



Family Open Day
Saturday 3rd December

All Free | Library open 9.30am - 4pm

Flight

Surely few innovations
were as dramatic and
exciting as *Flight*.
Learn more about the
early attempts.



#Lit & Phil

Zeppelins in the Library!

Come and see a scale model (nine feet long) of the L34 Zeppelin which was shot down off Hartlepool on 27th November 1916 by Lt. Ian Pyott of RFC Seaton Carew. There will also be a model of Pyott's biplane on the same scale. You can help make models of the biplane throughout the day.

There will be a small exhibition of some of the Lit & Phil's books about flight.

Free Guided Tours

**10.30am, 11.30am,
12.30pm, 1.30pm and
2.30pm**

Ben Jones will be on hand in the morning to introduce you to the *Reflections of Newcastle* ebooks and city walk. It's the last chance to go on the WWI library trail.

All events and tours are FREE but to reserve a place please call

0191 232 0192 or email library@litandphil.org.uk

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Free Events

**Library open 9.30am-4pm
Membership Special Offer!**

11.30am and 2pm

The Centre for Life presents Flights of Fancy

From hot air balloons to modern jet engines, this lively and engaging show includes demonstrations on the science of flight with stories about the people who made it possible. **there will be a small amount of fire.*

3pm | How do wings work? | 16yrs +

with Cambridge University PhD students Todd Davidson and Richard Stephens.

The most widely used explanation is not only wrong but can lead to fundamental misunderstandings of some of the most important aerodynamic principles. An alternative explanation will be illustrated with simple 'live' experiments and video clips from the aerodynamics laboratory in Cambridge. *In association with the Institute of Physics North East*

9.30am-4pm | Think Physics

Ever wondered why some things drop quickly and others fall slowly to the ground? Or how gliders stay in the air? Explore these questions at the Think Physics stand and make a Flying Fish Spinner.

5pm | First to fly: Otto Lilienthal with Andrew Fletcher 16yrs +

In mid nineteenth-century Berlin, Otto Lilienthal undertook the first systematic study of flight, designing and building his own flying machines, and making thousands of flights, before dying of the injuries sustained when one of his machines stalled. Recognised by the Wright brothers as a significant influence, he remains largely unknown outside Germany.

