



AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA | DEPARTMENT OF EDUCATION AND SCIENCE

**Planning and Building Unit  
Tullamore, Co. Offaly.**

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**Room: Technology**

**Technology -- TECH  
Equipment List and Specifications**

**Standards, Specifications & Conditions**

**All equipment/machinery/tools shall be durable and safe for school use. Equipment wholly or partly funded from public funds is subject to Inspection by officers from the Department of Education and Science.**

**It is essential that tenders for equipment for school use shall:**

- i) Comply fully with the specifications and be durable and safe for school use.**
- ii) Comply fully with the standards as detailed and shall comply fully with European (EN) standards, both established and developing.**
- iii) Comply with European electrical standards and CE marking as appropriate.**
- iv) Be accompanied by documentation of sufficient detail for full evaluation.**
- v) Include the completed and signed certificate of compliance.**

**Award of a contract is conditional on the production of a current tax clearance certificate.**

**Failure to comply with the above may result in the tender being deemed null and void.**

<b>Section 1: General Workshop Equipment/Tools</b>		
<b>Code Quantity</b>	<b>Descriptions &amp; Specifications:</b>	<b>Cost €</b>
<b>Craft: Wood</b>		
TECH/101 12	Bench plane, smooth, 50 mm cutter, adjustable for depth of cut/alignment. Manufacturer: Catalogue No:	
TECH/102 12	Carpenters mallet, c.115 mm Manufacturer: Catalogue No:	
TECH/103 12	Tenon saw, c.250 mm – 300 mm, stiffening rib. Manufacturer: Catalogue No:	
TECH/104 12	Bench hook. Manufacturer: Catalogue No:	
TECH/105 12	Warrington hammer, weight: c.340 g. Manufacturer: Catalogue No:	
TECH/106 12	Marking gauge – steel pin, thumbscrews Manufacturer: Catalogue No:	
TECH/107 12	Woodwork try-square, blade length: 150 mm min. Manufacturer: Catalogue No:	
TECH/108 8	Coping saw, complete with pack of blades. Manufacturer: Catalogue No:	
TECH/109 4	Sliding bevel (woodwork), wooden handle, hardened steel blade, locking mechanism. Manufacturer: Catalogue No:	
TECH/110 4	Measuring tape, c.3 m Manufacturer: Catalogue No:	
TECH/111 4 4 4 4	Chisels (bevel edge): 6 mm 10 mm 18 mm 25 mm Manufacturer: Catalogue No:	
TECH/112 4 4 4 4	Chisels (mortise): 6 mm 10 mm 18 mm 25 mm Manufacturer: Catalogue No:	
TECH/113 2	Bit brace, c.250 mm. Manufacturer: Catalogue No:	
TECH/114 2	Set of auger bits, c.6mm – c.25mm to suit TECH/112. Manufacturer: Catalogue No:	
TECH/115 2	Set of flat bits, c.6mm – c.25mm to suit TECH/112. Manufacturer: Catalogue No:	
TECH/116 2	Claw hammer, tempered/hardened head, wood/metal handle, 500 g (1 lb). Manufacturer: Catalogue No:	
TECH/117 2	Carpenter's pincers, c.180 mm. Manufacturer: Catalogue No:	
TECH/118 2	Mallet, tinsmans type, c.45 mm diameter head. Manufacturer: Catalogue No:	
TECH/119 2	Mitre/corner clamp. Manufacturer: Catalogue No:	

TECH/120 1	Mitre Saw. Manufacturer: _____ Catalogue No: _____	
TECH/121 1	Set of c.5 hole-saws, complete with arbor, sizes from c.20 mm to c.60 mm diameter. Manufacturer: _____ Catalogue No: _____	
TECH/122 12 12 4 4 4	Files, smooth, 250 mm: Half round Hand Round Square Three square Manufacturer: _____ Catalogue No: _____	
TECH/123 12 12 4 4 4	Files, bastard, 250 mm: Half round Hand Round Square Three square Manufacturer: _____ Catalogue No: _____	
TECH/124 72	File handle for 250 mm file, plastic <b>or</b> wooden. Manufacturer: _____ Catalogue No: _____	
TECH/125 4	Set of c.6 needle files. Manufacturer: _____ Catalogue No: _____	
TECH/126 24	Abra file, 250 mm, medium cut. Manufacturer: _____ Catalogue No: _____	
TECH/127 6	Pair of abra file spring clips Manufacturer: _____ Catalogue No: _____	
TECH/128 2	Engineers inside spring caliper, c.150 mm. Manufacturer: _____ Catalogue No: _____	
TECH/129 2	Engineers outside spring caliper, c.150 mm. Manufacturer: _____ Catalogue No: _____	
TECH/130 2	Precision vernier caliper, capacity c.150 mm, dial reading 0.02 mm. Manufacturer: _____ Catalogue No: _____	
TECH/131 2	Precision vernier caliper, capacity c.150 mm, digital reading. Manufacturer: _____ Catalogue No: _____	
TECH/132 12	Engineer's spring divider, c.150 mm. Manufacturer: _____ Catalogue No: _____	
TECH/133 12	Engineer's centre punch, c.100 mm. Manufacturer: _____ Catalogue No: _____	
TECH/134 24	Engineer's fully integrated scribe, double ended, c.175 mm. Manufacturer: _____ Catalogue No: _____	
TECH/135 12	Engineer's steel square, blade c.120 mm. Manufacturer: _____ Catalogue No: _____	
TECH/136 24	Stainless steel rule, pearl chrome finish, 300 mm long, graduated in mm. Manufacturer: _____ Catalogue No: _____	
TECH/137 4	Universal bevel, (metalwork), c.150 mm. Manufacturer: _____ Catalogue No: _____	
TECH/138 2	Set of stocks (10), dies (10), taps and wrenches, ISO thread form, range from 3 mm to 12 mm. Circular die pattern. Set complete in strong case. Manufacturer: _____ Catalogue No: _____	
TECH/139 6	File card (wooden base type), c.100 mm x c.50 mm. Manufacturer: _____ Catalogue No: _____	
TECH/140 1	Tinmans folding bars, c.250 mm Manufacturer: _____ Catalogue No: _____	

