



Year: 7

Subject: Product Design: Modular Vehicle

Topic: Design, make and evaluate a toy vehicle, based on a standard modular design principle, covering woodworking skills.

**Knowledge and Understanding to be developed:**

- Design and make skills.
- Workshop skills and good practice - e.g. measuring, marking out, cutting and finishing. H&S.
- Design basic ideas that satisfy the design brief within the limitations given.
- Use of a range of hand tools and equipment.
- Draw and annotate sketches
- Evaluate their work.
- Know the name of the tools/ equipment used.
- Be able to use a sanding disc, be able to setup and use a pillar drill.

**Key Terms to be learned :**

Design process, specification design evaluation. Workshop skills and understanding, H&S. Working with accuracy- prototype to final product. **Numeracy:** measuring and marking out skills accurately when measuring to given dimensions, marking out and cutting cubes, concepts - "length" "width" and "thickness" Drawing skills using dimensions and a range of CAD and hand drawing . **Literacy** Key words used in specification, annotation, extended writing, use Key words when talking about work, and use the correct terminology when talking about the tools, machines and processes. **DCF:** Homework 2 (class work support as required). "Evaluation of the project" Use of CAD.

Section A: Learning Objectives and Outcomes:	Assessments:	Homework:
<p><b>Students should be able to:</b></p> <ul style="list-style-type: none"> <li>• Analyse task, identify areas for research</li> <li>• Develop a specification.</li> <li>• communication skills: quick idea generation</li> <li>• Measure and mark out using a try square and pencil.</li> <li>• Cut timber using vice, bench hook and Tenon saw.</li> </ul>	Test mark out and cut wood	Homework 1. "Tools and process"
Section B: Learning Objectives and Outcomes:	Assessments:	Homework:
<p><b>Students should be able to:</b></p> <ul style="list-style-type: none"> <li>• Use the disk sander/ pillar drill safely using the dust extractor, goggles</li> <li>• Mow to mark out and cut the groove for the window</li> <li>• Cut the groove for the window using tenon saw, chisel and mallet.</li> </ul>	Numeracy test	Homework 2. "Tools and process"
Section C: Learning Objectives and Outcomes:	Assessments:	Homework:
<p><b>Students should be able to:</b></p> <ul style="list-style-type: none"> <li>• Design Ideas and design development</li> <li>• Develop Rendering, graphical techniques</li> <li>• Different types of glass paper - coarse, medium, fine, etc.</li> </ul> <p>Processes in wood tools and marking out, isometric drawing.</p>	Key words	Homework 3. Sequence Drawing
Section D Learning Objectives and Outcomes:	Assessments:	Homework:
<p><b>Students should be able to:</b></p> <ul style="list-style-type: none"> <li>• Assemble product using tools and equipment safely and with skill and accuracy.</li> <li>• Apply finish. Evaluate products understanding of why designers evaluate their outcomes, and identifying any modifications.</li> </ul>	Final product making skills. Extended writing	Homework 4. Revision flash cards

