

## FLIGHTPATH

## PRODUCT DESIGN

Year 9	Year 9	Year 9	Year 9	Year 9	Year 9	Year 9	Year 9
1	2	3	4	5	6	7	8
Explore		You can produce simple design ideas and with individual help understanding how to make them work.	You can produce small range of design ideas and with guidance, after you have been shown, understand how they work and can be made.	<b>You can use your prior knowledge and research to produce several different design ideas and with limited help, use your experience to understand how they work and how they are made.</b>	You can use prior knowledge and independent research to produce at least four imaginative design ideas and can develop them to show a full understanding of how they will work.	You can use a wide range of information to generate realistic and original design ideas. Through your designing you can develop one idea through to manufacture demonstrating a sound understanding of how materials and components can be combined.	You use a range of strategies to analysis complex situations to generate and develop appropriate and original ideas which after analysis you can modify and fully develop to allow a high class product to be made.
Design		You can explain your design ideas using basic freehand sketches and add limited annotation	You can use a range of freehand sketches in 2D and 3D with some annotation and when appropriate use ICT to make your design ideas clear.	<b>You can use different types of freehand drawing showing dimensions, rendering, annotation an ICT to help you explain your design ideas.</b>	You can use a full range of media to explain your design thoughts ready to develop into full working drawings.	You can communicate your design ideas and working drawings using the full range of appropriate media.	You can communicate complex design ideas using your knowledge of advanced media techniques so that others can follow your thinking.
Develop		You can follow a set of step by step instructions for making given by your teacher	You can use your own experience and with limited help plan main stages for making.	<b>You can produce a step plan for making in order to complete your own work.</b>	You can prepare a detailed step by step plan for manufacture that others can follow.	You can produce a detailed plan for manufacture that others can follow listing all the requirements you need to complete the task in a logical sequence.	You can produce in advance of making a detailed, accurate and logical plan which predict the time and resources needed to complete the manufacture of the product.
Make		With individual help you can understand how tools and equipment can be used with care and safety to cut and shape materials ready for assembly	With guidance you can show your understanding of how to use tools and equipment to measure, mark out, cut and join materials with care and safety to produce well made products.	<b>With some guidance you can control and use tools and equipment with degree of accuracy and in a safe manner to produce a quality product. You can adjust your way of working to improve the outcome.</b>	You can use your experience to select and use a range of tools and equipment with some skill and precision to ensure the safe manufacture of a well made product. You can modify your plans to ensure a quality outcome.	You can adapt your methods of manufacture to changing circumstances and select and use a full range of tools and equipment in a skilful and accurate way with high regard for safety. You can modify your plans to make a high quality product that works well.	You can use your prior knowledge and understanding of a wide range of materials and equipment to organise the production of fully functional products that have been made with precision and a high regard for safety.
Evaluate		You can make simple verbal explanations about your ideas and suggest possible changes to improve both the designs and the finished product	You can consider your design ideas and explain why you are developing one for manufacture. You can communicate the strengths and weaknesses of your finished product.	<b>You can evaluate your design ideas against the specification to select the best design to develop for manufacture. You can test and evaluate your finished product and explain how well it works.</b>	You can explore and test your design ideas against the specification and explain why you have selected one idea to develop for manufacture. Through on going evaluation and results from testing you can evaluate your product and suggest modifications.	You can make a full evaluation of your ideas against the specification and develop, model and test them to produce a realistic design for manufacture. You can evaluate the end product using evidence from tests and users' views to suggest and justify modifications.	You can fully evaluate your ideas against the specification and consider the user and manufacturer needs when developing a design for manufacture. You can evaluate the end product using thorough analysis of your testing to show how the school based prototype could be extended for commercial manufacture.
SPaG		There are errors in spelling, punctuation and grammar which sometimes hinder overall meaning.	There are errors in spelling, punctuation and grammar which sometimes hinder overall meaning.	<b>Students spell and punctuate with reasonable accuracy.</b>  <b>Students use rules of grammar with some control of meaning and any errors do not significantly hinder overall meaning.</b>	Students spell and punctuate with reasonable accuracy.  Students use rules of grammar with some control of meaning and any errors do not significantly hinder overall meaning.	Students spell and punctuate with considerable accuracy.  Students use rules of grammar with general control of the meaning overall.	Students spell and punctuate with considerable accuracy.  Students use rules of grammar with general control of the meaning overall.