

Moving Monsters	Art, Design and Technology	Years 3 & 4, Term 3	Year B
Key vocabulary: examine, sketch, label, pneumatic, system, materials, components, annotate, design, audience, purpose, evaluate			
Knowledge and skills: Investigate and analyse existing products and those they have made. (BD1) Use knowledge of existing products to design a functional product. (BD2) Create designs using annotated sketches, cross-sectional diagrams and exploded diagrams. (BD3) Consider how existing products and their own finished products might be improved and how well they meet the needs of the intended user. (BD4) Safely measure, mark out, cut, assemble and join with some accuracy. (BD5) Use techniques which require more accuracy to cut, shape, join and finish eg cutting internal shapes, slots in frameworks. (BD6) Make suitable choices from a wider range of tools and unfamiliar materials. (BD7) Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. (BD9) Use Years 3/4 vocabulary: design, feature, component, function, target audience, design criteria, improvement. (BD11)		Possible activities: Explore products that use air to make them work. Make simple pneumatic systems following instructions on challenge cards. Investigate different ways of joining and fixing components. Investigate ways of using pneumatic systems with various materials to control movement. Design, make and evaluate a monster with a moving part controlled by a pneumatic system.	
Spiritual, Moral, Social and Cultural Education, and Promotion of British Values: Spiritual: Pupils have the opportunity to exercise imagination, inspiration, intuition and insight through creativity and risk taking in analysing, designing and manufacturing a range of products. Encouraging creativity allows pupils to express innermost thoughts and feelings and to reflect and learn from reflection, for example, asking ‘why?’, ‘how?’ and ‘where?’ Moral: pupils encouraged to value the environment and its natural resources and to consider the environmental impact of everyday products. Pupils are encouraged to become responsible consumers. Social: Opportunities to work as a team, recognising others’ strengths and sharing equipment. DT can promote equality of opportunity e.g. encouraging girls to use equipment that has been traditionally male dominated. Cultural: Pupils reflect on ingenious products and inventions, the diversity of materials and ways in which design technology can improve the quality of life. British Values: Take the views and opinions into account but still have the right to make their own choices. Take turns both in speech and practically with others. Understand that it is not always possible or right to have one’s own way and understand the value of compromise. Understand the importance of safety rules when using tools. Understand that there are able to listen to others but can use their own ideas and design choices. Accept that others ideas may not be the same as their own but are able to accept this. Tolerate ideas from others which are different to their own. Understand that many great design ideas originate from other cultures. Listen to and consider the ideas and opinions of others even if they differ from their own. Be able to take turns during discussions to resolve difficulties or make decisions. Offer supportive comments in evaluations that will improve learning outcomes in a way that is objective but sensitive to the listener.			