<b>Code Quantity</b>	<b>Descriptions &amp; Specifications:</b>	<b>Cost €</b>
TECH/141 2	Pop riveting kit, complete with pliers and assorted rivets, industrial grade. Manufacturer: Catalogue No:	
TECH/142 6	Engineers ball-pein hammer, weight: 500 g (1 lb). Manufacturer: Catalogue No:	
TECH/143 8	Tinmans snips, straight, c.200 mm. Manufacturer: Catalogue No:	
TECH/144 4	Tinmans snips, curved, c.200 mm. Manufacturer: Catalogue No:	
TECH/145 12	Hacksaw frame, 300 mm, adjustable <b>or</b> fixed type. Manufacturer: Catalogue No:	
TECH/146 100	Hacksaw blade, 300 mm, 24 T.P.I. Manufacturer: Catalogue No:	
TECH/147 12	Junior hacksaw frame. Manufacturer: Catalogue No:	
TECH/148 12	Junior hacksaw blade pack. Manufacturer: Catalogue No:	
<b>Craft: General Tools</b>		
TECH/149 2	Glass cutter, hand held, single <b>or</b> multi-wheel type. Manufacturer: Catalogue No:	
TECH/150 1	Hand held engraver, variable speed, 230 V; 50 Hz. Manufacturer: Catalogue No:	
TECH/151 2	Set of letter stamps, 5 mm, set of 27, Grade A. Manufacturer: Catalogue No:	
TECH/152 2	Set of 12 combination spanners, e.g., 8 mm – 19 mm, chrome finish. Manufacturer: Catalogue No:	
TECH/153 2	Set of drills, HSS, parallel shank, c.1.0 to c.13 mm x 0.5 mm. Set in case. Manufacturer: Catalogue No:	
TECH/154 1	Set of counter sink drills, HSS, 6 mm, 8 mm and 10 mm. Parallel shank 90°. Manufacturer: Catalogue No:	
TECH/155 2	Leather sandbag, c.250 mm diameter. Manufacturer: Catalogue No:	
TECH/156 2	Boxwood bossing mallet, c.50 mm diameter head. Manufacturer: Catalogue No:	
TECH/157 2	Vice grips, 250 mm, lever release. Manufacturer: Catalogue No:	
TECH/158 2	Sheet metal vice grip, 250 mm, lever release. Manufacturer: Catalogue No:	
TECH/159 4	Combination pliers, c.200 mm. Manufacturer: Catalogue No:	
TECH/160 4	Long-nose pliers, c.200 mm. Manufacturer: Catalogue No:	
TECH/161 6	Set of assorted flat and Philips head screwdrivers with plastic handles. Manufacturer: Catalogue No:	
TECH/162 6	Nail punch, c.150 mm Manufacturer: Catalogue No:	
TECH/163 12	Craft knife Manufacturer: Catalogue No:	
TECH/164 2	Set of Allen keys, e.g., 3 mm - 10 mm. Manufacturer: Catalogue No:	

