

**Activity Title:**

**Pipe Planes**

**Area of Learning:**

**Expressive Arts and Design:**

- Safely use and explore a variety of materials, tools, and techniques, experimenting with colour, design, texture, form, and function,
- Share their creations, explaining the process they have used.

**Development Matters / Early Learning Goals:**

- Safely use and explore a variety of materials, tools, and techniques, experimenting with colour, design, texture, form, and function
- Share their creations, explaining the process they have used
- Make use of props and materials when role playing characters in narratives and stories.

**Resources:**

- Paper straws
- Strips of paper/thin card, 2 to 3 cm wide of various lengths
- Glue sticks / stick tape or masking tape
- Scissors
- More card for cutting strips of different length / thickness.

**Introduction:**

Show the children pictures of aeroplanes or toy aeroplanes. Have they seen planes before? Have they ever been on one? Show them a pre-made paper straw aeroplane – what do they think this is? Try and fly it. Model using glue sticks / tape to make a paper straw plane, then model testing it out. To make a paper straw plane:

1. Take a long strip of paper and add glue one of the short ends to the other short end, using a glue stick or stick tape / masking tape, to create a loop.
2. Do the same with a shorter strip of paper, creating a smaller loop.
3. Use glue or tape to attach the loops to either end of a straw.
4. Throw your paper straw planes small loop forwards and see if they fly.

Ask how you could work out how far it went – counting steps, putting a marker down – then try to beat that distance. Show children building space and resources.

**Activities and Experiences:**

Children will use paper / card strips and glue/tape to create and test out paper straw aeroplanes.




**Differentiation:**

**Support:**

Adult help to stick paper / card loops to paper straws.

**Extension:**

Challenge children to come up with alternative designs – thicker loops, more loops, folding the loop into a square or triangle. Which

		design flies best?
<b>Conclusion / Plenary:</b>		
Have a competition to see who's design flies the furthest. Discuss what they found – was it surprising the design flew, and why?		
<b>Key Vocabulary:</b>		
Aeroplane, fly, loop, build, design, change, length, thickness, far, farthest, shape	<ul style="list-style-type: none"> <li>• How far does your paper straw plane fly?</li> <li>• How can you measure how far it goes?</li> <li>• Do you know any other way to make paper planes?</li> </ul>	
<b>Careers in the Curriculum</b>		
<p>Cambridge LaunchPad is a collaboration of Greater Cambridge science, technology, engineering and maths (STEM) organisations, who invest their talent and resources to inspire school children and young people into STEM careers. Our Industry Partners and School Partners are at the heart of the programme experience. By connecting education and employment, we can showcase the diverse range of careers and education pathways into STEM industries and meet the growing demand for a skilled workforce in the Greater Cambridge region. Cambridge LaunchPad is a three-tiered scheme, made up of Stars, Innovators and Scholars, designed to suit students from Year 4 to the end of Year 12, at key points of their decision making – from primary school, to before selecting GCSE options, and to finessing advanced-level experiences.</p>		
<b>Partner Profile:</b>		
<b>Name:</b>	<b>Marshall Aerospace</b>	
<b>Web Address:</b>	<a href="http://marshallaerospace.com">marshallaerospace.com</a>	
<b>Partner Summary:</b>		
<p>(What are the primary activities of the partner? What industry sector are they? Where do they operate? What are key products / outcomes?)</p> <p>Marshall Aerospace are part of the privately-owned Marshall Group, headquartered in Cambridge. They employ a global team of over 2,000 highly skilled people at locations in the UK, the Netherlands, UAE, Canada, and the USA.</p> <p>Marshall, which owns a broad portfolio of businesses in the Aerospace and Defence, Automotive, Fleet Management, Property and Education sectors, boasts a rich heritage with aviation dating back to 1912 when its mechanics played a key role in the repair of the British Army Airship Beta II.</p> <p>Since then, the Marshall name has become synonymous with the aerospace industry, not least because of its long history of apprenticeships that has seen it launch the careers of over 20,000 apprentices, lots of whom remain in the business and many of whom have gone on forge amazing careers elsewhere in the industry.</p> <p>Despite its long and illustrious past, the Marshall of today is very firmly focussed on the future, finding, and developing the next generation of talent, investing in record levels of R&amp;D spend and harnessing emerging technologies to solve its customers' problems, support local communities and protect our planet.</p>		