



FLIGHT AT KS1 (CROSS-CURRICULAR TOPIC)

SESSION 5 THE STORY OF AMY JOHNSON AND THE WRIGHT BROTHERS

The teaching took place in an Exeter First School with a split Year 2/3 class. The older Year 3's formed a full class next door, while the younger Year 3's were in with the Year 2's. I worked with the class for a full morning a week over five weeks.

Andrea, the class teacher, had chosen the cross-curricular topic of 'Flight'. We planned the teaching together, to include science, history and technology, as well as literacy, particularly speaking and listening. The history element of the teaching was done mainly through storytelling. The stories ranged from myth (the story of Icarus) to Amy Johnson's solo flight from England to Australia. The idea was to give the children an overview of the development of flight, while also going into depth with the storytelling about a few special flying events.

This account describes the fifth, and final, session of the topic. Here we moved the development of flight into the 20th century, to aeroplanes. We told two stories: the Wright brothers' first flight, and Amy Johnson's solo flight to Australia. Amy Johnson's tale was a good one to tell, as it provided a *herstory* in the very male *history* of flight.

Storytelling is a major way of learning for young children. Through stories children learn about past people and events, develop their imagination and their listening skills, learn new vocabulary in context and develop their understanding of the rhythms and structure of the English language.

Class/Year group and Time

Year 2/3, mixed gender and ability, 29 in the class. The Year 2's were in the majority. One whole morning.

Learning objectives

For the children to:

- learn about famous past events and people (history)
- observe features of the Wright brothers' aeroplane and make deductions about their functions (science)
- carry out an investigation into the effect of weight in different places on an aeroplane – how does weight movement affect an aeroplane's flight? (Science – Sc1: investigative skills; and Sc4: Forces and motion, why things change direction).

Key questions

Who developed the first aeroplane?

What were early aeroplanes like and how did they fly?

Who was Amy Johnson?

Resources

Paper aeroplane templates, at least 35 (some children will tear theirs and need more than one).

We used the template reproduced with this lesson (see Resources). However, the children could make a folding plane instead.

<http://www.nickjr.co.uk/activities/dotogethers/paperPlane.aspx> has a simple folding template to download, with clear instructions.

Blutack and paper clips, to act as weights on the paper aeroplanes.

Wright brothers information:

The story of the Wright brothers. Available from topic books (or try the children's section of your local library).

On the web:

http://en.wikipedia.org/wiki/Wright_Brothers has a very detailed account of their lives and work. Also photos of their aircraft, including the famous Wright Flyer 1.

<http://www.first-to-fly.com/History/Wright%20Story/wright%20story.htm> This gives clear explanations of the forces involved in flying, and a good

description of 'The Invention of Flying'. It also has enlargeable photos of the first three Wright Flyers.

<http://www.wright-house.com/wright-brothers/wrights/1903.html> has a clear account of the development of the brothers' first Flyer, and a set of pictures of its December 1903 flight.

Pictures of the Wright brothers' first three aeroplanes, the Wright Flyers 1, 2 and 3. See websites above for these.

Amy Johnson information

The story of Amy Johnson's solo flight to Australia makes a terrific tale, full of dramatic incidents that yield insights into the reality of flying in the early days. I gleaned most of the details for my story from Amy's biography: Babington Smith, Constance (2003) *Amy Johnson*

On the web:

<http://www.theaustralian.news.com.au/story/0,20867,21194260-5002031,00.html>. This has some good details for a story, such as the things she took with her on her flight, e.g. a long knife to fight off sharks.

<http://www.pjcomputing.flyer.co.uk/comet/amy.html> for a brief description of her life.

http://commons.wikimedia.org/wiki/Image:Amy_Johnson_jason_india.jpg for a picture of Amy with her plane 'Jason' in India.

<http://www.air-racing-history.com/PILOTS/Amy%20Johnson.htm> gives a reasonably detailed account of her 1930 flight to Australia.

