Voters’ Attitudes toward Science and Technology Research and the Role of the Federal Government

Key findings from online national survey among 1,500 registered voters conducted September 28 to October 8, 2018
Key Findings

• Support for increasing funding for science and technology research in general is **strong across the partisan spectrum**.

• Americans express significant **concern about the consequences of falling behind the rest of the world**—especially China—in this area.

• Specifically, **funding that supports research into health-related areas is supported broadly**, and Republicans are especially enthusiastic about **research that has defense and national security implications**.

• Federal funding for science and technology research is a **rare issue where politicians get more credit for supporting it than pushback for opposing it**.
Key Findings (cont’d)

• **Voters expect Congress to use science in policymaking**—even when an elected official's principles and policy views may differ from what science suggests. This transcends party, with large majorities of Republicans, Democrats, and independents agreeing that science should inform decision-making.

• There are three key themes that rise to the top for promoting greater funding:
  1. Science and technology research is important to all our national priorities—education, healthcare, energy independence, and the economy.
  2. Improving STEM education is crucial to having a strong education system, developing a strong workforce, and being competitive with the world.
  3. Science and technology research plays a fundamental role in national security.
Voters’ Attitudes toward Science and Technology Research
Science and technology research is initially seen as a middle-of-the-road priority for the United States among several tested.

Proportions rating each as a VERY IMPORTANT PRIORITY for the United States

- Access to affordable, quality healthcare: 72%
- Education of children and youth: 71%
- National defense: 58%
- Development of wind, solar, renewables: 52%
- Research in science and technology: 51%
- Worker training: 44%
- Large-scale manufacturing: 31%

9-10 ratings on a 0-to-10 scale, 10 = extremely important
But nearly all voters, across partisan affiliations, are certain of the importance of America’s leadership in science and technology research.

Important that the U.S. be a world leader in science and technology research

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Fairly important</th>
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<tbody>
<tr>
<td>All</td>
<td>90%</td>
<td>28%</td>
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<tr>
<td>Democrats</td>
<td>91%</td>
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<tr>
<td>Independents</td>
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<td>27%</td>
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<tr>
<td>Republicans</td>
<td>91%</td>
<td>30%</td>
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Important that the U.S. stay ahead of China as a world leader in science and technology research

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<tr>
<td>Independents</td>
<td>79%</td>
<td>28%</td>
</tr>
<tr>
<td>Republicans</td>
<td>88%</td>
<td>23%</td>
</tr>
</tbody>
</table>

All Democrats Independents Republicans All Democrats Independents Republicans
A potential gap between the United States and China generates concern among voters.

**Perceptions of U.S. vs. China on Research in S&T**

Only **24%** say the U.S. is staying ahead of China

**27%** say the U.S. is about even with China

**49%** say the U.S. is falling behind China

- **73%** of voters say it would be a big concern if they learned that the United States is falling behind China in S&T research, including **38%** of voters who say it would be a **VERY big concern**.
Voters across the political spectrum say falling behind China would be a big concern; there is less agreement as to whether this is the case now.

- **U.S. is falling behind China**
- **Big concern about U.S. falling behind China**

**Democrats**
- 56% are concerned that the U.S. is falling behind China.
- 72% believe it is a big concern.
- Gap: -16

**Independents**
- 49% are concerned that the U.S. is falling behind China.
- 70% believe it is a big concern.
- Gap: -21

**Republicans**
- 41% are concerned that the U.S. is falling behind China.
- 76% believe it is a big concern.
- Gap: -35
Government Funding of Science and Technology Research
Voters place high importance on government funding for science and technology research.

How important is it for the federal government to fund research in science and technology?

<table>
<thead>
<tr>
<th>Importance</th>
<th>Democrats</th>
<th>Independents</th>
<th>Republicans</th>
<th>Republicans age 18 to 34</th>
<th>Republicans age 50/older</th>
<th>Republicans men</th>
<th>Republicans women</th>
<th>High school grad/less</th>
<th>Some college</th>
<th>College grad</th>
<th>Postgrad edu</th>
<th>Urban</th>
<th>Suburban</th>
<th>Small town/rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>69%</td>
<td>50%</td>
<td>46%</td>
<td>54%</td>
<td>37%</td>
<td>53%</td>
<td>38%</td>
<td>53%</td>
<td>56%</td>
<td>56%</td>
<td>67%</td>
<td>67%</td>
<td>59%</td>
<td>45%</td>
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<tr>
<td>Very/fairly important</td>
<td>12%</td>
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<tr>
<td>Less/not important</td>
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</table>
And half of voters say the government spends too little on S&T research; very few (including few Republicans) say spending is too high.

Do you think the federal government spends too much, too little, or about the right amount on research in science and technology?

