



Activity Title:

Paper Plane Races

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.

Resources

- Paper plane template
- Sheets of paper, card, coloured paper, textured paper, tinfoil, etc
- Scissors.

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.

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 aeroplane – what do they think this is? Try and fly it.

Show them a different design, or the same design but a different colour or material? Does a 'light' colour plane fly further as it is 'lighter'? Ask them to explore by trying different designs.

Show the children how to make a paper aeroplane, and the different materials / decorating options. Allow them to colour and decorate a plane, and ask what might help it fly? For example, would adding feathers help it fly, because birds have feathers? Will adding more decoration make it heavier so it won't fly as far?

Test the designs, to see who'd plane will fly the furthest. Ask how you could work out how far it went – counting steps, putting a marker down - then try to beat that distance.

Activities and Experiences:

Children will use paper, card, and other materials to create and decorate paper aeroplanes. They will then test out their planes. Which design and which material flies the best?

Differentiation

Support

Adult help to fold materials to create planes, supported by provided templates.

Extension

Challenge children to come up with alternative designs – different types of planes, materials, decorated or undecorated,

etc.

Conclusion / Plenary:

Have a competition to see who's design flies the furthest. Discuss what they found – was it surprising the design flew furthest, and why?

Key Vocabulary:

Aeroplane, fly, loop, build, design, change, length, thickness, far, farthest, shape

Key Questions:

- How far does your paper plane fly? Does it go further than a card plane? What about a different colour plane?
- How can you measure how far it goes?
- Do you know any other way to make paper planes?

Careers in the Curriculum;

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.

Partner Profile:



Name:

MathWorks

Web Address:

www.cambridge-design.com

Partner Summary:

(What are the primary activities of the partner? What industry sector are they? Where do they operate? What are key products / outcomes?)

MathWorks are the creators of MATLAB and SIMULINK, software that is used widely within STEM organisations to enable engineers and scientists to analyse data, and to simulate systems and designs.

MathWorks was founded in 1984 by Jack Little and Cleve Moler, who recognized the need among engineers and scientists for more powerful and productive computation environments beyond those provided by languages such as Fortran and C. They combined their expertise in mathematics, engineering, and computer science to develop MATLAB. MathWorks believes in the importance of engineers and scientists – that they increase human knowledge and profoundly improve our standard of living.

Mathworks actively support their local and professional communities through initiatives that advance STEM education, foster staff volunteerism, build environmental sustainability, and aid global relief efforts.

MathWorks is committed to acting responsibly as a global corporate citizen. Their core values and conviction to "Do the Right Thing" guide them in leveraging our unique company strengths for meaningful outcomes. Mathworks believe that investing in our Social Mission Program helps them to lead in both local communities and the field of technical computing.