<b>Code Quantity</b>	<b>Descriptions &amp; Specifications:</b>	<b>Cost €</b>
TECH/165 1	Combination oilstone, c.200 mm, coarse and fine faces. Manufacturer: Catalogue No:	
TECH/166 1	Paper guillotine, capable of cutting up to A3 size paper. Manufacturer: Catalogue No:	
TECH/167 6 6 4	G-clamps: 100 mm 150 mm 200 mm Manufacturer: Catalogue No:	
TECH/168 2	Cordless drill, min. 14V, complete with case and spare battery. Manufacturer: Catalogue No:	
TECH/169 1	Portable electric router, complete with tool case, 110 V, 50 Hz, c.1800 W motor. Manufacturer: Catalogue No:	
TECH/170 1	Portable electric orbital sander, complete with tool case, 110 V, 50 Hz, c.600 W motor. Manufacturer: Catalogue No:	
TECH/171 1	Portable electric jig saw, complete with tool case, 110 V, 50 Hz, c.700 W motor. Manufacturer: Catalogue No:	
TECH/172 2	Glue gun, complete with box (c.1 kg) of glue sticks, 230 V, 50 Hz. Manufacturer: Catalogue No:	
TECH/173 2	Quarter litre (250 cm <sup>3</sup> ) oilcan. Manufacturer: Catalogue No:	
TECH/174 1	Single phase, double wound, transformer with earth metallic screen between windings. Mounted in robust carrying case. Input 230 V, 50 Hz. Output 110 V in 2 x 16 A sockets to CEE 17. Rating: 2 kVA. Unit to comply with Safety, Health and Welfare at Work (General Application) Regulations (1993). Manufacturer: Catalogue No:	

<b>Section 2: Machine Tools</b>		
<p><b>Notes:</b> Details of warranty for each item should be supplied and accompanied by a statement of service support and likely applicable charges                      Equipment to be commissioned and training provided where appropriate.</p>		
Code Quantity	Descriptions & Specifications:	Cost €
TECH/201 1	Vertical bandsaw, floor standing, 2/variable speed, table size: c.350-450 mm square, table tilt facility, cutting height: c.150-300 mm, cutting width: c.300-400 mm, blade guard fitted, 3 phase / 380 V. Manufacturer: _____ Catalogue No: _____	
TECH/202 1	Vacuum forming machine, bench top model, cut sheet size c.250 x c.450 mm. Electrics – 230 V, 50 Hz. Manufacturer: _____ Catalogue No: _____	
TECH/203 1	Vacuum form cutting machine, bench mounted type, complete with adjustable tilting table, guide fence and dust extraction outlet facility, Electrics: 230 V, 50 Hz. Manufacturer: _____ Catalogue No: _____	
TECH/204 1	Belt sander, c.150 mm wide belt, bench or floor mounted. Fitted with dust extraction facility in accordance with Circular Letter M45/01. Electrics: 230V, 50Hz. Manufacturer: _____ Catalogue No: _____	
TECH/205 2	Scroll saw, bench mounted type, c.500 mm frame to blade, 2/variable speed, table tilt facility, blade guard attachment, motor: c.120-200 W, 230 V. Manufacturer: _____ Catalogue No: _____	
TECH/206 2	Drilling machine, pedestal <b>OR</b> bench mounted model, belt drive type, complete with fitted drill chuck (capacity: c.16 mm), key and chuck guard. Electrics: 1/1.5 kW, 230 V, 50 Hz. Manufacturer: _____ Catalogue No: _____	
TECH/207 2	Drill-press vice (approx. 100 mm jaws, prismatic type) complete with appropriate hold down clamps. Manufacturer: _____ Catalogue No: _____	
TECH/208 2	Thermoplastic sheet strip heater, suitable for bending of thermo-plastic sheets up to c.6 mm thick and up to c.500 mm wide. Complete with guarded hot wire for safety. Electrics: 110/230 V, 50 Hz. Manufacturer: _____ Catalogue No: _____	
TECH/209 1	Hot wire sculptor/cutter Electrics: 110/230 V, 50 Hz, voltage through the wire c.8 V. Manufacturer: _____ Catalogue No: _____	
TECH/210 1	Box and Pan folding machine – hand operated. Folding capacity c.1.6 mm (16 swg) min. Machine to be supplied complete with stand and range of clamping bars. Manufacturer: _____ Catalogue No: _____	
TECH/211 1	Guillotine-Notcher, bench mounted type, table size: c.500 mm x 400 mm, max. capacity in ferrous metals: c.1.5 mm, max. capacity in non-ferrous metals: c.3 mm. Manufacturer: _____ Catalogue No: _____	
TECH/212 1	Bench grinder, complete with eye shields and tool rests. Wheels – diameter c.200 mm, coarse and medium grit type, 230 V, 50 Hz. Manufacturer: _____ Catalogue No: _____	
TECH/213 1	Plastic dip coating unit. Minimum capacity 50 litres. Supplied complete with air blower and air pressure regulator together with 20 kg packs of two different colours of polyethylene powder. Electrics: 230 V, 50 Hz. Manufacturer: _____ Catalogue No: _____	

