

A Virtual Drawing-board for Engaging Students in Class Discussions Involving Higher-order Thinking

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One goal of student-centered classrooms is getting students engaged in thinking about biological concepts at a higher level. Instructors often try to do this with discussions, but many students do not participate. To address the engagement problem, we've been trying a new platform called Visual Classrooms for the past 3 semesters. Visual Classrooms allows instructors to ask challenging visual questions (such as graphing, drawing, sorting, and concept-maps), and facilitates both online discussions between students about their answers, and in-class discussions with the instructor. We've developed activities in Visual Classrooms to accompany simulation-based labs from SimBio. We find that following up the lab activities with one or more Visual Classroom exercises changes the nature of the classroom. Students that were previously quiet become more engaged in classroom discussions and debates. Instructors are able to quickly assess student thinking and correct any misconceptions in real time. Bring your laptop or other device to this mini-workshop. We'll go through a small portion of SimBio's Isle Royale lab on population growth and predator-prey dynamics. Then all participants will do accompanying exercises in Visual Classrooms. We'll talk about how we implemented those in-class, and some of the benefits and challenges we encountered in doing drawing exercises online.

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Citing This Article

Boone E, Meir E. 2018. OK Google, A Virtual Drawing-board for Engaging Students in Class Discussions Involving Higher-order Thinking. Article 22 In: McMahon K, editor. *Tested studies for laboratory teaching*. Volume 39. *Proceedings of the 39th Conference of the Association for Biology Laboratory Education (ABLE)*. <http://www.ableweb.org/volumes/vol-39/?art=22>

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