## **Teaching Experimental Design Using Labs That** "Don't Work"

## **Emily Boone**

University of Richmond, Biology Department, 28 Westhampton Way, Richmond VA 23173 USA (eboone@richmond.edu)

There is nothing that a lab instructor dreads more than a lab that "doesn't work". As instructors, we are continually tweaking our lab exercises to make them "work" for our students. Have you ever considered that a so-called "failed" lab might teach them more than whatever concept the original lab was designed to teach in the first place? What if instead of fixing them ourselves we allowed our students to troubleshoot them? In this workshop we will examine how you can take a lab that you may have otherwise discarded because it "doesn't work" and transform it into a lab on experimental design for your students. We will use an ecology lab as an example but this concept can be applied to a variety of different specialty areas in biology. So dig out those old forgotten labs and see how you can transform them into a whole different learning experience.

## 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 teaching biology 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 <a href="http://www.ableweb.org/">http://www.ableweb.org/</a>.

Papers published in *Tested Studies for Laboratory Teaching: Peer-Reviewed 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**

Boone, E. 2014. Teaching Experimental Design Using Labs That "Don't Work". Page 333 in *Tested Studies for Laboratory Teaching*, Volume 35 (K. McMahon, Editor). Proceedings of the 35th Conference of the Association for Biology Laboratory Education (ABLE), 477 pages. http://www.ableweb.org/volumes/vol-35/?art=23

Compilation © 2014 by the Association for Biology Laboratory Education, ISBN 1-890444-17-0. 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.

© 2014 by Emily Boone 333