TECH/214 1	Enamelling kiln, max. temperature, c.1000 °C. Overall dimensions c.600 mm x c.400 mm x c.400 mm. Complete with start-up enamelling kit. Manufacturer: Catalogue No:	
TECH/215A 1	Centre lathe (metal cutting), <i>bench mounted type</i> , swing over bed c.200 mm, swing over cross-slide c.100 mm, distance between centres c.500 mm, spindle speed c.100 – 2000 rpm, motor c.375 W (0.5 HP).  The following total number of accessories should be supplied with the lathe and fitted. a) Three-jaw self-centering chuck. b) Live centre. c) Drill chuck, c.10 mm capacity, complete with key and arbor - chuck to suit tailstock. d) Appropriate set of HSS, <b>OR</b> carbide cutting tools.	
TECH/215B 1	<b>OR</b>	
	Wood turning lathe, bench or floor mounted, distance between centres c.1000 mm, complete with appropriate set of turning tools. Electrics: 230 V, 50 Hz. Manufacturer: Catalogue No:	
TECH/216- 220	Moved	0.00
TECH/221 1	Portable CNC design/vinyl cutter, with plotting area to 250 mm x 1000 mm to include appropriate computer operating software. 2 no. 1 metre vinyl rolls to be supplied. Manufacturer: Catalogue No:	

<p><b>TECH/222</b> (A) 1</p> <p>TECH/222B</p>	<p><b>ONE ONLY TO BE PROVIDED PER SCHOOL.</b> <b>SEE ALSO ENGM/212.</b></p> <p>Bench mounted computer numerically controlled (CNC) slant bed educational training lathe: max. machining diameter c.55 mm, travel in x-axis: c.50 mm, travel in z-axis: c.250 mm, typical spindle speed range: c.100-4000 rpm. Electric supply: 110/230 V, 1 pH, 50/60 Hz.</p> <p>Machine to be compatible with standard computer hardware, operating system/CADCAM software, fully enclosed working area, operator's handbook.</p> <p>Appropriate tooling package to cater for standard lathe operations to be included.</p> <p><b>Note:</b> Details of specification of computer required to operate to be furnished to school.</p> <table border="1" data-bbox="407 762 1219 793"> <tr> <td>Manufacturer:</td> <td>Catalogue No:</td> </tr> </table> <p>Deleted</p>	Manufacturer:	Catalogue No:	
Manufacturer:	Catalogue No:			
<p><b>TECH/223</b> 1</p>	<p>CNC 3-axis Training Router. Bench top with enclosed work area. Operating footprint to be c.600 mm x 400 mm in X-Y plane; capacity to machine a minimum of 110 mm of light materials such as light alloys, wood and plastic using multiple passes. Spindle speed 10-25 kpm. Feed Rate c.5000 mm/min, 3D profiling c. 45000 mm/min. Spindle Motor c. 1.3 kw. Connection for dust extraction for dust and shavings from cutting area. Machine to be supplied complete with operating system, 2D &amp; 3D controlling software compatible with file format for PCB production. Fourth axis attachment. Appropriate tooling package and accessories for standard operating to be included. 230 V, 50 Hz supply.</p> <p><b>Note:</b> Details of specification of computer required to operate to be furnished to school.</p> <table border="1" data-bbox="407 1220 1219 1247"> <tr> <td>Manufacturer:</td> <td>Catalogue No:</td> </tr> </table>	Manufacturer:	Catalogue No:	
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<b>Section 3: Electronics and Systems &amp; Control Technology</b>		
<b>Code Quantity</b>	<b>Descriptions &amp; Specifications:</b>	<b>Cost €</b>
TECH/301 1	Educational electronics teaching kit capable of allowing for the demonstration of a range (c.20) simple electronic circuits/systems such as fire alarm and motor controllers. Kit to be accompanied with associated guides/texts, and suitable for use with a class group of students. Manufacturer: Catalogue No:	
TECH/302 24	Electric soldering iron, extra fine tip for electronics, complete with stand and sponge, c.15-30 W, 220-240 V Manufacturer: Catalogue No:	
TECH/303 4	Temperature controlled electric soldering iron/station, complete with stand and cleaning sponge, c.50 W, 220-240 V Manufacturer: Catalogue No:	
TECH/304 25	Miniature electronics tool kit, to contain tools such as pliers, snips, wire strippers and screwdrivers, in appropriate case. Manufacturer: Catalogue No:	
TECH/305 6	Helping-hands for soldering work Manufacturer: Catalogue No:	
TECH/306 6	LT variable voltage power supply unit, overload protection. Performance (approx.): DC – 0-25 V (no load) and 24V (8 A load) AC – 0-25 V (no load) and 24V (8 A load) Manufacturer: Catalogue No:	
TECH/307 2	De-soldering pump, portable type. Manufacturer: Catalogue No:	
TECH/308 12	Digital multi-meter, auto-ranging frequency measurement, capacitance measurement and transistor test. Voltage a.c and d.c – c.5 ranges each from 200 mV x 100 µV to 600 V x 1 V Current a.c and d.c – c.4 ranges each from 2 mA x 1 µA to 10 x 10 mA Resistance – c.6 ranges from 200 R x 0.01 R to 20 M x 10 K Capacitance – c.5 ranges from 2000 pF x 1 pf to 20 µF 10 nF Frequency – c.5 ranges from 2 kHz x 1 Hz to 20 MHz x 100 kHz Diode test Continuity test Transistor test NPN and PNP Manufacturer: Catalogue No:	
TECH/309 2 2 2	Single core wire, diameter, c.1.2 mm x c.100 m length, to include: Black reels Red reels Blue reels Manufacturer: Catalogue No:	
TECH/310 2 2 2	Stranded wire, diameter, c.1.4 mm x c.100 m length, to include: Black reels Red reels Blue reels Manufacturer: Catalogue No:	
TECH/311 1	Extra flexible stranded wire, diameter, c.2.8 mm x c.100 m length, to include: Red; Black Manufacturer: Catalogue No:	
TECH/312 1	Ribbon cable reel of wire, e.g., 20-way rainbow, c.25 m length. Manufacturer: Catalogue No:	

