vdash\vdash$	╁┼	-	
42		Evaluation	3																						_	\vdash		
Year 10	SYSTEMS AND CON	NTROL FOR ENGINEERING GCSE	117																							\blacksquare		
1		Principles, units and measurement	2																						\vdash	$\perp \perp$		Ш
2		Values for voltage, current, resistance and power by calculation	4																						டட	$oxed{oxed}$		Ш
3		Circuit components, symbols and diagrams, i.e. Interpretation of simple circuit schematic diagrams	12																									
4	Unit R113: Electronic	Series and parallel circuits																							П			П
	i illicipies (LO1)	The operation of a potential divider								1 1												1 1			\sqcap	T	\dashv	П
		Types of power sources available				+																1 1			ПT	$\dagger \dagger$	$\dashv \dashv$	
ь						+				+ +	-											1 1			\vdash	++	\dashv	-
7		Reasons for selection of suitable power sources.				+				+ +	-			+								+			\vdash	++	+	Н
8		Function and application of voltage regulators in power supply circuits.				-		_		+ +				++		_	+					+			\vdash	++	+	\vdash
9		Appropriate cable types for specific applications giving reasons for their use.																							Ш			Ш
10		Identification and application of resistors used in electronic circuits																										
11		Identification and application of capacitors used in electronic circuits, i.e. types of capacitor																							Ш			
12		Application and function of resistor/capacitor circuit and RC time constant												Ш											$\perp \!\!\! \perp$			Ш
13	Unit R113: Electronic	Identification, application and function of switches.																							$\vdash \vdash$	$\perp \perp$		ш
14	Principles (LO2)	Application, function and benefits of circuit protection																							Щ			
15		Systems approach																							Щ			Ш
16		Identification, function and application of input devices.		Ш		\perp					\perp														لل			
17		Identification, function and application of process devices																							ıΤ			ı T
18		Identification, function and application of output devices.																							П			П
19		Application and function of DC electric motor control.																								\Box	\Box	П
20		Identification of smart and modern materials.				1	TT			+	1			TT								\dagger			\sqcap	†	\dashv	\Box
- 20		Techniques to identify potential electrical hazards and the reasons for		+		+	++	\dashv		+	-	+		++	+		+	-	+		+	++		+	\vdash	++	+	П
21		their use Fault-finding procedures		++	+	+	++	+	\vdash	++	\dashv	+		++	+	-	+	+	++	+	+	++	+	\vdash	\vdash	++	+	\vdash
22				╁		-	\vdash		$\vdash\vdash$	++		+		╁┼	+		+		\vdash			++	-	++	\vdash	++	$+\!\!\!+\!\!\!\!+$	Н
23		Appropriate test equipment		\vdash	_	-	$\vdash \vdash$		\vdash	++		+		\vdash	+		+		\vdash	_		\vdash	-	\vdash	\vdash	++	$+\!\!\!+\!\!\!\!+$	\vdash
24		Discrete, through hole and surface mount components.		\sqcup			$\sqcup \downarrow$		lacksquare	$\bot \bot$		\perp		\sqcup			\perp		\sqcup		_	\sqcup			\vdash	\sqcup	$\perp \!\!\!\!\perp \!\!\!\!\perp$	\vdash
25	Principles (LO3)	Benefits and drawbacks to the manufacturer of using surface mount components and using alternatives.												Ш	\perp		\perp				\perp				igspace	\sqcup		Ш
26		The manufacturing processes used within commercial circuit construction.			\perp						\perp			Ш							\perp				igspace		$oxedsymbol{oxedsymbol{oxedsymbol{eta}}}$	Ш
27		Quality assurance methods used during commercial printed circuit board (PCB) production																							ot			
Year 11	DESIGN AND TECH	NOLOGY GCSE	18																									
1		Analysis of a given context	1																									
2		Development of a design brief	1																									
		percopinent of a design offer	1						 																			

						1																					
3		Questionnaire, survey and interview design	1				\sqcup	 								 _						Ш					
4	and investigating	Client profiling	1																								
5	design posibilities (10 marks)	Research and analysis of existing products	2																								
6		Research and analysis of influential designers and design movements.	2																								
		Research and analysis of inhibiting designers and design movements.	2																								
7		anthropometrics	1																								
8	Section B- Producing a design brief and specification (10 marks)	Writing a justified specification and design brief	6																								
9		Generating design ideas- sketching and CAD	3																								
10		Generating design ideas- starting with the properties of a material	3																								
11	Section C-	Generating design ideas- inspired by an iconic design	3																								
12	Generating design ideas (20 marks)	Generating design ideas-thumbnail sketches	2																								
	ideas (20 marks)		3					+						_		-		\dagger	H	_	+						
13		Generating design ideas-card modelling	3	+	$\vdash \vdash$	+	H	 \dashv			+	+	H	+	H	 +	+	\vdash		+	+				H	+	
14		Generating design ideas- from a theme	3	-				 _		H			Н	-	\vdash	-		-	\vdash		+				\vdash		
		Idea Development	9	-	$\vdash \vdash$		\vdash	 	-	\vdash				_	\vdash	-		₩	$ar{}$		+		4			-	
	Developing design ideas	Working Drawings	6																								
	ideas	Manufacturing specification	6																								
	Section E- Realising design ideas	Manufacture	15										П														
