

**Subject: Paper, printing
textiles and levers**
Year: 11
Term: 3

Lesson Sequence

- 1 Paper and cards
- 2 Printing methods
- 3 Textiles types
- 4 Textiles Processes
5. Paper and card processes
6. Levers and linkages
7. Cams and Gears

Key Assessments

Spring Exam number 3.

Core Texts

Ebbsfleet Revision Pack 3

Knowledge Area	What You Must Know
Paper	General term for all products produced either from waste paper (recycled) or from wood pulp (virgin paper)
Bubble wrap	A synthetic (polythene) sheet with trapped bubbles of air for protecting products.
Card	Layered paper which provided a stiff, strong material for packaging.
Corrugated Card	Two layers of thin card separated by a wavy layer of paper to create a stiff material with internal air gaps.
Solid White Board	Plain card of built up paper layers which is good for printing on and stiff enough for packaging.
Duplex Board	A plain card with a bonded layer on one side which is good for printing onto. Good for packaging.
Foam Core Board	Two layers of paper sandwich a layer of polystyrene foam for a still board good for modelling.
Isometric Paper	Paper with a 30 degree isometric grid on it.
Tracing Paper	Expensive highly translucent paper for high quality drawings.
Layout Paper	A cheap white translucent paper for initial ideas which is cheaper than tracing paper.
Cartridge Paper	A high quality paper which is excellent for artists to draw and paint on.
Polythene laminated card	Solid white board which has a layer of this polythene stuck to the inside face to make it waterproof for liquid cartons.
A1,A2,A3,A4.	The international sizes of paper and boards. As the number goes up by one so the size of the sheet is halved.
Synthetic textiles	Textiles made from crude oil (plastics) such as: Nylon, Polyester, Rayon, Viscose, Acrylic.
Natural textiles	Textiles from plants and animals: Leather, Wool, Silk (worms), Cotton, Linen, Jute.
Yarn	The long threads of fibres for weaving which are produced by SPINNING fibres together.
Lycra	A synthetic POLYURATHANE fibre that can stretch up to 6 times its original length used for leotards and sportswear.
Elastane	Is the generic word for stretchy fibres such as Spandex and Lycra which are brands of Elastane.
Wool	The durable and warm fibres obtained from a sheep and spun into wool yarn for weaving fabric.
Polyester	A durable thermosetting plastic yarn which is used (often mixed with wool) to produce hardwearing fabric.
Cotton	Durable and attractive fibre obtained naturally from cotton plants for spinning into cotton yarn & weaving into cloth.
Kevlar	Synthetic fibre (from oil) that is five times the strength of steel for its weight. Bullet proof vests & motorcycle gear.
Acrylic fabric	A thermos plastic fibre that is spun into thread and woven into a hardwearing synthetic cloth.
Dying	The process of adding pigment into cloth AFTER the cloth is woven. Can be natural or synthetic dyes.
Cams	Rotating shaped objects that force a CAM FOLLOWER to move up and down depending on the shape of the CAM
Gears	Toothed rotating wheels, can change speed up or down by either increasing or decreasing the teeth in driven gear.
Levers class 1	Where arranged : LOAD, PIVOT, EFFORT. Such as opening paint tin with screwdriver.
Levers class 2	Where arranged: PIVOT, LOAD, EFFORT. Such as nut crackers and wheelbarrows.
Levers class 3	Where arranged: PIVOT, EFFORT, LOAD. Such as tweezers
Linkages	Rods connected by pivots to transfer movement from one place to another. Such as a scissor lift cherry picker.
Lithography	Suitable for medium to long runs where a plate is made for each or 4 colours and printed in 4 stages (CMYK)
Flexography	A method similar to lithography but for printing onto flexible materials such as carrier bags without cracking.
Gravure	A more hard wearing method of printing long print runs with high detail such as stamps. Uses tiny holes in metal plates to hold ink. Lasts longer than Lithography for perfect detail.
Silk screen printing	A method for printing onto short or medium runs such as T shirts, cheap to set up and not that durable for long runs.
Digital Printing	Suitable for short runs and cheap to set up such as laser printing at school.