<b>Code Quantity</b>	<b>Descriptions &amp; Specifications</b>	<b>Cost €</b>
TECH/313 <b>50</b>	Cable Mounting Sockets 20 way Manufacturer: Catalogue No:	
TECH/314 <b>10</b>	Pack of c.10 crocodile clip leads. Manufacturer: Catalogue No:	
TECH/315 <b>100</b> <b>100</b> <b>100</b> <b>100</b>	Pack/kit of 4 mm plugs and sockets, to include: 4mm Plug Red 4mm Socket Red 4mm Plug Black 4mm Socket Black Manufacturer: Catalogue No:	
TECH/316 <b>40</b> <b>40</b> <b>40</b> <b>40</b> <b>40</b> <b>40</b> <b>300</b>	Pack/kit of battery holders and clips, to include: 2XAA 4XAA 2XC 4XC 2XD 4XD PP3 battery snaps Manufacturer: Catalogue No:	
TECH/317 <b>5</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b>	Pack/kit of micro-miniature electrolytic capacitors, to include, Variety capacitor kit suitable for simple electronic circuit building 100µF 16v 220µF 16v 470µF 16v 1000µF 16v 2200µF Manufacturer: Catalogue No:	
TECH/318 <b>5</b> <b>2000</b> <b>1000</b> <b>2000</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b> <b>1000</b>	Pack/kit of resistors, to include: Variety resistor kit suitable for simple electronic circuit building 270R 1K 2K2 4K7 10K 22K 33K 100K 150K 1M Manufacturer: Catalogue No:	
TECH/319 <b>100</b> <b>100</b> <b>100</b> <b>100</b> <b>100</b> <b>100</b> <b>50</b>	Pack/kit of potentiometers, to include: 1K LIN 2200K LIN 10K LIN 47K LIN 100K LIN 1M LIN 100K LIN dual control (stereo) Manufacturer: Catalogue No:	
TECH/320 <b>5</b> <b>500</b> <b>1000</b> <b>1000</b>	Pack/kit of preset potentiometers, to include: Variety preset potentiometer kit suitable for simple electronic circuit building 10K 22K 100K Manufacturer: Catalogue No:	

TECH/321 80 80 20	Miniature motors, to include: High torque miniature motor, 3-6 V High power, 12 V motor Solar motor	
	Manufacturer:	Catalogue No:
TECH/322 1 200	Motor mount (e.g., self-adhesive) to suit miniature motors detailed in TECH/320.	
	Manufacturer:	Catalogue No:
TECH/323 10	Miniature multi-ratio gearbox and motor (clearbox motor), assembled <b>OR</b> in kit form, motor to operate on c.1.5-4.5 V power supply.	
	Manufacturer:	Catalogue No:
TECH/324 10	Miniature worm drive gearbox with motor, assembled <b>or</b> in kit form, motor to operate on c.1.5-4.5 V power supply.	
	Manufacturer:	Catalogue No:
TECH/325 1000	MES lamp (bulb), 6 V/60 mA, commercial grade.	
	Manufacturer:	Catalogue No:
TECH/326 1000	MES lamp (bulb) holder, solder tags at base.	
	Manufacturer:	Catalogue No:
TECH/327 1000	MES lamp (bulb) holder, spring loaded contact, fixing centres: c.23 mm.	
	Manufacturer:	Catalogue No:
TECH/328 100 100 100	Pack/kit of assorted colours MES lamp holders, to include: Red Green Orange	
	Manufacturer:	Catalogue No:
TECH/329 500 500 500 500 3000 500 500 40	Pack/kit of assorted standard 5mm LED's and clips, to include: Red Yellow Green Flashing 5mm bezel panel clips (one piece). Silicone rectifier diode IN4001 1A, 50V max. Silicone rectifier diode IN5401 3A, 100V max Seven segment LED display, common cathode, c.13 mm	
	Manufacturer:	Catalogue No:
TECH/330 300	Light dependent resistor (ORP 12 specification)	
	Manufacturer:	Catalogue No:
TECH/331 500 10	Pack/kit of assorted sizes of strip-board, to include: 25 mm x 64 mm 119 mm x 455 mm	
	Manufacturer:	Catalogue No:
TECH/332 50	Pack/kit of breadboard, to include: 400 Tie points	
	Manufacturer:	Catalogue No:
TECH/333 50 50 50 50	Pack/kit of miniature relays, to include: DPDT 5A SPDT 5A SPDT 10A DPDT 8A	
	Manufacturer:	Catalogue No:

