Transforming Science Education

People who understand science and technology

...are prosperous!

<table>
<thead>
<tr>
<th>Field</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Sciences</td>
<td>104</td>
<td>109</td>
<td>115</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>136</td>
<td>142</td>
<td>151</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>95</td>
<td>100</td>
<td>105</td>
</tr>
<tr>
<td>Engineering</td>
<td>134</td>
<td>139</td>
<td>143</td>
</tr>
<tr>
<td>Computer Occupations</td>
<td>64</td>
<td>68</td>
<td>71</td>
</tr>
</tbody>
</table>

How can we better prepare students to meet the science and technology challenges of the future?

1. Create a Plan
2. Build Awareness
3. Professional Development and Curriculum
4. Implement
5. Results

U.S. students rank 17th in science and 23rd in math

2000-2010

12-30% STEM job growth is projected to increase from 2000 to 2020.

STEM job growth is expected to increase from 2000 to 2020.

- Computer Programmer
- Biomedical Engineer
- Sonographer (Associate’s degree)
- Sonographer (Bachelor’s degree)
- Computer Programmer

Jobs in scientific and technological fields pay well and are on the rise:

- Computer Occupations
- Life Sciences
- Mathematical Sciences
- Physical Sciences
- Engineering

Are U.S. students prepared to meet the challenges of a technology-based global economy?

- 74% are more productive, and more prosperous!
- 54% are smarter, more competitive, and technology relies on more people who currently understand science
- 22% are healthier and live longer
- 16% are more engaged, globally informed, and increasingly better able to engage in public policy debates
- 78% can make informed decisions about health, safety, and technology
- 50% of high school graduates do not meet benchmark
- 50% of their students do not identify with STEM
- 25% of undergraduates found that they did not understand the difference between an atom and a molecule
- 50% of their students could explain why it gets colder in the winter
- 100% of their students could not identify the difference between sunlight and a molecule

How do we thrive during times of change?

- 10%
- 10%
- 20%
- 50%
- 54%
- 74%
- 40%

Transforming Science Education: Preparing for the Jobs of the Future
