

**Year 3 Design and Technology Knowledge Organiser Summer 2**

**Mechanical system: Pneumatic toys**



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| **Knowledge** |
|  | **Exploring pneumatics*** Machines can work with the use of wind, water and human energy.
* Turbines are big drums that water, wind or steam turn to make electricity.
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|  | **Designing a pneumatic toy*** Thumbnail sketches: Good for making sense of your ideas, in a series of quick sketches.
* Exploded – diagrams: Used to show how the different parts of a product fit together.
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|  | **Making pneumatic toys** * We can use split pins to create motion.
* Use scissors safety by cutting away from your body slowly.
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|  | **Decorating and assembling my toy*** We can add detail by attaching googly eyes, curl up coloured paper, use pipe cleaners, tissue paper, add feathers, pom poms.
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|  | **Evaluating*** Evaluating is saying what we like and can improve about a product.
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|  | **Key Vocabulary** |
| **Input** | Input is the motion used to start a mechanism.  |
| **Lever** | This helps us lift loads with lesser effort.  |
| **Linkage** | Lengths of material that are joined together by pivots, so that the links can move as part of a mechanism.  |
| **Pneumatic system** | A mechanism that runs on air or compressed air.  |
| **Motion** | The movement an object makes when controlled by an input or output. (left , right, up, down) |
| **Net** | A 2D flat shape, that can become a 3D shape once assembled.  |

