

Nationwide there is a shortage of workers with backgrounds in science, technology, engineering and mathematics (STEM). For the last several years, state leaders have been working to improve and diversify West Virginia's economy. Preparing our students for careers in STEM is the key to achieving that goal. With an increase in Marcellus and Utica shale drilling as well as growing opportunities in technology fields, we now have thousands of opportunities for West Virginia families to find excellent jobs here in the Mountain State.

Major occupational groups with STEM-related jobs include: manufacturing; natural resource development; healthcare practitioners and technical occupations; computer and mathematical occupations; and business and financial operations occupations. STEM-related jobs are ones that are considered high wage and high skill. Workers in STEM occupations use science and math to drive our state's innovation and competitiveness by generating new ideas, new companies and new industries.

Research indicates that instructional approaches or learning opportunities that engage students actively increase skill acquisition and information retention, encourage more positive attitudes toward STEM disciplines, and strengthen retention of students in STEM majors. Specific studies provide evidence suggesting that STEM experiences that engage learners in "active learning" improve retention of information and critical thinking skills. Furthermore, research studies in STEM education support this positive relationship between STEM engagement experiences and student achievement ¹

Progress Update: *In his 2014 State of the State address, Governor Earl Ray Tomblin announced the formation of a STEM Council. The Council was comprised of business leaders from across the state. The Council presented their report to the Governor outlining findings and key recommendations in November 2014.*

Recommendations:

1. Develop local capacity for STEM education across the state by establishing 3-5 Regional STEM Network HUBS.
2. Strengthen the public's awareness of STEM as a vital economic development advantage for quality job growth through an aggressive public engagement plan.
3. Establish a virtual STEM clearinghouse to review current STEM resources and assets across the state to ensure alignment and eliminate redundancy.

¹ ENGINEERING, AND MATHEMATICS (STEM) EDUCATION 5-YEAR STRATEGIC PLAN: A Report from the Committee on STEM Education National Science and Technology Council
http://www.whitehouse.gov/sites/default/files/microsites/ostp/stem_stratplan_2013.pdf