

# Science is Essential to Innovation and the Economy



## WHY SCIENCE SUPPORT IS NEEDED NOW

For decades, our nation has been a leader in scientific advancements that spur the economy, providing economic prosperity and development for its communities. But new challenges such as a dwindling STEM workforce properly equipped for the demands of the 21st century threatens our ability to continue this streak of progress and prosperity for our country. Supporting a diverse, inclusive STEM workforce will enable innovative perspectives and ideas to flourish and create more modernization for our future.

**Increasing diversity in STEM is vital to the nation's long-term economic growth and global competitiveness.**



The U.S. is currently facing a skilled worker shortage in the science and technology sectors that will only worsen without a new infusion of STEM-trained individuals. The [Bureau of Labor Statistics](#) estimates that the U.S. economy will need a further one million more STEM professionals by 2030.



We all benefit from a STEM workforce that includes a broad range of perspectives and backgrounds. We must work to include traditionally underrepresented groups in STEM fields to grow a workforce capable of tackling present challenges and bringing ideas to ensure future scientific discoveries and breakthroughs happen here in the U.S.

**Science helps create jobs and enhances economic security for vulnerable communities.**



The cornerstones of rural economies, including agriculture, food and natural resources-based industries, heavily [involve](#) the STEM fields of Earth science, biology, chemistry, engineering, physics and computer science. Building a strong STEM foundation and workforce in the communities will ensure rural communities thrive.



Ocean acidification limits the ability of certain marine animals- many of which are food for commercial species- to grow, survive and reproduce. The decrease in abundance or health of these animals can [negatively affect](#) the entire marine food chain, resulting in significant challenges to global economies. [3 billion people](#) worldwide depend on seafood as their primary source of protein, and ocean acidification could result in increased competition and conflict over marine resources. Support for ocean research can help mitigate these global threats.

## Robust investment in science helps grow our economy and support innovation.



Eighty percent of the [National Science Foundation's](#) budget supports over 300,000 researchers, teachers, postdoctoral fellows, trainees and students and nearly 2,000 institutions each year. Federal investment in basic research and education helps to not only foster innovation, but also boosts the careers of students and scientists who may go on to critical national security positions in areas such as nuclear power.



Global economies increasingly require an understanding of science, technology, engineering, and mathematics. Therefore, investing in STEM education programming and basic research is vital to supporting our future science and engineering workforce.

## OUR COMMITMENT

**The American Geophysical Union (AGU) and its network of Earth and space scientists are committed to:**

- Studying the natural world and its impacts on society
- Investigating ways to reduce any negative geophysical, ecological, societal and economic effects
- Helping create resilient communities and nations, especially the most vulnerable
- Educating the public