

## Project description: Iridescence of butterflies and paints

Year 2 physics projects 2007/8

The iridescent colours of butterfly wings and peacock feathers are of interest to biologists and artists alike. Physicists are familiar with the same phenomenon in soap bubbles and interference filters.

Comparing and describing iridescent materials is subtle, because we have to describe how a continuous spectrum changes with angle. The school's visiting artist is interested in just that, because recent developments in iridescent pigments offer the possibility of being able to use paints that make their colours in the same way that nature does.

Set up a spectrometer to study iridescent materials under controlled illumination, and make comparisons of paints applied in different ways with natural specimens.

- [www.guardian.co.uk/science/gallery/2007/jul/24/1?picture=330260808](http://www.guardian.co.uk/science/gallery/2007/jul/24/1?picture=330260808) (<http://www.guardian.co.uk/science/gallery/2007/jul/24/1?picture=330260808>)
- [newton.ex.ac.uk/research/emag/butterflies/index.html](http://newton.ex.ac.uk/research/emag/butterflies/index.html) (<http://newton.ex.ac.uk/research/emag/butterflies/index.html>)
- [www.ua.es/area/vision\\_color/docs/cramer/cramer4.pdf](http://www.ua.es/area/vision_color/docs/cramer/cramer4.pdf) ([http://www.ua.es/area/vision\\_color/docs/cramer/cramer4.pdf](http://www.ua.es/area/vision_color/docs/cramer/cramer4.pdf))

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