



PREPARING WASHINGTON'S NEXT GENERATION OF STEM TEACHERS: *Recommendations for Action*

OUR VISION

All K–12 educators have the knowledge, tools, and resources to support equitable science, technology, engineering, and mathematics learning.

Washington's STEM teacher preparation programs graduate educators ready to engage all K–12 students in personally relevant STEM learning.

K–12 students graduate prepared for civic engagement, STEM and other careers, post-secondary education, and life-long learning.

In support of this vision, a broad and diverse group of experts and leaders (The Next Generation Washington STEM Teacher Preparation Collaborative) from higher education, K–12, government, not-for-profit, and business organizations have crafted two recommendations for policymakers to consider and strategies that support those recommendations.

RECOMMENDATION 1

Recognize and support K–12 STEM teaching as a critical component of the overall economy.

RECOMMENDATION 2

Support STEM teacher preparation programs that integrate knowledge, practice, cultural competency, diversity, equity, and inclusion.

Enacting these recommendations will require a shared vision and supporting action by state agencies, post-secondary faculty, administrators and staff, K–12 teachers, administrators and staff, and community, business, and educational advocacy organizations.

PROPOSED STRATEGIES

Work collaboratively in support of policies, incentives, and structures that promote inter-institutional, cross-sectional collaboration among K–12, post-secondary education, government agencies, and STEM businesses, non-profits, and communities in order to:

1. **CREATE A SHARED VISION** for equitable and meaningful STEM education for all of their students.
2. **ENSURE THAT EVERY STEM CLASSROOM HAS A QUALIFIED STEM TEACHER** so that teachers have the disciplinary and pedagogical content knowledge needed to teach all of the STEM courses they are assigned to teach, and administrators/schools have the resources to make this a reality.
3. **RECRUIT STUDENTS FROM UNDERREPRESENTED GROUPS INTO STEM TEACHING** and support them through graduation and hiring.
4. **SUPPORT STANDARDS-BASED STEM TEACHING AND LEARNING** so that graduates of teacher and administrator preparation programs are prepared to support active learning consistent with adopted state standards.
5. **PROMOTE CROSS-DISCIPLINARY TEACHING AND LEARNING** so that all graduates of teacher and administrator preparation programs have the ability to promote integration within STEM disciplines and connect STEM learning with language arts, the humanities, and the arts.
6. **PERSONALIZE STEM LEARNING** so that graduates of teacher and administrator programs are able to leverage individual interests, local contexts, broader societal needs, and real-world problems to create learning environments that actively engage all students.
7. **IDENTIFY AND ADDRESS HIGHER EDUCATION BARRIERS** to becoming a STEM teacher such as time, cost, and complexity to degree, department and institutional culture, and the general undervaluing of STEM teaching as a career choice.
8. **IDENTIFY AND ADDRESS K–12 BARRIERS** to STEM teaching and learning such as lack of time, resources, and tools, for regularly engaging students in personally relevant, meaningful STEM learning experiences; highly variable administrator support for STEM from school to school; and persistent barriers to participation in STEM by students of color and first-generation students.