nsta
National Science Teaching Association

NSTA supports educators

- We are a community of over **35,000 members** from more than 100 countries.
- We reach **300,000 teachers** weekly across all of our networks.
- We offer **vetted classroom resources** and **professional learning** to help educators and administrators increase their effectiveness and create inclusive and equitable learning environments to improve student learning.

Mission: Transform science education to benefit all through professional learning, partnerships and advocacy.

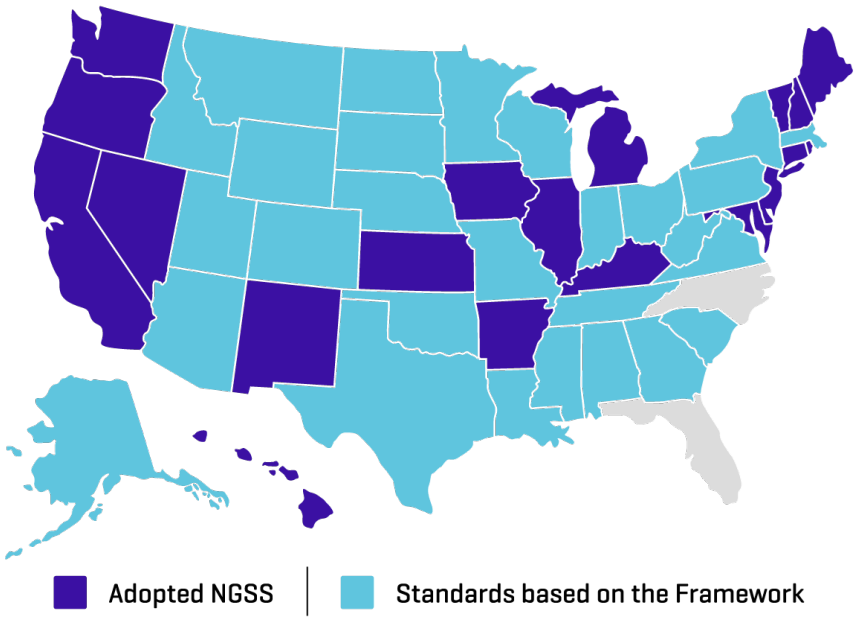
Vision: Science literacy and education are recognized as vital to the future of our society, enabling us to make informed decisions about the collective challenges we face.

Need for technical and scientific workforce

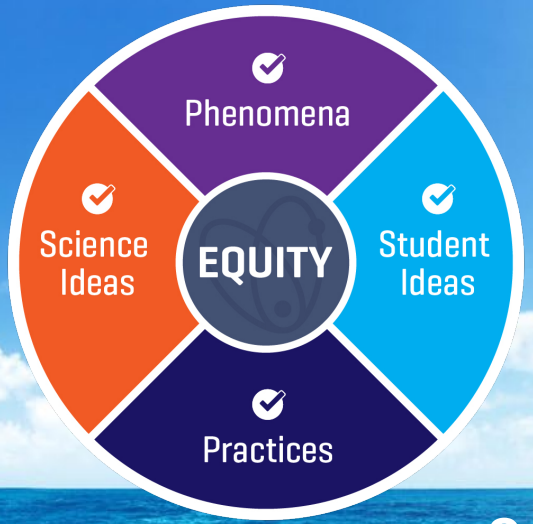
Need for scientific literacy

Leveraging the Science Standards

We help teachers and districts realize the new vision of science teaching and learning outlined in the *Next Generation Science Standards (NGSS)* and the *Framework for K-12 Science Education.*



Sensemaking



Information Frame

Less Like

Sensemaking Frame

More Like

Practices

1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

National Academies of Sciences, Engineering, and Medicine. 2012. A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas. Washington, DC: The National Academies Press. https://doi.org/10.17226/13165.

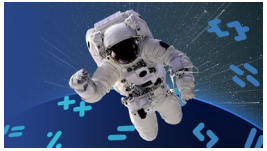
NSTA Resources on Data and Computing

National Conferences

2 conferences a year

Health Datawell

Partnership with: HESI



Alexa for Astronauts

Partnership with: Amazon

How Can We Make Informed Decisions to Keep Ourselves and Our Communities Safe During the COVID-19 Pandemic?

Daily Do Lesson Plan

How Can We Use Data to Predict the Length of a Shadow?

Daily Do Lesson Plan

Header

Opportunity	Challenge
Science is a framework to integrate and give meaning to data and computing through practices and tools.	The school day is already packed with the majority of the time focused on ELA and math at the earlier grades. There are competing standards.
Real data and relevant contexts (phenomena) engage students' curiosity and naturally spark knowledge-rich conversations.	Educators need professional learning necessary to teach this material effectively.
Computer simulations, sensors and software and other technical tools are already used in science classrooms.	Not all schools have the resources to provide these tools.