

Start Young, Start Now: Key Actions to Improve Scientific Literacy

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COVID-19, wildfires, and other 2020 headlines show us that *science matters*. Every day, we make critical science-related decisions, whether that means putting on a mask or voting on an environmental issue. Yet far too many U.S. students leave high school with low scientific literacy.

Building scientific literacy begins in preschool and elementary school, yet fewer than 20% of U.S. children in kindergarten through grade 3 have science as a reliable and regular part of their schooling. When our elementary schools do not treat science as a valued core subject, it may help explain why only 38% of grade 4 students scored at or above *proficient* in science on the [National Assessment of Educational Progress](#). To change this, we must increase elementary science instruction and close [opportunity gaps for low-income communities](#)—and we must do so now.

Everyone has a role to play in this effort. Following are examples of actions we can take to improve students' scientific literacy:

- **State education leaders, school boards, industry leaders, researchers, and policymakers:** Address systemic inequities, including [lack of resources in low-income communities](#). Invest in and promote new strategies to expand and enhance science learning for all elementary students in the classroom, online, and at home.
- **Principals:** Make time for science in the elementary grades. Provide teachers with the support they need to teach science well—including remotely. Communicate the expectation to teachers and families that students will have reliable, regular, and sufficient time for science.
- **Teachers:** Create opportunities for children to ask questions, collect data, and discuss their ideas. Honor the ideas children bring from their

homes and communities. Share examples of scientists from all racial and ethnic groups, genders, and economic backgrounds. Take advantage of the opportunities inherent in conducting science investigations to build children's reading, writing, and communication skills.

- **Parents:** Advocate for science. Ask your child's teacher about what they are doing in science and how you can support science learning at home. Talk with your child about their science work, encourage their curiosity, and investigate everyday phenomena together. You don't need to know the answers to [explore science with your child](#). You can look up questions and enjoy scientific discovery together.

All students deserve the chance to grow a love for science, feel capable of doing scientific work, and develop the scientific literacy they need to be informed citizens. We have deprived too many students of these chances, and our nation is experiencing the result.