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Integrated College Algebra into General Biology by Interdisciplinary Course Projects.

Low participation and retention of African-American STEM students in remains a prevalent. However, integrated approaches have increased participation and retention in STEM programs. We created an intrusive Learning Community (LC) based on the Performance Pyramid Model that included peer-led weekly sessions to reinforce biology course content and connect biology with mathematics concepts through interdisciplinary projects. We compared LC students to separate biology and mathematics control groups on pre-post biology and mathematics quizzes, respectively. We compared all groups on post-test assessments of Performance Pyramid supports and student perceptions. The LC group had greater improvements on biology quiz scores than the biology control group. The LC group reported higher rates of feedback compared to both control groups ($d = .79$ to $.81$), and greater confidence ($d = .62$) and science knowledge ($d = .72$) compared to the math control group. Implications for applying this model will be discussed. (Received August 21, 2019)