

Edward Peake C of E VC Middle School



Medium Term Plan

Subject: Design Technology	Unit: Design and Make a Door Sign for a user of your choice	Term/Duration: Rotation 7 weeks	Year Group: 5
Prior Learning: <ul style="list-style-type: none"> • · That all products have been designed to a set of criteria. • · That research is done into what the user likes before designs are drawn. • · That safety rules need to be followed when working with tools. • · That there is a sequence of steps to follow to make a product. 		Key Vocabulary: Design Brief Specification Evaluation Plywood Coping Saw File Glass paper Bench vice	
By the end of this unit...			
<p>All pupils will be able to:</p> <p>Know what needs to be thought about before the door sign can be designed. Draw 2 different ideas for the door sign that have the key decisions labelled. Know the safety rules of working in the workshop. Know plywood is the material the door sign is made from. Use a coping saw to cut straight lines in plywood. Draw the design for the door sign onto the plywood. Add colour to the door sign. Use the coping saw safely to cut out the door sign. Use the flat file and half round file to smooth the edges of the door sign. Drill holes in the door sign. Think about how well the door sign works and how suitable it is for the user.</p>			
<p>Most children will have made more progress; they will be able to:</p> <p>To write a list of requirements the door sign must meet. Colour the ideas.</p>			



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Include in your labelling reasons for your decisions.

Explain why it is important to follow the safety rules.

Know some facts about plywood.

Use a coping saw to cut curved lines in plywood.

Use pens or paint neatly so the door sign looks like the design idea.

Use the flat file and half round file to remove some of the saw cuts.

Use the glass paper to get a smooth finish.

Know which points of the specification are met by the final door sign.

Some children will have progressed further; they will be able to:

Explain why it is important for the door sign to meet the requirements.

Link your labelling to the individual points in your specification.

Explain how following the rules can prevent risks.

Explain why plywood is a suitable material for the door sign.

Use pens or paint accurately so the door sign matches the design idea.

Use the coping saw to accurately cut the shape of the door sign.

Use the flat file and half round file to remove the saw marks.

Explain the changes you would make if you were to make the door sign again.

◆ **Notes:**

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	Learning Objectives	Content	Assessment	Resources /Health and Safety	ICT Opportunities
1	To be able to write a specification for the door sign including reasons for the points.	<p>Starter - what can you tell me about these door signs. Use random questioning for students to feedback. Look at the slide of existing door signs. Discuss the different shapes used for the outline of the sign, how the lettering styles are bold so they stand out, how simple images that are easy to recognise are used, how shapes can be cut out and glued on top, how bright colours are used to attract attention. Students answer the questions in their work booklets on the existing door signs. Monitor and give individual assistance as required. Go through the answers to the questions using random questioning. Discuss what a design brief is and why it is used. Read through the design brief for the door sign and discuss what would need thinking about before designing the door sign. Use random questioning to find out what a specification is and how it is written. Discuss the main points that need to be included in the specification. Model how to write the first point of the specification focusing on the point and the reason. Students write the specification in their work booklet. Monitor students progress as they write the specification and give assistance as required. Students feedback the points they have included in their specification and the reason.</p>	Highlight learning objective, must, should or could in the booklet. Specification	<p>Year 5 Door sign powerpoint Printed work booklet Example door sign</p> <p>H&S - see Room 5 risk assessment</p>	

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2	<p>To be able to create a design for the door sign using the images as a starting point. To be able to evaluate the strengths and weaknesses of the designs.</p>	<p>Starter - Think about the points you included in your specification. What do you need to think about before starting designing your door sign. Use random questioning for students to feedback. Explain and model how to produce the design ideas. Explain ideas should be drawn in pencil, coloured in coloured pencil, the design decisions should be labelled, how the design links to the points of the specification should be labelled, the points in the labelling should be explained. Discuss the size of the pieces of the door sign. Monitor students progress as they produce their ideas giving assistance as required. Discuss identifying the strengths and weaknesses of the designs. This should focus on how well they work as a door sign not on the neatness of drawing, colouring etc. Students evaluate the strengths and weaknesses of their designs in their work booklets. Students explain which idea they plan to make and why.</p>	<p>Highlight learning objective, must, should or could in the booklet. Design Ideas</p>	<p>Year 5 Door sign powerpoint Printed work booklet Example door sign Coloured pencils H&S - see Room 5 risk assessment</p>	
3	<p>To be able to make a prototype of the door sign and suggest improvements based on what you have found out.</p>	<p>Starter - What do you think are the safety rules of working in the workshop? Use random questioning for students to feedback. Discuss what a prototype is and what it is used for. Demonstrate how to make a prototype of the door sign from card, discuss the size and shape of the pieces and how these make a successful door sign. Discuss what you have found out from making the prototype</p>	<p>Highlight learning objective, must, should or could in the booklet. Prototype</p>	<p>Year 5 Door sign powerpoint Printed work booklet Example door sign Card Scissors Pritt stick</p>	

