

SUE ANN HEATHERLY, Green Bank Observatory, Green Bank, WV 24944 & ERICA HARVEY, Department of Natural Sciences, College of Science and Technology, Fairmont State University, Fairmont, WV, 26554. Scientific method for improvement and student success: Plan-Do-Study-Act.

Are you curious what STEM students find to be barriers to their own success? Do you have anything in your courses or research laboratory environments that you would like to improve? In this hands-on session you will learn how to use the basic principles of improvement science, specifically a branch called Networked Improvement Communities (NIC), to identify ideas that you think might produce the improvement you seek. You will be guided through setting up a Plan-Do-Study-Act (PDSA) cycle to test your change idea on a rapid timescale in your own local environment. The First2 Network (<https://first2network.org>) is a growing statewide alliance that aims to improve student success and retention in STEM fields, using the NIC framework. First-generation and other underrepresented students are at the center of the work, and we invite all students at the conference to join in and share their own experiences and perspectives with faculty members during this session. *First2 Network, a National Science Foundation INCLUDES Alliance, is supported by NSF award numbers HRD-1834569, 1834575, 1834586, 1834595, and 1834601.*