YEAR 8	SUBJECT: DT	TITLE: CONTAINER PROJECT
OBJECTIVE: To introduce the pupils to basic design work and manufacturing using basic tools and equipment.		

STAGE	ADDITIONAL SKILLS	EXTENSION WORK	RESOURCES	H&S
Stage 1: The pupils will be introduced to a range of containers. They will be asked top look at a series of pictures and determine the purpose of each container. No indication of scale / proportion will be given. The pictures will be shown on the projector and pupils will suggest answers. The pupils will list every conceivable container to be found at home. E.g. storage units to batteries. They will be introduced to Rich Pictures - explained in detail. Production of a rich picture with text and pictures.	L. Keywords regarding the containers and their uses. Rich picture introduced. N. Size and proportion of containers will be mentioned during the container exercise. ICT. If facilities are available, research into unusual containers will take place. HWK. Complete the rich picture. C. Recycling of plastic discussed I terms of plastic containers and glass.	Pupils to collect a range of pictures associated with container theme. Present the images as a collage.	Computer projector. General drawing and writing equipment. Photocopies of containers.	CONTROL MEASURE CLEAPPS REF. RESIDUAL RISK
Stage 2: The pupils will select six everyday items (stationery) and present each as an accurate drawing with dimensions. They will be shown how to construct a typical piece of equipment and draw on dimensions according to British Standards. The page layout will be discussed. The use of colour and shade and use of guidelines for printing will be emphasized.	L. Key words such as 'dimensions' will be explained. N. Measuring of items of equipment and presentation as dimensions. ICT. Potential use of ICT I terms of using TECH2D software for accurate drawing. HWK. Complete the presentation. C. Quality of work emphasized.	Draw a further two pieces of equipment that under normal circumstances require a container.	Computer projector. General drawing and writing equipment. Photocopies of containers. Sample equipment.	CONTROL MEASURE CLEAPPS REF. RESIDUAL RISK
Stage 3. The pupils will be introduced to simple orthographic drawing. They will be shown how draw a front, side and plan elevation. Dimensions will be added. Drawing wood grain and texture will be demonstrated. Use of computer software such as Google SketchUp will be used to demonstrate elevations.	L. Key words such as orthographic and elevations introduced. N. Precise measurements and scaling explained and attempted by pupils. ICT. Potential use of CAD software. HWK. Complete orthographic drawing. C. Value of ethical design and recycling of materials explained and discussed.	Draw a3D version of the container.	Computer projector. General drawing and writing equipment. Photocopies of containers. Sample equipment.	CONTROL MEASURE CLEAPPS REF. RESIDUAL RISK

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Stage 4. Practical work started. Pupils shown how to mark out the four sides of the container, including explanation of face side and edge. Accurate measurement and use of marking out tools stressed. Use of tenon saw and fretsaw demonstrated. Safety emphasized. Pupils mark out and cut two sides.	L. Following verbal instructions as well instruction diagrams on the board. N. Accurate measuring and marking out by pupils. C. Talk regarding the value of materials and sustainable forestry. HWK. Pupils collect information on finger joints and images. ICT. Use of the internet as a research tool.	Collect information and display information on similar joints.	General tools and equipment. Fretsaw and band saw Hand tools such as tenon saws.	CONTROL MEASURE Teacher instruction and supervision CLEAPPS REF. 1.066 Handsaws 1.067 Fretsaw RESIDUAL RISK
Stage 5. Demonstration on the cutting of the other two sides / joint work. Use of the try square emphasized and coping saw (demonstration only). Pupils mark out the joints and cut on the fretsaw for accuracy. Gluing demonstrated - emphasis placed on joining the correct pairs of joints.	L. Following verbal instructions as well instruction diagrams on the board. N. Accurate measuring and marking out by pupils.. HWK. Pupils collect information on glues for a range of materials. ICT. Use of the internet as a research tool.	Collect information on a range of containers and how they are manufactured.	General tools and equipment. Fretsaw and band saw Hand tools such as tenon saws.	CONTROL MEASURE Teacher instruction and supervision CLEAPPS REF. 1.066 Handsaws 1.067 Fretsaw 1.009 PVA RESIDUAL RISK
Stage 6. The glued box is sanded using the disk sander. This is explained in detailed and safety emphasized. Hand finishing of sides explained and demonstrated. Plastic materials explained and shown to the pupils. The shaping and cutting of the top demonstrated on the fretsaws. Use of masking tape explained. Pupils cut shapes and file using techniques such as through filing and draw filing. After designing.	L. Following verbal instructions as well instruction diagrams on the board. N. Accurate measuring and marking out by pupils. ICT. Use of the internet as a research tool. C. Recycling of plastics and reduction of wastage explained.	Draw an alternative range of shapes for the plastic top/shape.	General tools and equipment. Fretsaw and band saw Hand tools such as tenon saws. General drawing equipment.	CONTROL MEASURE Teacher instruction and supervision CLEAPPS REF. 1.062 Sanding disk 1.067 Fretsaws 1.042 Plastics, hazards 1.066 Handsaws and hand tools RESIDUAL RISK

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Stage 7. Lid and base manufactured. Entire item assembled. Evaluation of project. Pupils work through an evaluation sheet marking their own project and that of others. Marks presented as a table of results. Average mark calculated and results also graphed using a pictogram.	L. Key words regarding evaluation explained and used. Criteria for marking set. C. Evaluation skills and their transferability discussed. Importance of critical evaluation. HWK. Complete evaluation and table of results. ICT. Potential use of ICT for presentation of evaluation. N. Working out mean average and collection of data.	Work out the mode, mean and medium average.	General tools and equipment. Fretsaw and band saw Hand tools such as tenon saws. General drawing equipment	CONTROL MEASURE CLEAPPS REF. RESIDUAL RISK