

KS4Project Scheme of Work 2018-19

Subject	Topic	Year Group	Length
WJEC Product Design	Wooden Paddle boat	10	5-6 weeks

<u>Target Grade</u> A-C

<p style="text-align: center;">Investigating the design context</p>	<p style="text-align: center;">Development of the design proposal</p> <p style="text-align: center;">Practice drawing shapes in 3 D.</p>	<p style="text-align: center;">Testing and evaluation</p> <p style="text-align: center;">Test finished boats in water troughs</p>	<p style="text-align: center;">Communication</p> <p style="text-align: center;">Develop knowledge in Pro-desktop, Isometric projection and Oblique Projection.</p>
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ICT SKILLS
Use of pro-desktop.

Making
Learn to use a wide range of marking out, shaping tools and machinery. Develop ability to finish wood materials well.

HEALTH AND SAFETY
Full Demonstration and Supervision at all times.
All relevant risk assessments to be followed.

EXTENTION WORK
Modify the boat to include a different paddle or a rudder.

Learning ACTIVITY
Making a wooden Paddle boat.

SKILLS AND KNOWLEDGE
Drawing skills, Presentation skills, Making skills.
Develop knowledge of Tools and Machinery.

TECHNICAL LANGUAGE
Pine Softwood. Various marking out tools. Various shaping tools Pillar drill Varnish Screws
<p>OPPORTUNITIES FOR LAC</p> Home works will be produced to describe the making process to others in a step by step nature. Evaluation at the end of the project to reflect on work done.

Week No	Learning Objective We are Learning to (WALTS)	Specification Focus	Teaching Activity	Outcomes Plenary (WILFs) Assessment	Health and Safety	Resources
1	2D drawing techniques. British standard dimensioning. Marking out wood.	Communication Making	Make a folder. Draw the hull shape to scale. Show how to mark the hull joints out. Pupils supervised while they mark out and cut housing joints.	Naet work. Accuracy and precision in all woodwork tasks.	Full supervision and demonstrations given on tools and machinery. All risk assessments followed.	Fully stocked wood-work tool cupboard. Pine—210by 30by 12mm—two per pupil. Pine— 110by 20by 10mm—two per pupil. 3mm Plywood—60by 60mm—two per pupil. Varnish. Water troughs
2	Cutting wood joints. Shaping wood	Making	Recap on joint cutting and allow class to work on with joints. Introduce shaping the front and back of the hull.— Pupils to continue under supervision. Hwk— Write up the making process so far.	Hwk neatly presented with correct names and terms used.		
3	Tool names and machinery names. Using pro-desktop	Communication Development	Introduce pro-desktop and support pupils while they draw the Paddle boat hulls and crossmembers. Continue with practical work. Hwk— Continue with writing up the making process.	An understanding of CAD and an ability to draw simple shapes. Hwk neatly presented with correct names and terms used.		
4	Cutting wood joints and shaping wood. 3D drawing. Fitting joints. Tool names and machinery names and understanding of processes.	Communication Communication Making Communication	Introduce Isometric projection and encourage pupils to use isometric paper. Demo Oblique projection as an alternative. Continue with practical work— Fitting crossmembers. Hwk— Continue writing up the making process.	An understanding of 3D drawing techniques. Accurate joints. Hwk neatly presented with correct names and terms used.		
5	Drilling and finishing wood.	Making	Demo fitting the dowel and drilling, counter-sinking and fitting crossmembers. Continue with practical. Hwk— Continue with writing up making process.	Accurate and safe use of tools and machinery. Hwk neatly presented with correct names and terms used.		
6	Cutting joints. Finishing wood to a smooth finish.	Making	Demo making paddle and varnishing boat. Pupils varnish finished boats and use pro-desktop while varnish dries.	Accurate joints. Neat finishing using varnish.		
7	Evaluating your work.	Evaluation	Testing boats in troughs.	An understanding of what makes the boats perform well.		

Assessment

Grade	Investigating the design context	Development of the design proposal	Making	Testing and evaluation	Communication
A	NA	NA	Use of tools and equipment correctly, safely and accurately.	A good understanding of how the boat could be improved.	High quality presentation. Use of a range of communication techniques.
C			Use of tools and equipment with the need for help. Safely and correctly used.	Some understanding of future improvements.	Good presentation with different techniques used.
E			Tools and equipment used at a basic level. Help needed often	Limited understanding of how the product could be changed.	Low level presentation. Limited range of techniques used.

Addition all assessment