



Design	Make	Evaluate
<ul style="list-style-type: none"> • Explain the project to the children and establish clearly the design criteria for the product • Research and evaluate existing products (including book and web based research) • Consider user and purpose • Understand how key people have influenced design • List tools needed before starting the activity • Plan the sequence of work e.g. using a storyboard • Record ideas using annotated diagrams • Use models, kits and drawings to help formulate design ideas • Combine modelling and drawing to refine ideas • Devise step by step plans which can be read/followed by someone else • Use exploded diagrams and cross-sectional diagrams to communicate ideas • Sketch and model alternative ideas • Decide which design idea to develop 	<ul style="list-style-type: none"> • Make prototypes • Develop one idea in depth • Use researched information to inform decisions • Produce detailed lists of ingredients / components / materials and tools • Use a computer to model ideas • Select from and use a wide range of tools • Cut accurately and safely to a marked line • Select from and use a wide range of materials • Use appropriate finishing techniques for the project • Refine their product - review and rework/improve 	<ul style="list-style-type: none"> • Identify the strengths and weaknesses of their design ideas • Consider and explain how the finished product could be improved related to design criteria • Discuss how well the finished product meets the design criteria of the user. • Test on the user!
Structures		Mechanical, Electrical Systems and ICT
<ul style="list-style-type: none"> • Use the correct terminology for tools materials and processes • Use bradawl to mark hole positions • Use hand drill to drill tight and loose fit holes • Cut strip wood, dowel, square section wood accurately to 1mm • Join materials using appropriate methods • Build frameworks to support mechanisms • Stiffen and reinforce structures 		<ul style="list-style-type: none"> • Develop vocabulary related to the project • Use mechanical systems such as gears, pulleys, levers and linkages • Incorporate a circuit into a model • Use ICT to control products • Use lolly sticks/card to make levers and linkages • Use linkages to make movement larger or more varied. • Develop a technical vocabulary appropriate to the project • Program, monitor and control using ICT <p>DT learning covered in Science:</p> <ul style="list-style-type: none"> • Use electrical systems such as motors

Notes for teachers:

Project ideas

Mechanisms and Electrical systems

- Crumble project - creating an opening box/bin. (could combine with structures work)

Structures

- Shelters
- Fairground
- Bird houses

Process for Planning a Project for your class.

Think: Product (What could we make?) Purpose (What is it for?) User (Who is going to use it?) - this will make the "Challenge" for the project

e.g. Design Make and Evaluate a (product) to (purpose) for (user).

How will this fit with your themes/topics/creative curriculum? If it doesn't, consider it as a discrete project.

What context will this project be set in? Consider the examples given in the Programme of Study (NC2014) or your own idea.

Plan what products for evaluation / resources / tools / materials you are going to offer the children, taking account of previous experiences and current learning readiness. Ensure all appropriate Risk Assessments have been undertaken.

Make sure prior learning from D&T and other subject areas is in place. If not, plan specific learning opportunities prior to the project - Focus Tasks.

Plan for inclusion of vocabulary development. Are you going to teach this before beginning the project or during the course of the project?

Plan the questions you will ask the children to encourage the 'iterative process'