<b>Code Quantity</b>	<b>Descriptions &amp; Specifications</b>	<b>Cost €</b>
TECH/334 100 100	Pack/kit of NTC thermistors, to include: 5 k ohm 2700 ohm Manufacturer: _____ Catalogue No: _____	
TECH/335 600 300 200 200 100	Pack/kit of general purpose transistors, to include: ZTX321 NPN specification BC108 NPN specification BFY51 NPN specification BC109 NPN specification TIP121 Darlington NPN specification Manufacturer: _____ Catalogue No: _____	
TECH/336 100 50 50 30 30 30	Pack/kit of linear integrated circuits (ICs), to include: 555 Timer 741 Op Amp 3140 Op Amp 556 7400 7490 Manufacturer: _____ Catalogue No: _____	
TECH/337 50 50 200 50	Pack/kit of miniature speakers, for example: 8 ohm 64 ohm Buzzer, 6 V (leads) Miniature piezo buzzer Manufacturer: _____ Catalogue No: _____	
TECH/338 150 150 100 200 200 200 100 50 10 50 50 50	Pack/kit of miniature switches, to include: Miniature toggle SPST Miniature toggle SPDT Miniature rocker Standard slide DPDTCO Push to make Push to break Push latching Tilt switch (mercury) Reed switch with magnets Microswitch button Microswitch lever Microminiature microswitch lever Manufacturer: _____ Catalogue No: _____	
TECH/339 100	Pack/kit of miniature thyristors, to include: TIC106D specification Manufacturer: _____ Catalogue No: _____	

<b>Code Quantity</b>	<b>Descriptions &amp; Specifications</b>	<b>Cost €</b>
TECH/340 100	Control knobs, to fit c.6 mm shaft Manufacturer: _____ Catalogue No: _____	
TECH/341 10	Low-fume / colophony free solder, 500 g / 22 swg (0.71 mm) Manufacturer: _____ Catalogue No: _____	
TECH/342 2	Multiple drawer storage cabinets, plastic drawer type, wall mountable, c.60 drawer unit size. Manufacturer: _____ Catalogue No: _____	
TECH/343 24	Multi-compartment boxes (e.g., plastic type), suitable for storing of electronics circuits / components. Manufacturer: _____ Catalogue No: _____	
TECH/344 10 10 10 10 10 10	Pack/kit of accessories suitable for electronics work (i.e., push-fit directly to miniature motor shafts): Pack of c.10 plastic wheels, various diameter sizes (e.g., 30 mm – 70 mm) Pack of c.10 plastic propellers, c.100 mm diameter, 2 or 3 blades. Pack of c.10 2 mm steel shafting Pack of c.10 3 mm steel shafting Pack of c.10 miniature pulleys, various diameter sizes (e.g., 8 mm to 25 mm) Pack of c.10 plastic gears, various diameter sizes (e.g., 15 mm to 40 mm) Pack of c.10 miniature worm gears Manufacturer: _____ Catalogue No: _____	
TECH/345 2	PCB Drill and stand set complete with power supply output of drill 12 V to 18 V. Chuck capacity 0.6 mm to 3.2 mm. Input of power supply unit 220 V to 240 V Manufacturer: _____ Catalogue No: _____	
TECH/346 1	Set of Control technology teaching kits. Kits to simulate control of manufacturing processes (e.g. conveyor, sorter, pick and place) and/or examples of control technology used in society (e.g. Car park barrier, lifts, sliding doors). Kit to be accompanied with associated guides/texts, and suitable for use with a class group of students. Manufacturer: _____ Catalogue No: _____	
TECH/347 24	Microcontroller board. Minimum specification of board to include 5 inputs & 8 outputs incorporating 8 LED outputs, 1 seven segment display, piezo sounder, 1 servo 3 pin header, darlington driver on 4 outputs and 2 motor drivers. To include a switch to disable/enable seven segment display, LEDs, piezo sounder and stepper motor control. All outputs rated at 5 V, 600 mA max. Appropriate power supply and download cable. Manufacturer: _____ Catalogue No: _____	
TECH/348 1	Robotic control technology teaching kit. Kit to simulate a range of robotic control applications. Kit to be accompanied with associated guides/texts and suitable for use with a class group of students. Manufacturer: _____ Catalogue No: _____	
TECH/349 1	Electro-pneumatic teaching kit and suitable air compressor. Capable of allowing for the demonstration of a range of circuits/systems. Kit to be accompanied with associated guides/texts and suitable for use with a class group of students. Manufacturer: _____ Catalogue No: _____	3000

