



UK CENTRE FOR

bioscience



Mathematical Challenges for Biologists

Supporting teaching in higher education to improve student learning across the Biosciences



Mathematical Challenges for Biologists

University of Reading, 16th November 2010

10.20 ***Welcome and Introduction to Day***

10.30 ***School to University Transition I***, Tom Button and Stephen Lee

11.10 ***School to University Transition II***, Jenny Koenig

11.50 *Break and refreshments*

12.05 ***Swapshop Session I***

12.55 *Lunch*

13.45 ***Swapshop Session II***

15.05 *Break and refreshments*

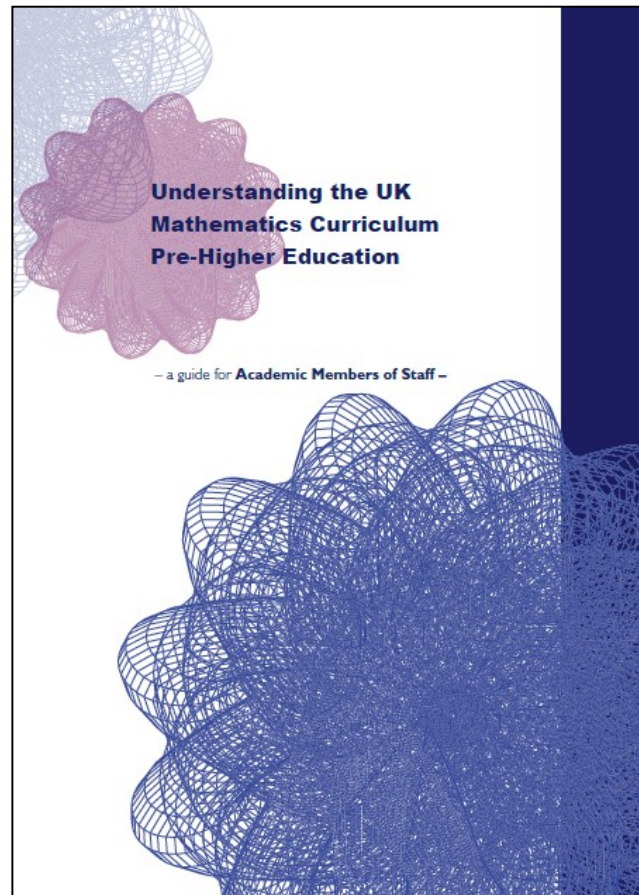
15.20 ***Facilitated discussion***

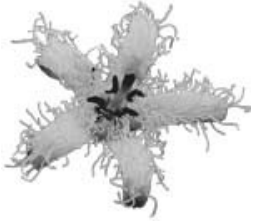
16.00 ***Reflections on the day***

16.15 *Depart*



Understanding the UK Maths Curriculum Pre-Higher Education





Student Award 2011

‘The pluses and minuses of maths on my bioscience course’

Undergraduate and Postgraduate awards

£300 each

Slide available:

Stand out from the crowd

Interested in winning £300 and adding something different to your CV?




Tell us about
“The pluses and minuses of maths on my bioscience course”

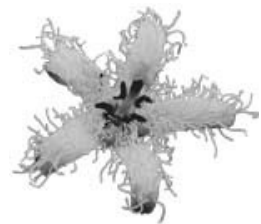
If you're an undergraduate or postgraduate bioscience student tell us about the maths on your bioscience course and you could win up to £300!

Submit your entry as a leaflet, poster, webpage, video, podcast... it's up to you!

Find out more at:
www.bioscience.heacademy.ac.uk/funding/essay/

**Deadline for entries:
8th April 2011**





ALTC Quantitative Skills Project



Quantitative Skills in Science

Curriculum models for the future

Australian Learning and Teaching Council (ALTC)
Priority Project 2010-2012

The Project

This project will promote and support strategic change in higher education via the enhancement of learning and teaching in science and mathematics. This will be achieved by articulating contemporary undergraduate curriculum models that are innovative and future-looking, and which meet the needs of students, industry and society. The movement to transform science education, to better reflect the interdisciplinary and quantitative

nature of modern science, requires a 'whole of program' approach with quantitative skills (QS) as an essential component. However, institutions continue to struggle to understand how to better integrate QS across the undergraduate science curriculum. This project aims to meet the challenge of integrating QS in science through four outcomes.

Outcomes

- 1
- 2
- 3
- 4

Curriculum Structures: International benchmarking of undergraduate science curriculum structures that effectively integrate QS.