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	<p>To understand how to prevent risks by following the workshop rules.</p>	<p>and what would need changing before making the door sign and why. Students make a prototype of their door sign focusing on the size and shape of the pieces. Students glue the prototype into their booklets and write what they have found out by making it and what changes they would need to make. Discuss why it is important to have health and safety rules for the workshop. Show students the images that link to the main health and safety rules. Use random questioning to discuss the main rules. Students write a set of rules in their work booklets, writing the rules and reasons these rules are important. Monitor student progress as they write the rules and reasons and give assistance as required. Students feedback on the rules they have written/</p>		<p>H&S - see Room 5 risk assessment</p>	
4	<p>To have knowledge of plywood and why it is a suitable material to make the door sign from.</p> <p>To be able to mark out and colour the door sign on plywood.</p>	<p>Starter - What are the main health and safety rules of working in the workshop. Use random questioning for students to feedback. Explain the material the door sign is made from is plywood, give some information about plywood and discuss why it is a suitable material to make the door sign from. Students answer the questions about plywood in their work booklets. Monitor student progress as they answer the questions and give assistance as required.</p>	<p>Highlight learning objective, must, should or could in the booklet.</p>	<p>Year 5 Door sign powerpoint Printed work booklet Example door sign Plywood Coping saws Flat file Half round file Coloured pens</p>	

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		<p>Bring students to stand around the front workbench. Go through the different tools used to make the door sign and explain why they are suitable. Demonstrate how to mark out the door sign onto the plywood focusing on the shape and size of the main part and pieces that will be cut out. Model using coloured pens to colour in the design. Students mark out their door sign pieces on the plywood. Students colour in their door sign with coloured pens. Students bring their door signs to the front workbench, discuss how to give constructive feedback on the work. Students give a positive comment and area of improvement to their partner for their door sign.</p>		H&S - see Room 5 risk assessment	
5	To be able to use hand tools to make the door sign.	<p>Starter - Do you know the name of these tools? Do you know what we'd use them for in the making of the door sign? Use random questioning for students to feedback. Explain students will need to put an apron on and put their stools to the side of the workshop before starting the practical work. Demonstrate how to use the door sign to cut straight and curved lines focusing on keeping both hands on the saw so fingers are kept away from the blade. Students cut out the pieces of their door signs. Monitor student progress and give assistance as required. Demonstrate how to file the edges of the door sign pieces to remove the groove of the saw cuts. Explain</p>	Highlight learning objective, must, should or could in the booklet.	<p>Year 5 Door sign powerpoint Printed work booklet Example door sign Coping saw Flat file Half round file</p> <p>H&S - see Room 5 risk assessment</p>	

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		<p>where a flat file and where a half round file are suitable to use.</p> <p>Students file the edges of the door sign pieces.</p> <p>Monitor student progress and give assistance as required.</p> <p>Students think about what went well and how they could improve their skills of cutting and filing.</p>			
6	To be able to use hand tools to make the door sign.	<p>Starter - What are the names of these tools? What are they used for? Use random questioning for students to feedback.</p> <p>Recap on how to use the coping saw to cut straight and curved lines, how to file using the flat file and half round file.</p> <p>Demonstrate how to use glass paper to make the edges of the plywood smooth.</p> <p>Students continue working through the stages of making their door sign.</p> <p>Monitor student progress and give assistance as required.</p> <p>Discuss how to fill out the production record for making the door sign. Explain how a plan of production is usually made before making a product and why. Recap on the tools and equipment needed to make the door sign and the stages of production.</p> <p>As students complete their door sign they can work through filling out the production plan.</p>	<p>Highlight learning objective, must, should or could in the booklet.</p> <p>Completed jigsaw puzzle</p>	<p>Year 5 Door sign powerpoint</p> <p>Printed work booklet</p> <p>Example door sign</p> <p>Coping saw</p> <p>Flat file</p> <p>Half round file</p> <p>Glass paper</p> <p>H&S - see Room 5 risk assessment</p>	
7	To be able to evaluate your final door sign.	<p>Why is it important to evaluate the completed door sign?</p>	<p>Highlight learning objective, must,</p>	<p>Year 5 Door sign powerpoint</p>	

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		<p>Use random questioning for students to feedback answers.</p> <p>Recap using random questioning the stages of making the door sign and the tools and equipment needed at each stage.</p> <p>Students complete the record of production in their work booklet.</p> <p>Monitor student progress and give assistance as required.</p> <p>Students answer the questions on their completed door sign in their booklets. Use random questioning to go through the answers.</p> <p>Recap why it is important to carry out an evaluation.</p> <p>Explain how to do an evaluation against the specification, using the points written in the specification. Discuss how this can show you what improvements could be made to the door sign if you were to make it again.</p> <p>Students work through their evaluation against the specification in their work booklets.</p> <p>Monitor student progress and give assistance as required.</p>	<p>should or could in the booklet.</p> <p>Evaluation</p>	<p>Printed work booklet</p> <p>Example door sign</p> <p>Completed door signs</p> <p>H&S - see Room 5 risk assessment</p>	
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