TECH/350 1	Pneumatic system construction and simulation software to include library of standard pneumatic symbols; educational site licence for min. 25 users. Manufacturer: _____ Catalogue No: _____	
TECH/351	Electronics construction and simulation software; educational site licence for min. 25 no. users. Manufacturer: _____ Catalogue No: _____	
TECH/352 1	Control system design, programming, simulation software, compatible with micro-controller boards TECH/347; educational site licence for min. 25 users. Manufacturer: _____ Catalogue No: _____	
TECH/353 1	Moved Manufacturer: _____ Catalogue No: _____	
TECH/354 1	Printed Circuit Board design and create software; educational site licence for min. 25 users. Manufacturer: _____ Catalogue No: _____	
TECH/355 1	Project management software for project planning, scheduling and simulation. Educational site licence for min. 25 users. Manufacturer: _____ Catalogue No: _____	
TECH/356 1	Digital camera (compact): - min. 5 megapixels; x4 optical zoom; USB port or equal; with cables; lithium ion or Ni-MH battery, charger, 256 Mb memory card/device, and case. Manufacturer: _____ Catalogue No: _____	
TECH/357 1	Document Camera. Minimum specification: Image sensor: 3 megapixel, 12 V dc power adaptor, Light source, cables incl. Manufacturer: _____ Catalogue No: _____	

Section 4: Drawing/Design		
Code Quantity	Descriptions & Specifications	Cost €
TECH/401 <b>24</b>	A2 drawing boards, white finish.	
	Manufacturer: _____ Catalogue No: _____	
TECH/402 <b>24</b>	A2 Tee-squares.	
	Manufacturer: _____ Catalogue No: _____	
TECH/403 <b>24</b>	Set squares, 45°, plastic type	
	Manufacturer: _____ Catalogue No: _____	
TECH/404 <b>24</b>	Set squares, 60°, plastic type	
	Manufacturer: _____ Catalogue No: _____	
TECH/405 <b>1 set</b>	Blackboard instruments comprising: compass, c.500 mm approx. with steel point; 60° set square, heavy duty plastic type, c.500 mm side; 45° set square, heavy duty plastic type, c.500 mm side with hand clasp; protractor, heavy duty type, c.425 mm side; rule, bevelled edge, 1 metre long, with metric graduations, heavy-duty type.	
	Manufacturer: _____ Catalogue No: _____	

Section 5: Structures/Mechanisms		
Code Quantity	Descriptions & Specifications	Cost €
TECH/501 12	Low cost construction set/kit, capable of allowing for the construction of models of various structures and mechanisms, e.g., bridges, towers, model automobiles, etc. A number to include appropriate power supply units. Manufacturer: _____ Catalogue No: _____	
TECH/502 3 3 3 3 3 3	Pack/set of plastic gear wheels suitable for model building, preferably of the brass hub-type, to include: Pack c.10 12 teeth Pack c.10 18 teeth Pack c.10 30 teeth Pack c.10 58 teeth Pack c.10 bevel gear Pack c.10 worm gear Manufacturer: _____ Catalogue No: _____	
TECH/503 3 3 3	Pack/set of pulley's suitable for model building, preferably of the brass-hub type, to include: Pack of c.10 pulley's c.20 mm diameter Pack of c.10 pulley's c.40 mm diameter Pack of c.10 pulley's c.60 mm diameter Manufacturer: _____ Catalogue No: _____	
TECH/504 10 10	Pack of shafting/shaft converters to suit TECH/501 and TECH/502, to include: Pack of shaft converters (e.g., 6 mm to 4 mm and/or 4 mm to 2 mm) Pack of shafts (e.g., 6 mm and/or 4 mm shafts) Manufacturer: _____ Catalogue No: _____	
TECH/505 20 20 10 10	Pack/set of plastic/wooden wheels suitable for model building/construction work, to include: Pack plastic c.10 wheels c.60 mm diameter Pack plastic c.10 wheels c.50 mm diameter Pack wooden c.10 wheels c.25 mm diameter Pack wooden c.10 wheels c.50 mm diameter Manufacturer: _____ Catalogue No: _____	
TECH/506 1 1 1 1 1 1	M3 screws and nuts: Box M3 screws 6 mm Box M3 screws 12 mm Box M3 screws 20 mm Box M3 screws 25 mm Box M3 nuts Box M3 washers Manufacturer: _____ Catalogue No: _____	
TECH/507 1 1 1 1 1 1	M4 screws and nuts: Box M4 screws 6 mm Box M4 screws 12 mm Box M4 screws 20 mm Box M4 screws 25 mm Box M4 nuts Box M4 washers Manufacturer: _____ Catalogue No: _____	
TECH/508 2	Box of art straws Manufacturer: _____ Catalogue No: _____	



