

Evolution resources for schools



2009 was the Year of Darwin.

In addition to the normal interest generated by Evolution there was increased attention in and out of the classroom.

The resources below have been gathered to help in teaching and learning of Evolution in Schools.



Lectures and talks

- [Download History of Evolutionary Thought lecture here \(PPT 6.7Mb\) \(/Documents/research/ias/EvolutionThinkingIntroduction.ppt\)](#)
One strategy for confronting the issue of creationist view in the class room is to take a historical perspective. Explaining how the theory of evolution by natural selection developed allows the teacher to take a more descriptive and less confrontational approach.
- [Download Human evolution lecture here \(PPT 8.6Mb\) \(/Documents/research/ias/HumanEvolutionLecture.ppt\)](#)
- [Download a lecture on the development of Darwins' ideas \(/Documents/research/ias/DarwinIdeaDevelopment.ppt\)](#), Given at West Yorkshire ASE, 12th February 2009 (Darwin's 200th Birthday!)

Teachers TV programme

<http://www.teachersmedia.co.uk/videos/adam-rutherford-on-evolution-and-creationism> **School Matters**

<http://www.teachersmedia.co.uk/videos/adam-rutherford-on-evolution-and-creationism> - Adam Rutherford on Evolution and Creationism.

Partially filmed at the School of Biosciences University of Birmingham, Adam Rutherford explores the controversy and learns that science teachers are being challenged and distracted by increasing questions about creationism and intelligent design, or avoiding the issues altogether rather than risk upsetting religious sensitivities. partially filmed in the School of Biosciences at Birmingham.



[Watch the School Matters programme online here \(http://www.teachersmedia.co.uk/videos/adam-rutherford-on-evolution-and-creationism\)](http://www.teachersmedia.co.uk/videos/adam-rutherford-on-evolution-and-creationism)

Human Evolution practical

The two main features that separate us from our closest cousins the chimpanzee are our bi-pedal locomotion and a larger brain.

[Exploring brain size and bipedalism \(DOC 1.4Mb\) \(/Documents/college-les/biosciences/schools/SkullBonesPractical.doc\)](#) is a downloadable practical that explores these two differences in phenotype, incorporating assessment of variation using measurements taken in the class.



If fossil replicas are not available to you, you can [download the necessary pictures for the exercise here \(ZIP 169Mb\)](#)

<http://www.download.bham.ac.uk/les/biosciences/skull-images.zip>. These measurements of brain capacity and skeletal features underlying locomotion are also performed on the hominid fossil material.

The evolution of complexity computer exercise

It has been difficult for some people to understand how Natural Selection can generate complex organs such as the eye. This difficulty stems from a miss-understanding of the process of natural selection as random. In fact, the process is a combination of random mutation and non-random differential survival.

Download exercises to demonstrate how complexity can be rapidly produced by evolution:

Either as:

- a [word 'crossword' \(XLS 125Kb\) \(/Documents/college-les/biosciences/schools/ComplexityExerciseWords.xls\)](#) - plus ['crossword' classroom notes \(DOC 54Kb\) \(/Documents/college-les/biosciences/schools/ComplexityExerciseWords.doc\)](#)
- a more [biological eye example \(XLS 177Kb\) \(/Documents/college-les/biosciences/schools/ComplexityExerciseEye.xls\)](#) - plus [eye classroom notes \(DOC 287Kb\) \(/Documents/college-les/biosciences/schools/ComplexityExerciseEye.doc\)](#)

Taxonomy

Practical exercise encouraging students to think critically about the characters used in classification. [See the practical taxonomy resources \(/schools/biosciences/outreach/teaching-resources/evolution/evolution-taxonomy.aspx\)](#).

Evolution in action; a practical

Variation, mutation and selection in plants: The [arabidopsis worksheet can be downloaded here \(PDF 45Kb\) \(/Documents/college-les/biosciences/schools/SchoolArabidopsisResource.pdf\)](#), contact us if you want us to send you the resources Evolution in action; a practical

Dealing with Creationist arguments:

Outlining the [characteristics of reactionist attacks on Evolutionary Darwin theory \(/schools/biosciences/outreach/teaching-resources/evolution/evolution-creationist-arguments.aspx\)](#).

Using sequence data to study Evolution

A discussion of [the use of classical characters and sequence data \(/schools/biosciences/outreach/teaching-resources/evolution/evolution-sequence-data.aspx\)](#) in the teaching of evolution from John Newbury (University of Worcester) using the Phylip package

We welcome any suggestions for changes to improve their usefulness, and any suggestions for other exercises. We welcome any other resources or strategies that you find useful and that you would like to share through this site. Please contact us with any comments.

