

AGU SCIENCE VOTES THE FUTURE

Science is Essential to **Innovation and the Economy**

WHY SCIENCE SUPPORT IS NEEDED NOW

For decades, our nation has been a leader in innovation that spurs 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 innovation and prosperity for our country.

Supporting a diverse, inclusive STEM workforce and feeding the STEM pipeline through investments in education will enable innovative perspectives and ideas to flourish and create more innovation 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, and without a new infusion of STEM-trained individuals, this shortage will worsen. The [Bureau of Labor Statistics](#) estimates that the U.S. economy will need a further one million more STEM professionals by 2030.
- Careers in STEM bring more income to workers and their families. The [Bureau of Labor Statistics](#) reports the average salary for a worker in the life sciences is \$80,000 per year, and computer and mathematics \$99,000, compared to \$58,000 for all jobs on average.
- Continuing the traditional underrepresentation of some groups in STEM fields prevents the U.S. from cultivating adequate domestic STEM talent and growing a workforce capable of ensuring that future scientific discoveries and breakthroughs happen here in the U.S.

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A diverse, equitable and inclusive scientific workforce benefits everyone.

- The response to COVID-19, which has affected every community across the world, has brought together scientists from all walks of life—representing various nationalities, religions, races, ethnicities, genders, sexual orientations, and socioeconomic backgrounds—on a scale unlike any in humanity’s history. Solutions to complex, global problems, like pandemics, require a diversity of perspectives and approaches. Without support for increasing diversity in STEM, these solutions will be undercut.

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

- Key drivers 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.
- 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 and the approximately [3 billion people](#) worldwide who depend on seafood as their primary source of protein, as well as increased competition and conflict over marine resources.

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

- Eighty percent of the [National Science Foundation’s](#) total budget supports more than 300,000 researchers, teachers, postdoctoral fellows, trainees and students and nearly 2,000 institutions each year. Federal investment in basic research and education helps both foster innovation and the careers of students and scientists who may go on to develop clean energy technologies, secure American energy independence, and aid in climate change solutions.
- 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.