



Key Learning in Design and Technology – Year 5

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 	<ul style="list-style-type: none"> • Decide which design idea to develop • 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"> • Discuss how well the finished product meets the design criteria of the user. • Identify the strengths and weaknesses of their design ideas • Consider and explain how the finished product could be improved related to design criteria • Test on the user!
Textiles		Mechanisms, Electrical Systems and ICT
<ul style="list-style-type: none"> • Use the correct vocabulary appropriate to the project • Create 3D products using patterns pieces and seam allowance • Understand pattern layout • Decorate textiles appropriately (often before joining components) • Pin and tack fabric pieces together • Join fabrics using over sewing, back stitch or blanket stitch • Combine fabrics to create more useful properties • Make quality products 		<ul style="list-style-type: none"> • Develop vocabulary related to the project • Use ICT to control products • Develop a technical vocabulary appropriate to the project • Use electrical systems such as motors and switches • Program, monitor and control using ICT <p><u>DT learning covered in Science:</u></p> <ul style="list-style-type: none"> • Use mechanical systems such as cams, pulleys, levers and gears • Incorporate a circuit into a model • Use electrical systems such as switches, bulbs and buzzers

Notes for teachers:

Project ideas:

Mechanisms and Electrical systems

- Crumble project (creating traffic lights). Differentiate via outcome (simple system changing colours, increase difficulty for HA). Children to create a traffic light structure (plan and design materials and design of traffic light).

Textiles

- Cushion
- Stuffed animals or creature
- Purse or money container

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