

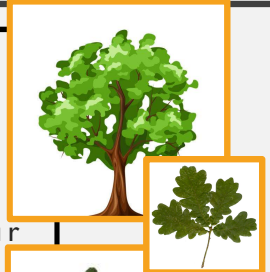
YEAR 7 – MECHANICAL TOY

Marking Out Equipment:
Ruler/Steel rule - for measuring and drawing straight lines
Pencil—For marking onto wood/paper/card
Try Square—For marking a line at right angles to an edge
Marking out in Technology is done in mm at all times



Hardwood

- Slow growing
- Loses leaves
- Deciduous trees
- heavy, distinctive grain
- Generally darker colour
- More dense/harder



Softwood

- Fast growing
- Evergreen
- Less pronounced grain
- Less dense



Structures
 Can be made stronger/more rigid by:

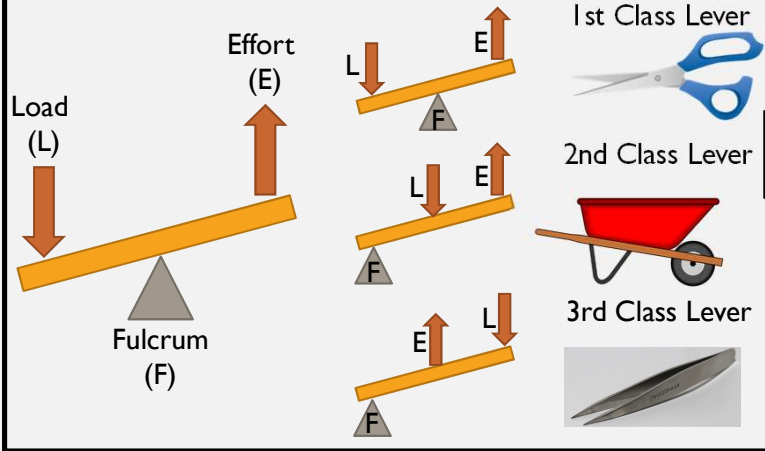
- Making them “bottom heavy”
- Use triangles
- Use brick patterns



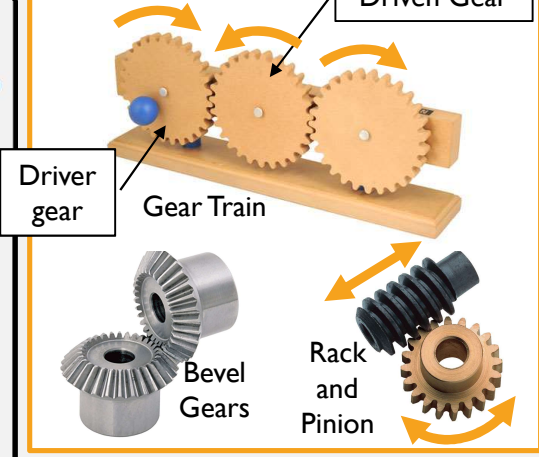
General Health and Safety in the Workshop

- Hair tied up
- Goggles on
- No running
- Carry tools safely
- Follow instructions

Mechanical Devices - Levers



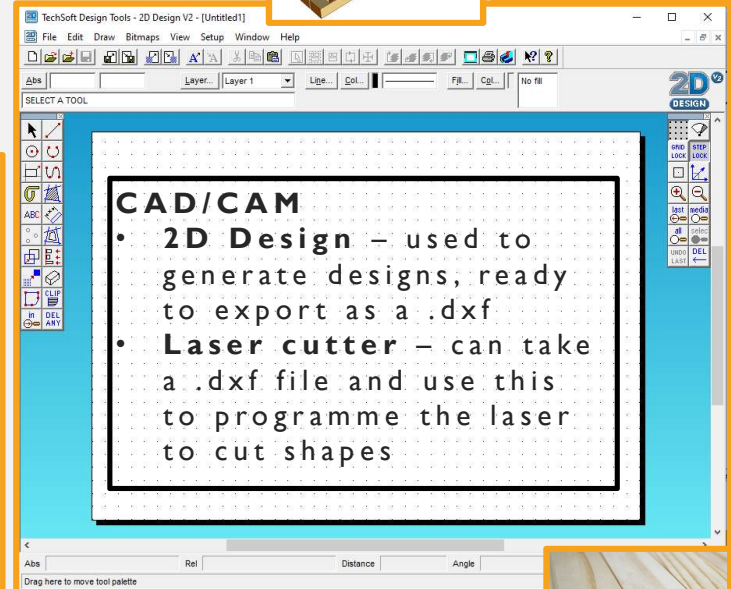
Gears



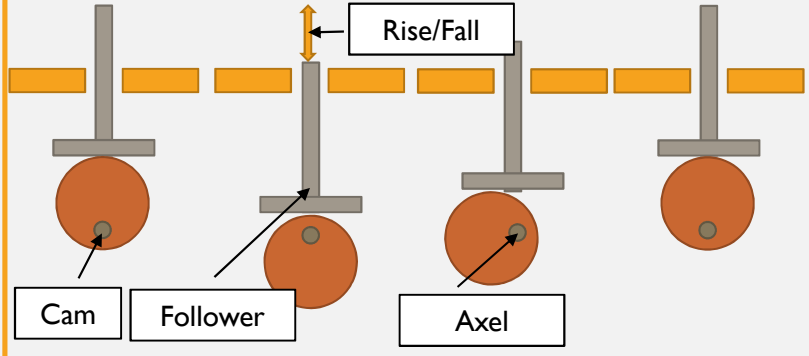
CAD/CAM

• **2D Design** – used to generate designs, ready to export as a .dxf

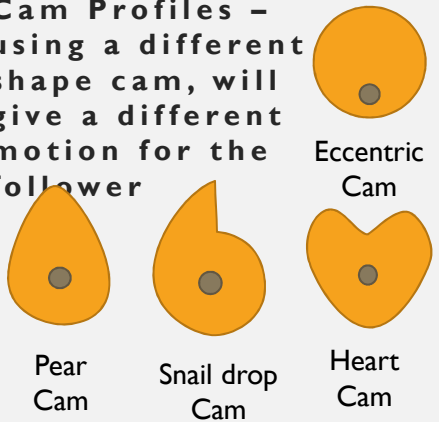
• **Laser cutter** – can take a .dxf file and use this to programme the laser to cut shapes



Mechanical Devices - Cams



Cam Profiles – using a different shape cam, will give a different motion for the follower



Materials—Wood based

Pine—Softwood, fast growing attractive grain, relatively cheap

MDF—Made from waste product of saw mills, very strong, comes in a range of thicknesses

Plywood—made from thin “ply’s” which are laminated at 90° to each other

Dowel – round thin lengths of timber (often hardwood)

