Integrating Laboratory Research Experiences in the Biology Curriculum

Carrie Doonan

Carnegie Mellon University, Department of Biological Sciences, 440 5th Ave, Pittsburgh PA 15213 USA (cbd@andrew.cmu.edu)

At Carnegie Mellon, the biology curriculum provides a research experience for freshman that creates research interest, improves problem solving and analytical skills that are further developed in advanced biology courses. Freshman research courses include: 1) Cellular Response to Environment - new discovery through imaging a cell’s response to environmental changes; 2) Summer Research Institute - an intensive summer research experience; 3) Phage Genomics - an introduction to research in bacteriophage genomics; and 4) How Biological Experiments Work - an understanding of the principles of biological experimentation. This workshop describes course goals, and how to adapt and implement them in the curriculum.

Mission, Review Process & Disclaimer

The Association for Biology Laboratory Education (ABLE) was founded in 1979 to promote information exchange among university and college educators actively concerned with biology learning and teaching in a laboratory setting. The focus of ABLE is to improve the undergraduate biology laboratory experience by promoting the development and dissemination of interesting, innovative, and reliable laboratory exercises. For more information about ABLE, please visit http://www.ableweb.org/

Papers published in Tested Studies for Laboratory Teaching: Proceedings of the Conference of the Association for Biology Laboratory Education are evaluated and selected by a committee prior to presentation at the conference, peer-reviewed by participants at the conference, and edited by members of the ABLE Editorial Board.

Citing This Article


Compilation © 2012 by the Association for Biology Laboratory Education, ISBN 1-890444-15-4. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner.

ABLE strongly encourages individuals to use the exercises in this proceedings volume in their teaching program. If this exercise is used solely at one’s own institution with no intent for profit, it is excluded from the preceding copyright restriction, unless otherwise noted on the copyright notice of the individual chapter in this volume. Proper credit to this publication must be included in your laboratory outline for each use; a sample citation is given above.