

DT CURRICULUM DESIGN

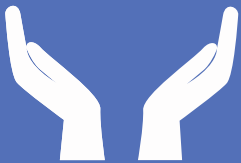
"CREATIVITY IS ALLOWING YOURSELF TO MAKE MISTAKES. DESIGN IS KNOWING WHICH ONES TO KEEP."
- SCOTT ADAMS



KNOWING



BECOMING



FEELING



Virtually everything around us has been designed and engineered in some way. This is particularly evident in our RAF context – pupils are surrounded by complex technical creations – aircraft, buildings, communications arrays etc. Through our DT learning, children are given the opportunity to develop their curiosity and capability – combining designing and making skills with their developing knowledge and understanding to create quality products. DT enables children to draw on their maths, science, computing, and art skills. Through engaging in the iterative process of designing and making children learn to think creatively and solve problems as individuals and as part of a team. We use an adapted scheme (Kapow DT) to support teaching and learning. This scheme returns cyclically to key concepts so children who join part way through a year or key stage can still cover all aspects. Classes work in Key Stage Phases to complete half termly projects, alternating with Art, to promote depth of learning.

The knowledge required in DT covers 4 main domains – cooking & nutrition; structures; electrical & mechanical systems; and textiles – with an additional digital element in KS2. Through these domains, children will be progressively introduced to key concepts, terms and ideas. We aim to develop the children's substantive knowledge of the technical elements and vocabulary of DT, such as information about materials, structures, components, mechanisms, aesthetics, nutrition etc. Alongside this, pupils' disciplinary knowledge of the design, make and evaluate processes is developed – from play-based experimentation in Early Years to meeting detailed design briefs and critically evaluating products in Key Stage 2. We acknowledge that with our mobile context, pupils may not have a completely secure technical or subject knowledge from previous years, but endeavour to introduce content progressively and establish new generative knowledge alongside the vocabulary needed to allow children to progress. The recall of prior learning is encouraged through knowledge catcher quizzes and key vocabulary is consolidated throughout each unit of work.

Our curriculum provides meaningful contexts for children to become designers and manufacturers. We know that the ability to do so is not automatic however, and therefore give them the small steps required to undertake this process – through research and evaluation of existing products; studying key individuals & designers; learning about materials and tools, and developing their practical expertise. Once focused practical skills have been taught and honed, this will lead to the creation of products. We aspire for children to successfully apply their growing technical skills to each project, having had the opportunity to practise without the fear of failure. Children will grow to recognise the functional and aesthetic properties of materials they select, collaborate with others, adapt their designs flexibly and communicate their ideas. As the children's conditional knowledge develops and they learn to understand the iterative nature of DT, children will evaluate, modify, or improve their product successfully in an age appropriate way. We also want to equip our children to become creators (and consumers!) of great food – health, nutrition, flavour, presentation – these are all aspects taught within our DT units.

DT can be a hugely motivating or deeply frustrating subject! We seek to ensure that the former is the case, by equipping children with a repertoire of knowledge, practical skills and understanding to enable them to create effective models and prototypes to fulfil a need. Equally, we embrace the evaluation and review aspect of design – acknowledging that the finest designers experience failures or setbacks and that this is all part of the process of refining a product. We help children become excited by DT by showing how the development of these practical manufacturing skills are relevant to their own experience or that of their immediate family – for example in the engineering, technical and mechanical roles within the RAF, in addition to careers as chefs, electricians or digital communications – within or beyond the military. Through their study of key individuals, children are helped to make sense of the world they live in and prepare them to participate in a rapidly changing world with confidence and passion.