

Year 4 Mechanical Systems: Pneumatics

Who is our mighty mascot?

Meeting	Greater depth
<p>Knowledge</p> <ul style="list-style-type: none"> To know that they are designing, making and evaluating a moving mascot for children for Chinese New Year (design brief). To know the purpose of their moving mascot is to entertain and celebrate Chinese New Year. To consider the intended user and what would make it appealing to them. To understand the function of the pneumatic system is to create a moving part of a mascot. To consider the aesthetics of the product and what will make it attractive and interesting. To know and sequence the main stages of making. To understand and use pneumatic mechanisms To explore and test the way different systems work using different components (tubing, syringes and balloons). <p>Skills</p> <ul style="list-style-type: none"> To investigate and analyse books, videos and products with existing pneumatic systems. To generate realistic and appropriate ideas and their own design criteria through discussion, focussing on the needs of the user. To use annotated sketches and prototypes to develop, model and communicate ideas. To select and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. To select and use finishing techniques suitable for the product they are creating. To evaluate their own products and ideas against criteria and user needs, as they design and make. To know and use the key vocabulary, listed below. <p>Vocabulary</p> <ul style="list-style-type: none"> Tubing – a length of metal/plastic/glass etc. in a tubular form pneumatic system – components using compressed air to make things move input movement – the force put into a mechanism output movement – the force coming out of a mechanism compression – pressing something into a smaller space 	<p>Can you use more than one pneumatic system to create different types of movements?</p>

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| <ul style="list-style-type: none">• pressure - continuous physical force placed on or against an object• inflate – fill with air or gas• deflate – empty of air or gas• pump – a device used to raise or move compressed gases into objects | |
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