

Alverton Knowledge and Skills - DT

Key Knowledge and Skills

Develop creative, technical and practical expertise to problem solve.
Design and make high quality prototypes and products for a range of users.
Critique, evaluate and test ideas and products.
Understand and apply the principles of nutrition.

	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Design	Design purposeful, functional and appealing products based on design criteria. Generate, model and communicate ideas using talking, drawing, templates, mock-ups and IT (as appropriate). Describe what they are making, how it works and what they need to do next.	Use research and criteria to develop appealing products which are fit for purpose. Use annotated sketches and prototypes to develop and explain ideas and be able to discuss them.	Use research and criteria to develop products which are appealing, innovative, fit for purpose and aimed at a specific audience. Generate, develop and communicate ideas in a range of ways such as annotated sketches, detailed plans and presentations.
Make	Use a range of tools and equipment to complete practical tasks. Select from and use a range of materials and components including construction materials, textiles and ingredients.	Use a range of tools and equipment with accuracy. Select from and use a range of materials and components including construction materials, textiles and ingredients. Join and combine a range of materials.	Select and use a range of tools and equipment for a range of uses. Select from and use a wider range of materials and components. Join and combine a range of materials using appropriate methods.
Evaluate	Explore and evaluate existing products. Talk about their developing designs and what they like and don't like about products they have made. Consider and explain how the finished product could be improved using their design criteria.	Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in DT have helped shape the world.	Analyse existing products and use this to inform decisions and refine ideas. Justify decisions during the design process. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in DT have helped shape the world.
Technical Knowledge	Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Understand how to strengthen and reinforce structures. Use mechanical and electrical systems in own work.	Use mechanical and electrical systems in own work, including programming.
Food and Nutrition	Understand where food comes from. Use the basic principles of a healthy and varied diet to prepare dishes.	Understand the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes.	Use a range of cooking techniques to cook dishes for a healthy and varied diet. Understand seasonality and where ingredients originate.