<table>
<thead>
<tr>
<th></th>
<th>Government spends too little</th>
<th>Government spends the right amount</th>
<th>Government spends too much</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All voters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>48%</td>
<td>22%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Democrats</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>63%</td>
<td>14%</td>
<td>5%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Independents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>46%</td>
<td>16%</td>
<td>11%</td>
<td>27%</td>
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<tr>
<td><strong>Republicans</strong></td>
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<tr>
<td></td>
<td>31%</td>
<td>33%</td>
<td>16%</td>
<td>20%</td>
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<tr>
<td><strong>HS or less</strong></td>
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<tr>
<td></td>
<td>43%</td>
<td>23%</td>
<td>10%</td>
<td>24%</td>
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<tr>
<td><strong>Some college</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>46%</td>
<td>20%</td>
<td>9%</td>
<td>25%</td>
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<tr>
<td><strong>College grads</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>52%</td>
<td>22%</td>
<td>10%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Postgrads</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>54%</td>
<td>22%</td>
<td>13%</td>
<td>11%</td>
</tr>
</tbody>
</table>
Similarly, voters across the electorate favor increasing federal funding for S&T research.

Support for a proposal for the federal government to increase funding for research in science and technology each year over the next 10 years

<table>
<thead>
<tr>
<th></th>
<th>Total favor</th>
<th>Strongly favor</th>
<th>Total favor</th>
<th>Strongly favor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women age 18 to 49</td>
<td>85%</td>
<td>41%</td>
<td>92%</td>
<td>59%</td>
</tr>
<tr>
<td>Women age 50/older</td>
<td>84%</td>
<td>40%</td>
<td>84%</td>
<td>37%</td>
</tr>
<tr>
<td>Men age 18 to 49</td>
<td>90%</td>
<td>55%</td>
<td>79%</td>
<td>33%</td>
</tr>
<tr>
<td>Men age 50/older</td>
<td>85%</td>
<td>47%</td>
<td>84%</td>
<td>38%</td>
</tr>
<tr>
<td>High school grad/less</td>
<td>85%</td>
<td>39%</td>
<td>84%</td>
<td>29%</td>
</tr>
<tr>
<td>Some college</td>
<td>85%</td>
<td>41%</td>
<td>83%</td>
<td>43%</td>
</tr>
<tr>
<td>College grad</td>
<td>86%</td>
<td>51%</td>
<td>75%</td>
<td>24%</td>
</tr>
<tr>
<td>Postgrad edu</td>
<td>91%</td>
<td>61%</td>
<td>88%</td>
<td>56%</td>
</tr>
<tr>
<td>Conservative Republicans</td>
<td>77%</td>
<td>30%</td>
<td>87%</td>
<td>45%</td>
</tr>
<tr>
<td>Trump voters</td>
<td>78%</td>
<td>34%</td>
<td>82%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Democrats: +72 favor
Independents: +67 favor
Republicans: +67 favor
Republicans age 18 to 34: +70 favor
Republicans age 50/older: +73 favor
Republican men: +72 favor
Republican women: +75 favor
Urban: +71 favor
Suburban: +74 favor
Small town/rural: +72 favor
Voters place a high priority on federal funding in a number of areas; medical advancements, cyber security, and national defense top the list.

<table>
<thead>
<tr>
<th>Area</th>
<th>Proportion Saying Very High Priority</th>
<th>Among the Three Most Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>New medicines, medical technologies/techniques</td>
<td>66%</td>
<td>54%</td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>66%</td>
<td>43%</td>
</tr>
<tr>
<td>Managing natural disasters, hurricanes, floods, wildfires</td>
<td>59%</td>
<td>35%</td>
</tr>
<tr>
<td>Efficient/cleaner renewable energy</td>
<td>58%</td>
<td>40%</td>
</tr>
<tr>
<td>Technologies related to national defense</td>
<td>58%</td>
<td>44%</td>
</tr>
<tr>
<td>Addressing climate change</td>
<td>51%</td>
<td>31%</td>
</tr>
<tr>
<td>Plant, wildlife, environmental conservation</td>
<td>51%</td>
<td>24%</td>
</tr>
<tr>
<td>Transportation and infrastructure</td>
<td>45%</td>
<td>21%</td>
</tr>
<tr>
<td>Aerospace/space exploration</td>
<td>31%</td>
<td>9%</td>
</tr>
</tbody>
</table>

9-10 ratings on a 0-to-10 scale, 10 = should be a very high priority for federal funding
Key top priorities differ by partisanship—all voters value medical research; Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.

Top three priorities for government research

- **Medical technology**: All voters value medical research; Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.

- **National defense technology**: Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.

- **Cyber security**: Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.

- **Renewable energy**: Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.

- **Managing natural disasters**: Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.

- **Addressing climate change**: Republicans prioritize defense/cyber security, Democrats and independents emphasize renewable energy.
Science in Policy-Making
Politically, the positions candidates take on increasing federal funding for science and technology research can be leveraged with voters.

