

Preparing Graduate Teaching Assistants for Teaching in Scientific Labs

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Teaching in a laboratory setting presents a unique set of challenges pertaining to classroom management, evaluation of student learning, and collaborative group projects. To address training needs of North Carolina State University Graduate Student Teaching Assistants (GTAs) who teach in the laboratory setting, we prepared a workshop in collaboration with Preparing Future Leaders and the Certificate of Accomplishment in Teaching programs that aim to promote GTA development in teaching. During this workshop, participants discussed the challenges of teaching in the lab, including lesson planning, assessment, managing students in the lab, student integrity, questioning techniques, and more, in an active learning, collaborative learning environment. Workshop activities lead participants to develop a master list of ground rules for successful laboratory instruction. Case studies of classroom management situations help to facilitate discussions on different classroom management techniques for teaching in labs. Other activities relate to productive questioning techniques to introduce participants to good questioning strategies, positive reinforcement, wait time, and positive non-verbal language skills. Participants also learn about Lab Write (an online tutorial) and other tools to facilitate assessment of, pre-, in-, and post- lab activities, including lab reports. In addition to workshop activities and discussions, participants receive online and text resources for their own study and teaching development.

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