	Section E Analysing	Planning and carrying out Testing	6																								
	and Evaluating																										
V 44	CYCTERAS AND COR	Evaluation	6																								
Year 11	SYSTEMS AND CON	Evaluation ITROL FOR ENGINEERING GCSE	6 81																								
Year 11			81																								
Year 11	Unit R114: Simulate, construct abd test		6 81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits		6 81																								
Year 11	Unit R114: Simulate, construct abd test		81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test	ITROL FOR ENGINEERING GCSE	6 81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits	Safe use of manually-operated hand tools	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s)	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction of PCBs	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test and test electronic circuits (LO2)	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction of PCBs Construction techniques for Joining external components Techniques for testing electronic circuits	81																								
Year 11	Unit R114: Simulate, construct add test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, UO2)	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction of PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits electronic circuits circuits (LO2)	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction of PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO3) Unit R115:	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction for PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new products	81																								
Year 11	Unit R114: Simulate, construct add test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO3) Unit R115: Engineering application of	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction of PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO3) Unit R115: Engineering	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction of PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new products How computers are used within engineering industries to manufacture	81																								
Year 11	Unit R114: Simulate, construct add test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO3) Unit R115: Engineering application of	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction for PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new products How computers are used within engineering industries to manufacture products, monitor production and manage process control Features of computer controlled automation How computers are used within engineering system maintenance	81																								
Year 11	Unit R114: Simulate, construct abd test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO3) Unit R115: Engineering application of computers (LO1) Unit R115: Engineering application of computers (LO1)	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction for PCBs Construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new products How computers are used within engineering industries to manufacture products, monitor production and manage process control Features of computer controlled automation	81																								
Year 11	Unit R114: Simulate, construct add test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R115: Engineering application of computers (LO1) Unit R115: Engineering application of computers (LO2) Unit R115: Unit R115: Engineering application of computers (LO2)	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new products How computers are used within engineering industries to manufacture products, monitor production and manage process control Features of computer controlled automation How computers are used within engineering system maintenance The use of computers to communicate and exchange data during production operations	6 81																								
Year 11	Unit R114: Simulate, construct add test electronic circuits (LO1) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO2) Unit R114: Simulate, construct and test electronic circuits (LO3) Unit R115: Engineering application of computers (LO1) Unit R115: Engineering application of computers (LO2) Unity R115: Engineering application of computers (LO2)	Safe use of manually-operated hand tools Circuit construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction following circuit diagram(s) Safe construction techniques for joining external components Techniques for testing electronic circuits Appropriate testing and fault-finding methods Use of physical test equipment How computers are used within engineering industries to design new products How computers are used within engineering industries to manufacture products, monitor production and manage process control Features of computer controlled automation How computers are used within engineering system maintenance The use of computers to communicate and exchange data during	6 81																								

The use of hand-held computer devices in manufacturing and maintenance systems															
The design process															
Design movements and designers															
Materials and processes															
Subject specific skill															
Theoretical															