You may also be able to find these children's books about Amy Johnson:

Bellis, H. *Amy Johnson*. Newnes. 1953

Charles, W. *Amy Johnson, a Brave Yorkshire Girl* Blackie. 1966

Newton, D. *'They Were Firs'*. No.7, Johnson, Earhart. Oliver & Boyd. 1969

The teaching

Episode 1

Focus: Storytelling, discussion and observation - the Wright brothers' aeroplane.

Today we brought the children up to the age of the aeroplane, and the first successful controlled, powered flight by Wilbur and Orville Wright in December 1903.

With the children sitting on the carpet, I briefly told the story of the Wright brothers. I displayed pictures of the Wright Flyer (versions 1, 2 and 3). They looked closely at the black and white photos and we discussed the features of the Flyer in detail. The children observed well, noticing the lack of a seat or cockpit, skids instead of wheels for landing, and the lack of a nose at the front. They correctly deduced that the two front surfaces were for balance. They also noticed the pilot's balancing act on the Flyer, with man and engine to left and right of centre.

Episode 2

Focus: Participatory storytelling – Amy Johnson flies to Australia.

Now we moved on to 1930, when Englishwoman Amy Johnson flew solo from England to Australia. She was not the first person to do this, but she was the first woman, and her aim was to break the record set by Bert Hinkler two years earlier. The story of her flight in her Gypsy Moth plane *Jason* made an exciting narrative. Amy had very little flying experience and the journey was long and dangerous.

Before the story, we all looked at a map of her flight and traced it on the classroom globe, so that the class could get an idea of how far she flew. Then I told her tale, interspersing it with drama. For example, when we came to the point where she crash-landed on the British army's parade ground at Jhansi in India, I swooped down on the class as *Jason*, and the class scattered, as the soldiers there had done in real life. At her next crash-landing, in Burma, we all played *Jason*, ending with our noses in a ditch (a wonderful sight – children and teachers, arms outstretched, kneeling with noses on the floor).

Because of the delays when *Jason* had to be repaired, Amy did not break Hinkler's record. She did, though, become a celebrity in both Britain and Australia. She also later made several record-breaking flights – to Moscow, Tokyo and Cape Town.

Episode 3

Focus: Investigating balance and flight.

Now we turned to a small science enquiry, picking up on the question of balance, which had been much discussed in relation to the Wright brothers' Flyer.

We posed the question: *If we put weights on a paper plane in different places, how will this affect its balance and its flight?*

We handed out the aeroplane templates, one per child. The children cut out and assembled them. Several of the Year 2's needed help putting their aeroplanes together.

Then we tested the paper planes' flight capabilities, making sure that all the planes flew. For this and the testing that followed, we pushed all the tables and chairs against the wall and divided the class into four groups. The children in each group took it in turn to launch their aeroplanes, all towards the windows. In this way only four aeroplanes were flying at any one time, and all in the same direction. Amazingly, there was no chaos.

Next the children used the Blotack and/or paper clips as weights to test the effect of changing the balance of their aeroplane. They tried adding the weights to one wing, the nose, the tail or the middle of their aeroplane. We asked them to observe closely what happened with each change of weight.

Episode 4

Focus: Writing – recording test results.

We restored the classroom to normality, and set the children to write their flight reports.

Learning outcomes

The children:

- learnt about three famous people, the first aeroplanes, and two events in aeroplane history (history)
- observed features of the Wright brothers' aeroplanes and made thoughtful deductions about how and why they worked (science)
- carried out a simple investigation into how weight movement affects an aeroplane's flight (science).

Reflection

by Andrea, the class teacher

It was a science project, yes, but we brought the history out of it, and it worked *really* well, the science and history together. Then at the end Jacqui brought in some little paper aeroplanes and the children had to work out where did you need weight. They experimented putting Bluetack, paper clips and so on on them. So the science and the history which I'd never thought of as subjects going together worked really well.

The children were stretched and challenged.

Nuffield Primary History project

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