Congressional candidate who **SUPPORTS** increased federal funding for research in science and technology:
- 75% support
- 27% oppose
- 4% undecided

Net advantage: +71 support

Congressional candidate who **OPPOSES** increased federal funding for research in science and technology:
- 67% support
- 30% oppose
- 17% undecided

Net advantage: -51 support

The net advantage of promoting a candidate who **SUPPORTS** increased S&T research funding is 20 points.
And the favorability of a pro-science funding candidate permeates the electorate.

If you learned that a candidate running for Congress supports increasing federal funding for research in science and technology, would that make you feel more favorable or less favorable toward the candidate, or would it not make a difference either way?
Policy-wise, across party lines, voters think using scientific research to inform policy decisions is essential.

On a 0-to-10 scale, how important is it that members of Congress take scientific research into consideration when they are making decisions about policies?

- **Very important (9-10)**
- **Fairly important (7-8)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Very Important</th>
<th>Fairly Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>All voters</td>
<td>80%</td>
<td>34%</td>
</tr>
<tr>
<td>Democrats</td>
<td>86%</td>
<td>33%</td>
</tr>
<tr>
<td>Independents</td>
<td>73%</td>
<td>42%</td>
</tr>
<tr>
<td>Republicans</td>
<td>75%</td>
<td>40%</td>
</tr>
<tr>
<td>Republican men</td>
<td>80%</td>
<td>35%</td>
</tr>
<tr>
<td>Republican women</td>
<td>70%</td>
<td>35%</td>
</tr>
</tbody>
</table>
Consistent with overall priorities, voters say science is most important to informing health and national defense policy.

Scientists often do research and produce findings relevant to the work of policymakers: how important is it that members of Congress take scientific findings into consideration when making policy decisions in these areas?

<table>
<thead>
<tr>
<th>Area</th>
<th>Very important (9-10)</th>
<th>Fairly important (7-8)</th>
<th>Dem</th>
<th>Ind</th>
<th>GOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>66%</td>
<td>22%</td>
<td>74%</td>
<td>62%</td>
<td>59%</td>
</tr>
<tr>
<td>National defense and security</td>
<td>62%</td>
<td>25%</td>
<td>55%</td>
<td>59%</td>
<td>71%</td>
</tr>
<tr>
<td>Education</td>
<td>59%</td>
<td>26%</td>
<td>66%</td>
<td>60%</td>
<td>51%</td>
</tr>
<tr>
<td>Energy</td>
<td>53%</td>
<td>31%</td>
<td>65%</td>
<td>49%</td>
<td>40%</td>
</tr>
<tr>
<td>Environment</td>
<td>52%</td>
<td>27%</td>
<td>67%</td>
<td>51%</td>
<td>37%</td>
</tr>
<tr>
<td>Taxes</td>
<td>39%</td>
<td>33%</td>
<td>38%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Immigration</td>
<td>39%</td>
<td>28%</td>
<td>36%</td>
<td>34%</td>
<td>46%</td>
</tr>
</tbody>
</table>

Very important (9-10 on 0-to-10 scale) and Fairly important (7-8)
Voters, including conservative Republicans, overwhelmingly want elected leaders to support policies grounded in science over the policymaker’s personal beliefs.

In cases where a member of Congress disagrees with what the majority of scientific research indicates is good policy, what should the member of Congress do in general?

- Support the policy scientists recommend, even if the member of Congress does not think it is the best policy
- Support the policy the member of Congress believes is best, even if scientists disagree
Messaging for Increasing Government Funding in Science and Technology Research
Problem statements about national security and STEM education generate the most urgency.

- **Without more S&T research, U.S. national security will be weakened**
  - Very serious: 57%
  - Fairly serious: 33%
  - Total: 90%

- **U.S. falling behind in educating youth in STEM**
  - Very serious: 55%
  - Fairly serious: 32%
  - Total: 87%

- **Need to develop tools to keep our country safe in a dangerous world**
  - Very serious: 45%
  - Fairly serious: 38%
  - Total: 83%

- **Need to develop tools and weapons to keep our country safe in a dangerous world**
  - Very serious: 44%
  - Fairly serious: 38%
  - Total: 82%

- **U.S. falling behind (China, India, etc.) in money government invests in S&T research**
  - Very serious: 43%
  - Fairly serious: 36%
  - Total: 79%

- **S&T research funding shrinking steadily as share of federal budget**
  - Very serious: 38%
  - Fairly serious: 40%
  - Total: 78%

- **Not enough S&T research being done to develop solutions to climate change**
  - Very serious: 47%
  - Fairly serious: 27%
  - Total: 74%

- **Too much S&T research in U.S. left up to private companies that only pursue research with profit in near future**
  - Very serious: 29%
  - Fairly serious: 41%
  - Total: 70%
Messages Tested for Federal Funding Increase in Science/Technology Research

**ESSENTIAL TO OUR PRIORITIES.** Having a strong and well-funded science and technology research sector is essential to some of our most important priorities—keeping our country safe, having a world-class education system, having high-quality healthcare, gaining energy independence, and having a highly-skilled workforce that can make quality goods that are sold around the world.

