Better Brain Dissection and Other Activities to Support the Active Classroom

Laura Manella

Cornell University, Department of Neurobiology and Behavior, Ithaca NY 14853 USA (laura.manella@gmail.edu)

In STEM education, buzz words like "flipping" and "active learning" are still controversial. Although research provides evidence that these teaching methods are effective, instructors often struggle to effectively implement active teaching tools. I will discuss the development of curriculum in a team taught Introduction to Neurobiology course at Cornell University as it actively transitions into the "flipped" format. I will provide concrete examples of successful implementation of active learning in and out of the classroom, such as ideas for pre-lecture videos and inclass iClicker questions and discussion activities. Moreover, I will specifically describe a better sheep brain dissection lab that uses prompts throughout the manual to get students to analyze how and why the brain is organized as it is, rather than using rote memorization of brain structures. This could serve as a model for all dissections and guided lab activities.

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 http://www.ableweb.org/.

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

Manella, L. 2017. Better Brain Dissection and Other Activities to Support the Active Classroom. Article 54 In: McMahon K, editor. Tested studies for laboratory teaching. Volume 38. Proceedings of the 38th Conference of the Association for Biology Laboratory Education (ABLE). http://www.ableweb.org/volumes/vol-38/?art=54

Compilation © 2017 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.

© 2017 by Laura Manella