Model for Curricula Change in Higher Education: A model for institutional curriculum change processes based on four phases: need, vision, implementation and evaluation.

Framework for Academic Change: A framework for cross-disciplinary academic collaboration, supporting adaption, adoption and evaluation of educational approaches/resources.

High Profile Dissemination Activities: An international symposium in 2012, an edited book, and the development of an interdisciplinary Australian 'QS in Science' network linking to existing networks in the USA and UK.

Members

The project brings together an international team from the cross-disciplinary areas of mathematics, science and education. Members represent a range of universities (research-intensive, regional, and multi-campus).

Australia		
University of Queensland	-	Peter Adams and Kelly Matthews
University of Western Sydney	-	Carmel Coady and Leanne Rylands
James Cook University	-	Shaun Belward
USA		
Purdue University	-	Nancy Palecz
University of Maryland	-	Katerina Thompson

Recent reviews have highlighted the ubiquitous nature of the problem of integrating QS into under-graduate science. Finding a solution will require wide-ranging involvement of industry, professional bodies and universities from the mathematics, science and education communities. This project has the support and involvement of the:

- Australian Council of Deans of Science
- Mathematics Education and Research Group Australasia (MERGA)
- Federation of Australian Scientific and Technological Societies (FASTS)
- International Association of Statistics Education (IASE)
- Higher Education Research and Development Society Australasia (HERDSA)
- Research Corporation for the Advancement of Science
- International Commission on Mathematical Instruction (ICMI)

Get involved

Your university could be a case study for the project. Are QS a graduate outcome for your science degree program? Are your math and science departments working together to build the QS of your science students? If so, then contact us.

- If selected, we will visit your university to document all the needed information to develop your university's case study profile. You will have the opportunity to publish that case study in an edited book and attend our QS in Science international symposium in Brisbane, Australia in 2012.





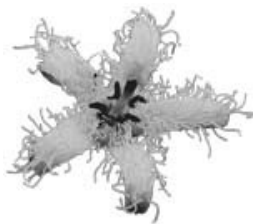




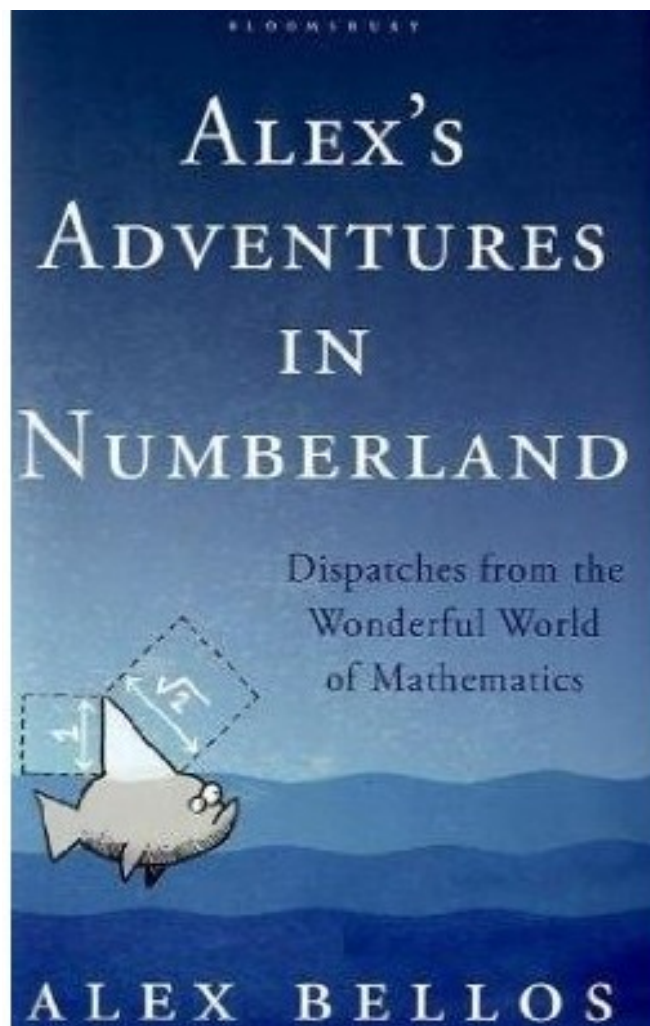



CBE Life Sciences Education: special issue





Alex Bellos' book



International Conference on Bioscience Education



Edinburgh

**30th June, 1st July
2011**



Book project

Effective Learning in the Life Sciences: how students can reach their full potential

Wiley-Blackwell

Publication 2011