

Flightpaths

Level	Analysis of Task and Research	Generate and Develop Ideas	Plan Activities	Use Materials and Equipment	Evaluate
1	design purposeful, functional, appealing products for themselves and other users based on design criteria explore and evaluate a range of existing products	generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	N/a	select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	evaluate their ideas and products against design criteria
2	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. investigate and analyse a range of existing products	generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	N/a	select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

3	Pupils generate ideas and recognise that their designs have to meet a range of different needs.	They make realistic plans for achieving their aims. They clarify ideas when asked and use words, labelled sketches and models to communicate the details of their designs.	They think ahead about the order of their work, choosing appropriate tools, equipment, materials, components and techniques.	They use tools and equipment with some accuracy to cut and shape materials and to put together components.	They identify where evaluation of the design and make process and their products has led to improvements.
4	Pupils generate ideas by collecting and using information.	They communicate alternative ideas using words, labelled sketches and models, showing that they are aware of constraints.	They take users' views into account and produce step-by-step plans.	They work with a variety of materials and components with some accuracy, paying attention to quality of finish and to function. They select and work with a range of tools and equipment.	They reflect on their designs as they develop, bearing in mind the way the product will be used. They identify what is working well and what could be improved.

5	Pupils draw on and use various sources of information. They use their understanding of the characteristics of familiar products when developing and communicating their own ideas.	They clarify their ideas through discussion, drawing and modelling.	They work from their own detailed plans, modifying them where appropriate.	They work with a range of tools, materials, equipment, components and processes with some precision. They check their work as it develops and modify their approach in the light of progress.	They test and evaluate their products, showing that they understand the situations in which their designs will have to function and are aware of resources as a constraint. They evaluate their products and their use of information sources
6	Pupils draw on and use a range of sources of information, and show that they understand the form and function of familiar products.	They make models and drawings to explore and test their design thinking, discussing their ideas with users. They check their work as it develops and modify their approach in the light of progress	They produce plans that outline alternative methods of progressing and develop detailed criteria for their designs and use these to explore design proposals.	They work with a range of tools, materials, equipment, components and processes and show that they understand their characteristics.	They evaluate how effectively they have used information sources, using the results of their research to inform their judgements when designing and making. They evaluate their products as they are being used, and identify ways of improving them.

7	They recognise the different needs of a range of users and develop fully realistic designs. Pupils use a wide range of appropriate sources of information to develop ideas.	They investigate form, function and production processes before communicating ideas, using a variety of media.	They produce plans that predict the time needed to carry out the main stages of making products.	They work with a range of tools, materials, equipment, components and processes, taking full account of their characteristics. They adapt their methods of manufacture to changing circumstances, providing a sound explanation for any change from the design proposal.	They select appropriate techniques to evaluate how their products would perform when used and modify their products in the light of the evaluation to improve their performance.
8	They identify conflicting demands on their design, explain how their ideas address these demands and use this analysis to produce proposals.	Pupils use a range of strategies to develop appropriate ideas, responding to information they have identified.	When planning, they make decisions on materials and techniques based on their understanding of the physical properties and working characteristics of materials.	They organise their work so that they can carry out processes accurately and consistently, and use tools, equipment, materials and components with precision.	They identify a broad range of criteria for evaluating their products, clearly relating their findings to the purpose for which the products were designed and the appropriate use of resources.
9	To consistently identify conflicting demands on their design, explain how their ideas address these demands and use this analysis to produce proposals.	To consistently use a range of strategies to develop appropriate ideas, responding to information they have identified.	To consistently plan and make decisions on materials and techniques based on their understanding of the physical properties and working characteristics of materials.	To consistently organise work so that they can carry out processes accurately and consistently, and use tools, equipment, materials and components with precision.	To consistently identify a broad range of criteria for evaluating their products, clearly relating their findings to the purpose for which the products were designed and the appropriate use of resources.

10	To master consistently identify conflicting demands on their design, explain how their ideas address these demands and use this analysis to produce proposals.	To master the use a range of strategies to develop appropriate ideas, responding to information they have identified.	To master planning and make decisions on materials and techniques based on their understanding of the physical properties and working characteristics of materials.	To master the process of organising work so that they can carry out processes accurately and consistently, and use tools, equipment, materials and components with precision.	To master the skill of identifying a broad range of criteria for evaluating their products, clearly relating their findings to the purpose for which the products were designed and the appropriate use of resources.
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