

# make:able

## Curriculum Alignment | UK National Curriculum

A list of curriculum standards addressed when participating in the make:able student challenge





# UK National Curriculum



- KS2 Design & Technology: Design | use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- KS2 Design & Technology: Design | generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- KS2 Design & Technology: Make | select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- KS2 Design & Technology: Evaluate | investigate and analyse a range of existing products
- KS2 Design & Technology: Evaluate | evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- KS3 Design & Technology: Design | use research and exploration, such as the study of different cultures, to identify and understand user needs
- KS3 Design & Technology: Design | develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations
- KS3 Design & Technology: Design | use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses
- KS3 Design & Technology: Design | develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools
- KS3 Design & Technology: Make | select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture
- KS3 Design & Technology: Evaluate | investigate new and emerging technologies

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- KS3 Design & Technology: Evaluate | understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists
  - GCSE Design & Technology: Technical Principles | the impact of new and emerging technologies on industry, enterprise, sustainability, people, culture, society and the environment, production techniques and systems
  - GCSE Design & Technology: Technical Principles | how the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment
  - GCSE Design & Technology: Technical Principles | the functions of mechanical devices, to produce different sorts of movement, changing the magnitude and direction of forces
  - GCSE Design & Technology: Technical Principles | the impact of forces and stresses on materials and objects and the ways in which materials can be reinforced and stiffened
  - GCSE Design & Technology: specialist techniques and processes that can be used to shape, fabricate, construct and assemble a high quality prototype, including techniques such as wastage, addition, deforming and reforming, as appropriate to the materials and/or components being used
  - GCSE Design & Technology: Designing and Making Principles | understand that all design and technological practice takes place within contexts which inform outcomes
  - GCSE Design & Technology: Designing and Making Principles | identify and understand client and user needs through the collection of primary and secondary data
  - GCSE Design & Technology: Designing and Making Principles | demonstrate an ability to write a design brief and specifications from their own and others' considerations of human needs, wants and interests
  - GCSE Design & Technology: Designing and Making Principles | investigate factors, such as environmental, social and economic challenges, in order to identify opportunities and constraints that influence the processes of designing and making
  - GCSE Design & Technology: Designing and Making Principles | explore and develop their ideas, testing, critically analysing and evaluating their work in order to inform and refine their design decisions thus achieving improved outcomes
  - GCSE Design & Technology: Designing and Making Principles | investigate and analyse the work of past and present professionals and companies in the area of design and technology in order to help inform their own ideas
  - GCSE Design & Technology: Designing and Making Principles | use different design strategies, such as collaboration, user-centred design and systems thinking, to generate initial ideas and avoid design fixation
  - GCSE Design & Technology: Designing and Making Principles | develop, communicate, record and justify design ideas, applying suitable techniques, for example: formal and informal 2D and 3D drawing; system and schematic diagrams; annotated sketches; exploded diagrams; models; presentations; written notes; working drawings; schedules; audio and visual recordings; mathematical modelling; computer-based tools

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- GCSE Design & Technology: Designing and Making Principles | design and develop at least one prototype that responds to needs and/or wants and is fit for purpose, demonstrating functionality, aesthetics, marketability and consideration of innovation
  - GCSE Design & Technology: Designing and Making Principles | make informed and reasoned decisions, respond to feedback about their own prototypes (and existing products and systems) to identify the potential for further development and suggest how modifications could be made
  - GCSE Design & Technology: Designing and Making Principles | selecting and working with appropriate materials and components in order to produce a prototype
  - GCSE Design & Technology: Designing and Making Principles | using specialist techniques and processes to shape, fabricate, construct and assemble a high quality prototype, including techniques such as wastage, addition, deforming and reforming, as appropriate to the materials and/or components being used



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