

Differentiated Learning Resource List

Differentiated Learning (stretching the most able)

A report of a forum for invited participants held by the Centre for Bioscience in June 2007. As well as a summary of the presentations and discussions from the day the report contains case studies of practice. The report can be downloaded in full from www.bioscience.heacademy.ac.uk/ftp/events/dlforum07/difflearnreport.pdf

The associated web report contains PowerPoint presentations from the day and links to further information and resources

www.bioscience.heacademy.ac.uk/events/dlforum07.aspx



origin

Undergraduate Research Journals



Bioscience Horizons is a free online journal publishing the best undergraduate bioscience research from the UK and Republic of Ireland. The journal provides a forum for students, their supervisors and institutions, to showcase high quality undergraduate research work, strengthening the link between teaching and research in higher education. All papers are written by students and based on final year research projects. www.oxfordjournals.org/our journals/biohorizons/

Origin an in-house undergraduate journal developed through a Centre for Bioscience Teaching Development Grant. Origin was created to publish representative examples of the research undertaken by Biological Science students at the University of Chester. **www.chester.ac.uk/origin/**

Biolog-e a graduate e-journal of assessed final year research projects. Each issue includes articles based on a sample of first class research projects from students on the Biology programmes at the University of Leeds, covering Biology, Animal Science, Zoology and Genetics. A longer term aim is to develop the journal with interested undergraduates taking responsibility for peer review and editing, enabling them to develop work-based skills and a deeper understanding of skills required for successful research careers.

www.fbs.leeds.ac.uk/students/ejournal/current/

BURN (Biosciences Undergraduate Research at Nottingham) is a showcase for undergraduates presenting articles and scientific reports of student research from across the Bioscience divisions. All the research reported in BURN has been carried out by undergraduate students in the University of Nottingham School of Biosciences.

www.nottingham.ac.uk/~sbzml/

Journal of Young Investigators (consortium of several universities) JYI is dedicated to the presentation of undergraduate research in science, mathematics, and engineering. It publishes the best submissions from undergraduates, with an emphasis on both the quality of research and the manner in which it is communicated. JYI also allows students to experience the other side of the scientific publication process: the review process. Students working with their faculty advisors review the work of their peers and determine whether that work is acceptable for publication in JYI. http://jyi.org/

Reinvention: a **Journal of Undergraduate Research** is an online, peer-reviewed journal, dedicated to the publication of high-quality undergraduate student research which welcomes academic articles from all disciplinary areas. The journal is produced, edited and managed by students and staff at Oxford Brookes University and the University of Warwick. It is published bi-annually and is open to

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submissions from undergraduate students in the UK and overseas. www2.warwick.ac.uk/fac/soc/sociology/research/cetl/ejournal/

Articles and Publications

Bates S, Hardy J, Hill J and McKain D (2008) How Design of Online Learning Materials can Accommodate the Heterogeneity in Student Abilities, Aptitudes and Aspirations. *Learning and Teaching in Higher Education*, **2**, 3-25. Available from http://resources.glos.ac.uk/shareddata/dms/19A9867CBCD42A039A91FDAD0B87CDAB.pdf

Davis HC, Carr L, Cooke E and White S (2001) Managing Diversity: Experiences Teaching Programming Principles. *Proceedings of the 2001 ICS Subject Centre Conference*. Available from www.ics.heacademy.ac.uk/Events/conf2001/papers/Davis.htm

Hughes I (2005) Student needs. *Bioscience Bulletin 16.* Available from www.bioscience.heacademy.ac.uk/ftp/newsletters/ltsn16p1.pdf

Linehan K (2008) Made to measure; using on-line resources to tailor teaching to an individual cohort. Presentation given at Centre for Bioscience Representatives Forum 2008. Available from www.bioscience.heacademy.ac.uk/ftp/events/repforum08/linehan.pdf

Park J (2006) Differentiating in the HE classroom – no easy answers? *Bioscience Bulletin 17.* Available from www.bioscience.heacademy.ac.uk/ftp/newsletters/bulletin17p2.pdf

Taber KS (ed) (2007) Science Education for Gifted Learners ISBN 978-0-415-39534-2 Routledge: Abingdon, Oxon

Walkington H (2008) Quality enhancement of the student experience through undergraduate research opportunities - the impact of undergraduate research journals. *Proceedings of the Higher Education Academy Annual Conference 2008.* Available from

www.heacademy.ac.uk/resources/detail/events/conference/Ann_conf_2008_Helen_Walkington

Undergraduate Research Schemes

Examples of undergraduate research placement schemes

- University of Reading www.reading.ac.uk/internal/urop/urop_home.asp
- University of Warwick www2.warwick.ac.uk/services/ldc/funding/urss
- UCL www3.imperial.ac.uk/urop
- University of Cambridge www.eng.cam.ac.uk/teaching/urops/
- MIT http://web.mit.edu/urop/

Web based resources

Gatsby Plants Summer Schools

An annual Summer School for high-achieving 1st year undergraduate students from UK Universities. www.gatsbyplants.leeds.ac.uk/about.html

QCA gifted and talented www.nc.uk.net/gt/index.htm

List of **summer placements and grant opportunities**, compiled following the Differentiated Learning Forum, **www.bioscience.heacademy.ac.uk/ftp/events/dlforum07/studentships.pdf**

Differentiated Learning page on the Centre for Bioscience website www.bioscience.heacademy.ac.uk/resources/difflearn.aspx

The Differentiated Learning Resource List developed by the team at the UK Centre for Bioscience, University of Leeds is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Based on a work at www.bioscience.heacademy.ac.uk.