

Upper Key Stage 2

Designing <i>(Understanding contexts, users and purposes, generating, developing, modelling, communicating ideas)</i>	Making <i>(Planning, practical skills and techniques)</i>	Evaluating <i>(Own ideas and products, existing products, key events and individuals)</i>	Technical Knowledge <i>(Making products work)</i>	Cooking and Nutrition <i>(Where food comes from, food preparation, cooking and nutrition)</i>
*Work confidently within a range of contexts *Describe the purpose of the product and how particular parts will work *Complete research *Identify preferences of the user/s *Generate innovative ideas drawing on research *Consider constraints – time, cost and resources	*Use a wider range of materials and equipment, making and explaining choice of components used *Accurately measure, mark, cut, assemble, join and combine materials *Accurately apply a range of finishing materials *Use techniques that involve a number of steps *Demonstrate resourcefulness	*Evaluate own work and consider views of others to improve *Critically evaluate the quality of design, build and fitness for purpose (including cost implications) *Consider how innovation, sustainability and impact beyond the intended purpose *Learn about a designer, engineer or manufacturer	*Functional and aesthetic qualities of materials *Mechanical systems: cams, pulleys, gears to create movement *More complex electrical circuits and components *Program a computer to monitor changes in the environment *Reinforce and strengthen a 3D framework	*The effect seasons have on food available *How food is processed into ingredients *Use a range of techniques; chopping, slicing, spreading, mixing, kneading *Purpose of nutrients, water, fibre *Know that recipes can be adapted in appearance, taste, texture and aroma

Notes and guidance

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims

The national curriculum aims to ensure that all pupils:

- develop creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.