﻿﻿**How to get to the Paper Plane Championships**

***Steps to Take* for this Resource**:

1. Students research design of flying structures from around the world identifying suitability of design to local environment and making comparisons to other structures. To provide background information on different designs of flying machines.

* ***Design and Technologies Knowledge and Understanding:****Recognise the role of people in design and*[*technologies*](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=technologies)*occupations and explore factors, including sustainability that impact on the design of products, services and environments to meet community needs*[*​****(ACTDEK010)***](http://www.australiancurriculum.edu.au/technologies/design-and-technologies/curriculum/f-10?y=3-4&s=DEKU&s=DEPPS&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)
* ***Design and Technologies Processes and Production Skills:****Critique needs or opportunities for*[*designing*](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=designing)*and explore and test a variety of materials,*[*components*](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=components)*, tools and*[*equipment*](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=equipment)*and the techniques needed to produce designed solutions*[***(ACTDEP014)***](http://www.australiancurriculum.edu.au/technologies/design-and-technologies/curriculum/f-10?y=3-4&s=DEKU&s=DEPPS&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)
* [**https://www.youtube.com/watch?v=y23MtdGNNN0**](https://www.youtube.com/watch?v=y23MtdGNNN0)

*Can lead from /to this…*

1. Students compare different types of transportation through the ages

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* *Sequence information about people’s lives and events. Recounting and sequencing events associated with a particular history*[*(ACHASSI076)*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACHASSI076)
* *exploring how Aboriginal Peoples exchanged ideas, technology and goods with each other and with Torres Strait Islander Peoples across vast distances  (*[*ACHASSK083*](http://www.australiancurriculum.edu.au/humanities-and-social-sciences/hass/curriculum/f-10?layout=1#cdcode=ACHASSK083&level=4)*)*
* [**https://www.youtube.com/watch?v=xKMdVWrKv2g**](https://www.youtube.com/watch?v=xKMdVWrKv2g)
* [**https://www.youtube.com/watch?v=FaLCQo8NJFA**](https://www.youtube.com/watch?v=FaLCQo8NJFA)
* [**https://www.youtube.com/watch?v=XfKFz5gV6bY**](https://www.youtube.com/watch?v=XfKFz5gV6bY)
* [**https://www.youtube.com/watch?v=0dhRlJ16zTk**](https://www.youtube.com/watch?v=0dhRlJ16zTk)
* [**https://www.youtube.com/watch?v=FgIY8x2bU0s**](https://www.youtube.com/watch?v=FgIY8x2bU0s)

1. Students explore paper folding techniques and how to create shapes using paper. Students learn about creating simple shapes within an existing shape

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* [***Mathematics:****| Measurement and Geometry | Location and transformation*](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?layout=1#cdcode=ACMMG091&level=4)*Create symmetrical patterns, pictures and shapes with and without digital technologies*[***(ACMMG091)***](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=NA&s=MG&s=SP&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)
* [***Mathematics:****| Measurement and Geometry / Shape*](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?layout=1#cdcode=ACMMG091&level=4)*Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies*[***(ACMMG088)***](http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?y=4&s=NA&s=MG&s=SP&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)

1. Students research local sustainable materials suitable for their design.   
   (recycled paper/ re-use paper) Advantages and disadvantages. (Local – school environment)
2. Students to design their own paper plane using unique design or *altering* current paper plane template (which includes altering materials used) they used in above construction.
3. Students measure to determine paper size, shape size, angles for symmetrical shapes to occur in their design

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* ***Design and Technologies Knowledge and Understanding:****Recognise the role of people in design and*[*technologies*](http://www.australiancurriculum.edu.au/glossary/popup?a=T&t=technologies)*occupations and explore factors, including sustainability that impact on the design of products, services and environments to meet community needs*[*​****(ACTDEK010)***](http://www.australiancurriculum.edu.au/technologies/design-and-technologies/curriculum/f-10?y=3-4&s=DEKU&s=DEPPS&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)

1. Students create a visual design
   * + [***Visual Arts :***](http://www.australiancurriculum.edu.au/the-arts/visual-arts/curriculum/f-10?layout=1#cdcode=ACAVAM111&level=3-4)*Use*[*materials*](http://www.australiancurriculum.edu.au/glossary/popup?a=TheArts&t=materials)*, techniques and processes to explore*[*visual conventions*](http://www.australiancurriculum.edu.au/glossary/popup?a=TheArts&t=visual+conventions)*when making artworks*[***(ACAVAM111)***](http://www.australiancurriculum.edu.au/the-arts/visual-arts/curriculum/f-10?y=3-4&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)
     + [***Visual Arts:***](http://www.australiancurriculum.edu.au/the-arts/visual-arts/curriculum/f-10?layout=1#cdcode=ACAVAR113&level=3-4)*Identify intended purposes and meanings of artworks using visual arts terminology to compare artworks, starting with visual artworks in Australia including visual artworks of Aboriginal and Torres Strait Islander Peoples*[***(ACAVAR113)***](http://www.australiancurriculum.edu.au/the-arts/visual-arts/curriculum/f-10?y=3-4&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)
2. Students construct paper planes using paper folding techniques with a variety of materials such as papers, cardboard of varying thickness and texture to determine design suitability for structures.

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* [***Visual Arts :***](http://www.australiancurriculum.edu.au/the-arts/visual-arts/curriculum/f-10?layout=1#cdcode=ACAVAM111&level=3-4)*Use*[*materials*](http://www.australiancurriculum.edu.au/glossary/popup?a=TheArts&t=materials)*, techniques and processes to explore*[*visual conventions*](http://www.australiancurriculum.edu.au/glossary/popup?a=TheArts&t=visual+conventions)*when making artworks*[***(ACAVAM111)***](http://www.australiancurriculum.edu.au/the-arts/visual-arts/curriculum/f-10?y=3-4&c=1&c=2&c=3&c=4&c=5&c=7&c=6&p=1&p=2&p=3&layout=1)

1. Students test their planes under different environmental conditions (heat/wind/rain/snow/sunlight) using household items to replicate weather conditions. (fan/water spray/hairdryer/crushed ice/heat lamp or light bulb / close to paper – or sunlight)
2. Students determine what ‘category’ their paper plane can be placed under - using data collected to compare their test results *(see Digital Technologies Resource)*
3. Students race their paper planes against each other in selected events. The top 3 of each category will compete in the Championships.

