|  |  |  |  |
| --- | --- | --- | --- |
| Design and Technology Area of Study | Covered in depth | Not covered fully | Not covered |
| User needs & user centred design |  |  |  |
| Including products that respond to needs in a variety of situations |  |  |  |
| Designing, solving design problems & making design decisions |  |  |  |
| Including working on own design problems as well as open ended design problems & |  |  |  |
| Reformulating problems |  |  |  |
| Domestic, local & industrial contexts |  |  |  |
| Research & exploration |  |  |  |
| Past & present professionals & others |  |  |  |
| Different cultures |  |  |  |
| Ergonomics & anthropometrics |  |  |  |
| Using a range of design strategies |  |  |  |
| Reverse engineering |  |  |  |
| Biomimicry |  |  |  |
| Iterative process |  |  |  |
| Develop specifications |  |  |  |
| Annotated sketches |  |  |  |
| 3D & mathematical modelling & computer based tools |  |  |  |
| Innovative, functional, appealing products |  |  |  |
| Non stereotypical responses |  |  |  |
| Innovation |  |  |  |
| Use a wide range of complex materials & components |  |  |  |
| Materials e.g. sources, classifications, properties |  |  |  |
| New & emerging technologies |  |  |  |
| Smart & modern materials |  |  |  |
| Technological knowledge |  |  |  |
| Making |  |  |  |
| Health & Safety |  |  |  |
| Select & use specialist tools, equipment & machinery |  |  |  |
| Select & use specialist techniques & processes |  |  |  |
| Select & use CAM |  |  |  |
| How mechanical systems enable change in movement & force |  |  |  |
| Electrical & electronic systems (inputs & outputs e.g. heat, light, sound & movement) |  |  |  |
| Using electronics to embed intelligence that responds to inputs & control outputs e.g. |  |  |  |
| Programmable components (microcontrollers) |  |  |  |
| Detailed plans |  |  |  |
| Costings |  |  |  |
| Evaluate |  |  |  |
| Including test, evaluate & refine ideas & products against a specification & getting |  |  |  |
| Views of intended users & other interested groups) |  |  |  |
| Responsibilities of designers, engineers & technologists |  |  |  |
| Impact of D&T on individuals & society |  |  |  |
| Environmental impact including: sustainability, product lifecycles, lifecycle analysis, |  |  |  |
| Cradle to the grave, circular economy |  |  |  |
| Oral & digital presentations |  |  |  |

This document is for guidance only and is not necessarily a comprehensive list of areas of study at KS3.The curriculum at KS3 for D&T encourages content linked to your specific school context.

You can use this document as a starting point for reviewing your provision at KS3