**STEM.** Improving American students’ education in STEM (science, technology, engineering, and math) needs to be a national priority if the United States is going to continue to produce the world’s best scientists and best research. Greater funding from the government for science and technology research will not only improve the quality of STEM education in the United States, it will encourage more young people to pursue careers in these important fields.

**NATIONAL SECURITY.** The nation’s security is the federal government’s #1 job, and science and technology research plays a fundamental role in many elements of our security, from the development of new defense techniques to new weapons systems, information-gathering technologies, surveillance technologies, and cybersecurity systems.

**FOUNDATIONAL.** There are countless innovations and advances whose origins came about due to years-long research that was funded by the federal government. These range from things that make our daily lives easier and safer, such as smartphones, GPS, and home security systems, to things that literally save lives, such as insulin for diabetics and life-saving cancer treatments.

**AMERICAN LEADERSHIP.** There are countless innovations and advances whose origins came about due to years-long research that was funded by the U.S. government—we’ve developed vaccines, cured diseases, invented GPS, found new and better ways to keep our air and water clean, and more. Great ideas are born here. Greater funding from the government for science and technology research will ensure that America continues to save and change lives globally.
GOV’T RATHER THAN INDUSTRY. Unlike private companies, the U.S. government is not required to turn a profit with the science and technology research it conducts. This means that the research the government funds can be aimed at helping people rather than making money, including in areas like the development of new medical treatments for rare diseases that affect small numbers of people, developing tools that help communities recover from natural disasters, developing safety technologies for our public highways, and coming up with new ways to protect Americans from cyber attacks.

AMERICAN COMPETITIVENESS. Major world competitors to the United States, such as China, India, and Russia, have, in the past few years, made it a national goal to excel in scientific advancements, and have dedicated enormous amounts of money to making that happen. Greater funding from the government for science and technology research will stop these competitor countries from eclipsing the United States in important areas such as cybersecurity, health, medicine, and education.

BEST UNIVERSITIES. U.S. universities are among the best in the world, both in terms of the scientific findings and discoveries they make and in the quality of scientists who train and conduct research at them. But without a greater commitment of funding grants from the federal government, our colleges and universities will lose the best professors, researchers, and students to universities in other countries that dedicate more funding to research in science and technology.

JOBS/ECONOMIC DEVELOPMENT. Science and technology research makes a huge contribution to our local economies each year. More than 6.4 million Americans across all 50 states work in science and technology research jobs, and millions more work at companies that rely on technology that is developed from government-funded research. Greater funding from the government for science and technology research will increase these local economic benefits even more.
The most convincing messages in favor of a funding increase focus on STEM education and national security.

How convincing is each statement for why the federal government should increase funding for research in science and technology?

**ESSENTIAL TO OUR PRIORITIES:**
Well-funded S&T research is important to education, a safe country, and energy independence.  

52% VERY convincing

**STEM:**
More S&T research funding will improve STEM education and encourage youth to pursue STEM careers.  

52% VERY convincing

**NATIONAL SECURITY:**
S&T research plays a fundamental role in national security—developing new weapons and cybersecurity.  

50% VERY convincing
Messages focused on STEM education and overall priorities are top overall, Republicans drive enthusiasm in national security messaging.

How convincing is each statement for why the federal government should increase funding for research in science and technology?

**ESSENTIAL TO OUR PRIORITIES:**
Well-funded S&T research is important to education, a safe country, and energy independence.

**STEM:**
More S&T research funding will improve STEM education and encourage youth to pursue STEM careers.

**NATIONAL SECURITY:**
S&T research plays a fundamental role in national security—developing new weapons and cybersecurity.

Dem: 55% VERY convincing
Ind: 47% VERY convincing
GOP: 50% VERY convincing

Dem: 57% VERY convincing
Ind: 50% VERY convincing
GOP: 47% VERY convincing

Dem: 45% VERY convincing
Ind: 41% VERY convincing
GOP: 58% VERY convincing
The opposition message is not as potent.

“We should not be increasing federal government funding for science and technology research every year. Private companies have made great breakthroughs in science and technology research and do so in a much more cost-effective and efficient manner—being accountable to their shareholders and customers. The federal government, meanwhile, spends too much on “scientific research” that does nothing to move our country forward or improve people’s lives. We should not waste tax dollars on something we cannot afford, and that the private sector is better equipped to do.”

Percentage saying this statement is a very convincing reason for why the federal government should increase funding for research in science and technology.