

SMSC in Design Technology and Engineering 2023

Please see below to see some of the many ways Spiritual, Moral, Social and Cultural education is incorporated into the Design Technology and Engineering curriculum.

SMSC	Requirement	Design Technology and Engineering key examples
300. Provision for the spiritual development of pupils includes developing their:	ability to be reflective about their own beliefs (religious or otherwise) and perspective on life	A Level Comparison of 'new' products with existing types; cultural trends and differences and their effect on new product development; ethical, moral and social considerations;
	knowledge of, and respect for, different people's faiths, feelings and values	Development of a design consciousness in society.
	sense of enjoyment and fascination in learning about themselves, others and the world around them	How good design can be spiritually uplifting. Understanding how design can be aesthetically pleasing. Therapeutic effects of working with raw materials. Key concepts in innovation such as the impact of product champions and entrepreneurs.
	use of imagination and creativity in their learning	Creating and encouraging a sense of pride and self-fulfilment in their work. Students creating unique designs that reflects their own personality and interests. Ensuring that students achieve their best in a creative and innovative way. A Level DT Be open to taking design risks, showing innovation and enterprise whilst considering their role as responsible designers and citizens. Develop the capacity to think creatively, innovatively and critically through focused research and the exploration of design opportunities arising from the needs, wants and values of users and clients. Be able to create and analyse a design concept and use a range of skills and knowledge from other subject areas, including mathematics and science, to inform decisions in design and the application or development of technology
	willingness to reflect on their experiences	Be able to make informed design decisions through an in-depth understanding of the management and development of taking a design through to a prototype/product
301. Provision for the moral development of pupils includes developing their:	ability to recognise the difference between right and wrong and to readily apply this understanding in their own lives, and to recognise legal boundaries and, in doing so, respect the civil and criminal law of England	Importance of following basic design rules (e.g. in architecture, furniture). Moral issues linked with design and manufacture (CAD/CAM – mass production, employment issues). Pricing and profit from designed products –

		bespoke versus mass produced. Sourcing ethical materials.
	understanding of the consequences of their behaviour and actions	Conservation of raw materials. Material safety, including manufacturing and use of chemicals How to use equipment safely; health and safety at work. Preparing students for the world of work. Sustainability in design and manufacture. How material/product production affects the environment. Achieve optimum use of materials and components by taking into account the complex relationship between: material, form and manufacturing processes; the scale of production; the environmental factors affecting disposal of waste, surplus and by products; and the cost; The effect of product life cycles.
	interest in investigating and offering reasoned views about moral and ethical issues and ability to understand and appreciate the viewpoints of others on these issues	Develop intellectual curiosity about the design and manufacture of products and systems, and their impact on daily life and the wider world. Develop knowledge and experience of real-world contexts for design and technological activity
302. Provision for the social development of pupils includes developing their:	use of a range of social skills in different contexts, for example working and socialising with other pupils, including those from different religious, ethnic and socio-economic backgrounds	Work collaboratively to develop and refine their ideas, responding to feedback from users, peers and expert practitioners Problem solving skills; investigation, team work (including brainstorming), research, modelling, prototyping and trialling.
	acceptance of and engagement with the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs. They will develop and demonstrate skills and attitudes that will allow them to participate fully in and contribute positively to life in modern Britain	Identify and apply relevant external standards, such as BSI, IEE, to their design tasks. Commercial working practices and responsibilities and their application to project work. Five-step risk assessment. (Identify hazard, who might be harmed & how, evaluate potential for risk, record, review if details change); provision of equipment, signage etc The implications of Intellectual Property - Patents, Registered Designs, Design Right, Registered Trade Marks, Copyright; The importance and effect of international standards on the design of products – BSI and ISO Standards.
303. Provision for the cultural development of pupils includes developing their:	understanding and appreciation of the wide range of cultural influences that have shaped their own heritage and that of others	Have a critical understanding of the wider influences on design and technology, including cultural, economic, environmental, historical and social factors