Section 6: Health and Safety Equipment		
Code Quantity	Descriptions & Specifications	Cost €
TECH/601 24	Non-mist safety goggles, full ventilation, for use over spectacles, kite marked to BS 2092.	
	Manufacturer: _____ Catalogue No: _____	
TECH/602 24	Student apron, suitable for workshop use.	
	Manufacturer: _____ Catalogue No: _____	
TECH/603 12	Lightweight safety spectacles with fully adjustable side frames and clear side shields, fitted with replaceable lens to BS 2092.	
	Manufacturer: _____ Catalogue No: _____	
TECH/604 12	Clearways face shields with adjustable headbands. Full facial and eye protection while operating machine tools, forging, heating and melting of metals, etc. Kite marked to BS 2092.	
	Manufacturer: _____ Catalogue No: _____	
TECH/605 6	Pair Gloves for materials handlings, abrasion and cut resistant; oil, grease and dirt repellent.	
	Manufacturer: _____ Catalogue No: _____	
TECH/606 12	Fume displacement unit, replaceable filter type, bench mounted, 230 V, 50 Hz.	
	Manufacturer: _____ Catalogue No: _____	
TECH/607 1	First aid cabinet, wall mounted type, size: c.240 x c.370 x c.100 mm - with hinged door, complete with appropriate first aid kit.	
	Manufacturer: _____ Catalogue No: _____	
TECH/608 2	Ear Defenders: headband and ear cup type. To be supplied complete with two sets of renewable sealing rings and to conform/be tested to EN352/BS 5108. Attenuation of 20 dB required.	
	Manufacturer: _____ Catalogue No: _____	
TECH/609 1	Soft soap/hand barrier cream dispenser, rechargeable type, suitable for wall mounting.	
	Manufacturer: _____ Catalogue No: _____	
TECH/610 1	Roll of hand paper, 200 mm wide, on roller stand.	
	Manufacturer: _____ Catalogue No: _____	

Section 7: ICT Equipment – hardware, software, peripherals		
Code Quantity	Descriptions & Specifications	Cost €
<b>Note:</b> The information in this Section is published as a general guide to schools as to requirements for this subject when procuring ICT equipment.		
TECH/701	Computers desktop <b>or</b> laptop type, with suitable specifications to operate machine tools and software for the teaching of Technology.. Manufacturer:   Catalogue No:	0
TECH/702	A3 Inkjet printer with networking capability and capacity for photo printing. Manufacturer:   Catalogue No:	0
TECH/703	A4 mono Laser printer with networking capability. Manufacturer:   Catalogue No:	0
TECH/705	Scanner. Minimum specification: 2400 x 4800 dpi scanning resolution, appropriate software and USB connecting cable. Manufacturer:   Catalogue No:	0
TECH/706	Web Cam. Minimum specification: Video Capture Resolution: 640x480 pixels, Still Capture Resolution: 640x480 pixels, Frame Rate: 640x480 pixels @ 30fps PC Interface: USB 2.0, Built in Microphone Manufacturer:   Catalogue No:	0
TECH/707	LCD Projector. Minimum specification: 2000 lumens, 500:1 contrast ratio and capable of XGA resolution (1024 x 786) and supplied with video cable and connections. Manufacturer:   Catalogue No:	0
TECH/708	Desktop publishing software to include word processing, spreadsheet, database and presentation applications. Educational site licence for min. 25 users. Manufacturer:   Catalogue No:	0
TECH/709	Parametric CAD software site licence, <i>if not already acquired for DCG etc. Framework Agreement is in place for school purchase of licence.</i> Manufacturer:   Catalogue No:	0

**General Note:** Equipment to be commissioned and training provided where appropriate.

Equipment for Technology SIX SECTIONS			
Section	Code Quantity.	Descriptions & Specifications:	Total Cost €:
Section 1	TECH/101-174	General Workshop Equipment/Tools.	
Section 2	TECH/201-223	Machine Tools.	
Section 3	TECH/301-357	Electronics	
Section 4	TECH/401-405	Drawing/Design	
Section 5	TECH/501-508	Structure/Mechanisms	
Section 6	TECH/601-610	Health and Safety Equipment	
Section 7		ICT Equipment	0.00
		Total	€
		Add for VAT :	€
		Total Amount for TECH List:	€

**See Next Page For:  
Certificate of Compliance with Standards, Specifications &  
Conditions**

**Standards, Specifications & Conditions**

**All equipment/machinery/tools shall be durable and safe for school use. Equipment wholly, or partly, funded from public funds is subject to Inspection by officers from the Department of Education & Science.**

**It is essential that tenders for equipment for school use shall:**

- (i) Comply fully with the specifications listed.**
- (ii) Ensure that all equipment/machinery/tools shall be of an appropriate quality and standard suitable for use in a post-primary school workshop setting.**
- (iii) Comply fully with European (EN) standards, established and developing, as appropriate.**
- (iv) Comply with European electrical standards and CE marking as appropriate.**
- (v) Be accompanied by documentation of sufficient detail for full evaluation.**
- (vi) Ensure consistency between machinery/equipment/tools quoted for and that supplied.**
- (vii) Include the completed and signed certificate of compliance.**

**Award of a contract is conditional on the production of a current tax clearance certificate**

**Failure to comply with the above may result in the tender being deemed null and void**

**Certificate of Compliance with Standards, Specifications & Conditions**

**I/We certify that the equipment tendered complies in all respects with the Standards, Specifications and other requirements/conditions specified in this tender document. I/We hold a current tax clearance certificate.**

**Company:** \_\_\_\_\_

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Position:** \_\_\_\_\_