



From Building Model Aircraft at School to the "Aviation Project"

Aeromodelling at school does not have to be taught as an individual subject but can be combined with virtually all other learning areas – from history to languages and science – to form the practical and emotional part of an "Aviation Project"

Joined-up thinking is increasingly important

Aeromodelling in schools ideally balances learning content with cognitive orientation as well as work in front of a computer screen. Unfortunately, it often takes place in isolation, i.e. with no connection to other subjects and content even when some theory – usually aerodynamics – is administered as part of an aeromodelling course. However, there is a huge opportunity, beginning with first steps taken with a small aeroplane in the classroom, to discover the entire world of aviation. This turns flying into a huge experience for

young people. In such an integrated approach to aviation, building a model aircraft, even if it is small and modest, provides a wonderful connection, not only to practical and technical creation, but also to the emotional side of flying. It is my conviction that not only pupils, but also adult students of aviation and budding managers should experience this at least once.

Co-operation is important

If we place the building of a model aircraft at school in a wider context with the world of aviation, e.g. history, laws of

science, social, economic and ecological issues, then the co-operation among disciplines suddenly acquires a very practical and hugely fascinating purpose. The pupils become a project team while teaching staff provide input and mainly act as project coaches. Enough has been written about project-orientated teaching. The fact is, that with this form of learning, motivation and independent activity are higher than with conventional methods.

Individual learning

Of course we can build 25 identical model aircraft within the project. However, a real challenge is to let pupils accomplish individual and much more creative work instead of performing uniform tasks. Apart from aircraft of all types – such as hot-air balloons – this could maybe be a rocket, a wind generator or a model of an airport. The coaching effort associated with this kind of individualisation must not be underestimated.



Making a start is not so difficult

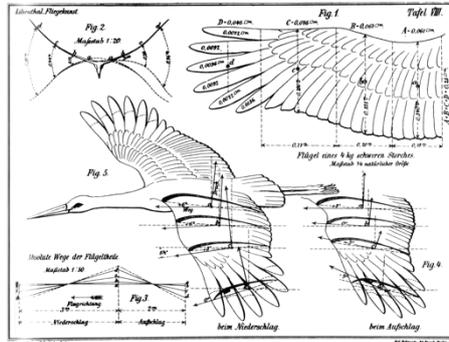
It is only logical that such interdisciplinary school or learning projects have to be well planned by the teaching team. Making a start is not all that difficult and can take place in various subjects. A few examples are given below:



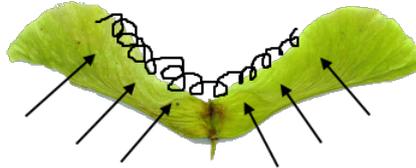
History and geography: The by now almost "classic" start is an episode from aviation history, for example the story of the "montgolfière" hot-air balloons or the crossing of oceans, etc. Subsequently, individuals or teams work on further episodes of aviation history. Who will produce a map showing record flights?



Physics: It's just as easy to start with physics, for example with the topic "air". Air is nothing! But what happens when air molecules hit a solid body at high velocity – or bodies hit air? Warm air – cold air, and we've already come to the montgolfières! Who will now build a hot-air balloon or a small wind tunnel?



Biology: Nature provides countless examples of "flying", think of the maple seed, flying birds or the wind. Who will build a small gyrocopter or hold a presentation on the flight of birds?



Languages and literature: Finally, a huge treasure trove of aeronautical tales is to be discovered in the literature of various cultures and languages. Starting with the question "who has ever dreamed of flying?" leads to fascinating stories.



Better to start small

The higher the intended level of project integration, the higher the requirement for teamwork within the school. It's not always possible to motivate fellow teachers. It is therefore advisable to start on a small scale, i.e. integrated with only two or three subjects: Aeromodelling combined with history and biology or building mongolfières combined with physics and history or French, etc.

Training and Careers: The subject "Economics" also provides numerous interesting aspects. An example could be the economic and environmental effects of an international airport on a region. Depending on age, professional training and careers in aviation are highly relevant topics and workplace visits can be a very welcome complementary experience



More depths requires sufficient time

The amount of time taken for work on the "aviation project" can be planned very differently. As a minimum, I would take a week (but of very concentrated work). Ideally all subjects will be coordinated with the project during that week. To allow for more focus on processing of what has been learned, reflection or even choices of career or higher education subjects, the project should run as a major subject for several months or even an entire term. Of course, the intensity can vary. I will be happy to respond to queries and to help with suggestions. I am always interested to hear about experiences with learning projects on aviation. Good luck!



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