



STEM EXPEDITIONS® LINKED TO HIGHER SCIENCE SCORES FOR SECOND YEAR IN A ROW

2018 Friday Institute report also notes statistically significant difference in Pitsco curriculum teaching students about careers

A 2018 report from the Friday Institute for Educational Innovation noted that students in a Pitsco Education STEM Expeditions® lab in Bertie, NC, outperformed a control group in the same school on the 2017-18 Measures of Academic Progress (MAP) science test. Students who experienced the team-based, hands-on curriculum from Pitsco scored an average of 7.1 percent higher on the test than did members of the control group.

This marked the second year in a row that the Friday Institute, which is affiliated with the North Carolina State University's College of Education, found Expeditions students outperforming their peers in science.

The 2018 Friday Institute report also states that students in the Bertie Middle School Expeditions lab reported learning about careers in science, technology, engineering, and math to a statistically significant higher degree than did students in the control group. According to the report, "STEM Expeditions curriculum may be better at teaching students about careers in multiple fields compared to the typical science classroom."

The Friday Institute's study findings for STEM Expeditions during the 2016-17 and 2017-18 school years include:

Tucker Creek Middle School, NC, 2016-17

MAP Science Scores Results

PILOT GROUP	COMPARISON GROUP
46.5	26.4
*Difference in CGP Mean = 20.1	

Student academic progress was measured using the Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) assessments. Specifically, these assessments use each student's assessment scores at multiple time points to yield a single Conditional Growth Percentile (CGP) metric for that student. This metric indicates how much the student's score improved over time compared to the scores of their peers of similar grade and age across the country. In other words, it provides a percentile of their learning progress compared to the national median (or 50th percentile).

Pittsburg Community Middle School, KS, 2016-17

Growth on MAP Performance

GOAL	STEM EXPEDITIONS STUDENTS
100%	178%

PCMS STEM Expeditions students outperformed a virtual comparison group and far exceeded the goal of 100 percent growth on MAP performance, with an average growth rate of 178 percent among all the school's eighth graders during the course of the school year.

Bertie Middle School, NC, 2017-18

MAP Science Scores Results

PILOT GROUP	COMPARISON GROUP
40.2	33.1
*Difference in CGP Mean = 7.1	

Bertie Middle School, NC, 2017-18

LEARNING ABOUT CAREERS IN	EXPEDITIONS GROUP	CONTROL GROUP
Science	4.04	3.39
Technology	4.19	3.55
Engineering	4.14	3.55
Math	3.76	3.42
(on a scale of 1-5, 5 being highest)		

STEM Expeditions and Career Expeditions are standards based and may be delivered as a single topic to a whole class or as several topics simultaneously to student pairs working through rotations. The Expeditions feature a wide range of topics from robots and rockets to food safety and flight to engineering and electricity.