

PRIOR LEARNING

- MEASURING USING A RULER
- DRAWING
- COLOURING
- 3D SHAPES

FUTURE LEARNING

- ELECTRONIC SYSTEMS
- METALS, ALLOYS, & POLYMERS
- NEW MATERIALS
- CUTTING AND SHAPING MANUFACTURED BOARD
- ISOMETRIC DRAWING
- APPLYING A PAINT FINISH

CROSS CURRICULAR LINKS:

- MEASURING ACCURATELY
- 3D SHAPES
- PARALLEL LINES
- 30° ANGLES
- DRAWING TO SCALE

DESIGN & TECHNOLOGY: YEAR 7 BLOCK BOT

DESIGN

- 4X DESIGN IDEAS- PRESENTATION, LAYOUT, ANNOTATION
- MANUFACTURING SPECIFICATION- DRAWN TO SCALE, SIZES, MATERIALS, MAKING METHODS



TECHNICAL KNOWLEDGE

- PRODUCTION SYSTEMS- CAD/CAM (PG 4-5)
- ISOMETRIC DRAWING SKILLS (PG 108)
- MANUFACTURING SPECIFICATION (PG 112- 113)



MAKE

- MEASURING MATERIAL
- MARKING OUT PARTS (PG 116)
- CUTTING PARTS
- SHAPING PARTS WITH BAND FACER (PG 67)
- DRILLING BLIND HOLES (PG 64-65)
- CONSTRUCTING DOWEL JOINTS
- ADDING A PAINT FINISH (PG 72)

EVALUATE

- PRACTICAL SKILLS
- CHOOSE WHICH DESIGN TO MAKE



TOOLS, EQUIPMENT & PROCESSES

- | | |
|---------------------------------------|--|
| ☐ TRY-SQUARE | ☐ ELECTRIC/ POWER DRILL |
| ☐ STEEL RULER | ☐ COPING SAW |
| ☐ BENCH HOOK | ☐ DOWEL JOINT |
| ☐ TENON SAW | ☐ PAINT FINISH |
| ☐ BAND FACER | ☐ ENGINEERS VICE |
| ☐ PILLAR DRILL | |

CAREER LINKS, INDEPENDENT STUDY IDEAS

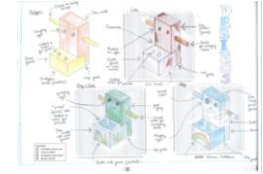
- 3D PRINTING PROTOTYPES
- CAD AS A DESIGNER
- TRY YOUTUBE VIDEOS TO LEARN MORE ABOUT SOLIDWORKS

DT 2 MRS BINDON

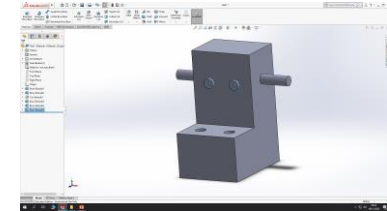
EVIDENCE IN BOOK



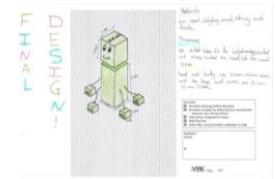
- ☐ ISOMETRIC DESIGN IDEAS X 4
DATE SET:



- ☐ SOLIDWORKS CUBES
DATE SET:

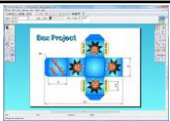
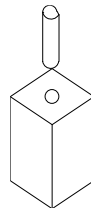
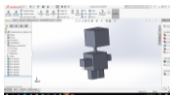
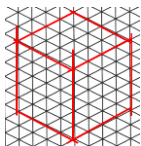
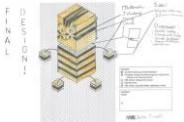


- ☐ MANUFACTURING SPECIFICATION (FINAL DESIGN)
DATE SET:



- ☐ PRACTICAL WORK



KEY WORD	IMAGE	DEFINITION	KEY WORD	IMAGE	DEFINITION
Production systems		CAD- computer aided design CAM- computer aided manufacture CNC- computer numerically controlled CAM machine examples- milling machine, router, 3D printer, laser cutter. Used by global companies as it is time saving, money saving, easy to share, easy to edit from all over the World.	Dowel joint		Hole is marked using a cross. Hole is drilled into both pieces to be joined using a hand drill. Dowel is cut to length using coping saw. PVA Glue is applied to hole & dowel, then pieces are stuck together.
Solidworks		Example of CAD software. A 3D drawing package. Can be used to 3D print designs.	Tenon saw		Cut straight lines in thicker timber
Isometric drawing		3D drawing technique using a triangular grid. Vertical lines stay vertical. Horizontal lines are at 30° and stay on the diagonal grid lines.	Try square		Accurately draw straight lines when marking out
Final design/ manufacturing specification		The fancy word for this is 'Manufacturing Specification'. Used to show all the relevant information that the manufacturer might need to make the product eg; What it looks like, Sizes, Materials, How to make it, Costs, Timings	Steel ruler		Accurate measuring of pieces
Pine		Softwood, easy to work with, light in colour, low cost	Pillar drill		Makes holes in wood, metal and plastic. Good for keeping holes straight.
Dowel		Cylindrical pieces of wood	Hand/ power drill		Good for smaller holes in wood, metals and plastic. Good for hard to reach holes.
PVA glue		Adhesive used to join woods together.	Band facer		Sand and smooth edges of timber
			Coping saw		Cut woods, metals & plastics. Good for curves and delicate cuts.