

Technology key vocabulary

(1st and 2n ESO)

Operations

To cut, to draw, to chisel off, to drill, to drive, to fasten, to finish, to glue, to stick, to heat, to hit, to hold, to join, to loosen, to tighten, to mark, to paint, to punch, to rivet, to saw, to sand, to screw, to roll, to shape, to smooth, to strip, to hoist, to pull, to push, to bend, to measure, to solder, to weld.

Materials

Metal: aluminium, brass, iron, cast iron, bronze, copper, tin, tinplate, steel, stainless steel, silver, gold, zinc, lead, alloy

Wood: timber, plywood, chipboard, fibreboard, hardboard, pine, cherry, oak, beech, mahogany, poplar, fir.

Shapes: bars, pipes, wire, sheet, profiles, board.

Others: threaded rod, flat bar, strip, plastic, ceramics, stone, fabric, textile, silk, clay, rubber, wool.

Workshop

Whiteboard/ blackboard, teacher desk, student desk, medicine cabinet/ first aid kit, sink, paper bin, tool cabinet, tool panel, bench, stool, sockets and plugs, blinds, lockers, storage room.

Hardware

Fastener, zip, bolt, screw, nut, washer, spring.

Electricity

Circuit components:

- Receptors: bulb, lamp, lamp holder, buzzer, bell, mo, tor, resistor, load
- Control elements: switch (SPST: Single pole single throw), SPDT (Single pole double throw), NO and NC push buttons, fuse, breakers
- Others: cable, wire, batteries, battery holder, insulators, conductors.

Magnitudes: Voltage, Current Intensity, Resistance, Energy, Power, Electric charge, Volt, Amp (Ampere), Ohm, Joule, Watt, Coulomb

Series, parallel and combination circuits. Ohm's law.

Electric-> using electricity for power: electric equipment, electric guitar, etc. We cannot say electric engineers (engineers do not need batteries to be alive!).

Electrical -> related to electricity or using electricity for power: electrical equipment, electrical engineers.

Electronics: Diode, Light-emitting Diode (LED), Light-dependent resistor (LDR), NTC and PTC thermistor (negative/positive temperature coefficient), anode, cathode, transistor.

Mechanisms and machines

Linear motion, rotating motion, alternating motion, oscillating motion, mechanical advantage, speed multiplier, speed reducer.

Machines: lever (class 1, class 2 and class 3), fulcrum, effort, resistance, inclined plane, fixed pulley, moveable pulley, compound pulley (block and tackle), engine, simple machine.

Mechanisms: friction wheels, gears or cogwheels, sprocket, rack and pinion, axle, teeth, pulley with belt, winch, gear with chain, worm gear, spur gears, bevel gears, helical gears, toothed neoprene belt, pulley trains, gear train, crank handle, nut and bolt, crank-link-slider, crankshaft, cam, eccentric cam.

Structures

Types: mass, frame (lattice), suspension, shell, vaulted, pneumatic, truss (triangulated), geodesic.

Elements: column, slab, foundations, pillar, joist, beam.

Stress: traction, torsion, bending, shear (cutting), compression.

The Technological Process

Requirements (requisites), schedule, budget, brainstorming, feedback, report, draft, design, construct, improve, evaluate (assess), check, fulfil, achieve, need (necessity), design, propose, solution, step (stage), flow chart (flow diagram, flow sheet).

Drawing

Tools: Pencil, rubber, pencil sharpener, set squares, ruler, sheet, protractor, compass, template

Techniques: sketch, freehand drawing, isometric perspective, isometric grid, cavalier perspective, axis (pl. axes), dimensioning, front view, overhead or plan view, side view, full scale, reduced scale, enlarged scale, fullscale, rough plan, accurate plan.

Useful sentences:

A map is to be drawn to a scale 1:50000

A sail is in the shape of a right angled triangle (obtuse, acute, isosceles, equilateral, scalene).