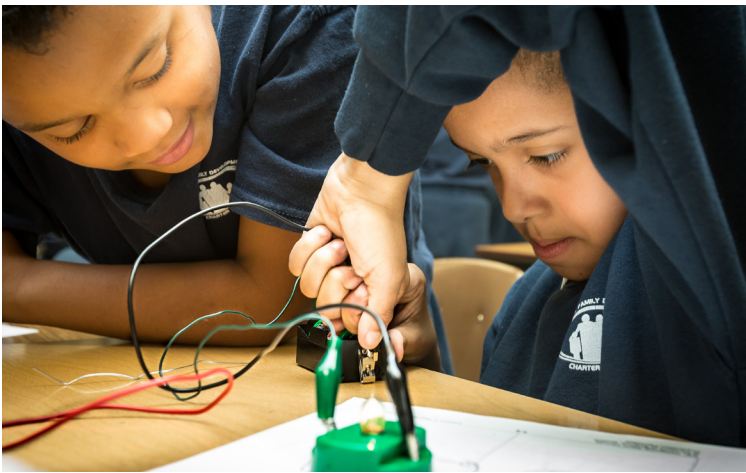


EiE

Guide to PreK–8 STEM Funding



Guide to PreK-8 STEM Funding

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Thank you for downloading EiE's Guide to PreK-8 STEM Funding. We hope you find this resource valuable. Our goal is to improve your understanding of different funding opportunities and help you secure funds for preK-8 STEM programs. In this guide, we provide easy-to-read summaries, practical tips, and resources that will help you navigate the complex world of STEM funding.

ABOUT MUSEUM OF SCIENCE

The Museum of Science, Boston is the nation's only science museum with a comprehensive strategy and infrastructure to foster engineering and technological literacy in both science museums and schools. The museum develops exhibits, programs, and curriculum that empower children to become lifelong STEM learners and passionate problem solvers. Through the advocacy efforts of the National Center for Technological Literacy, we inspire to transform STEM education both nationally and internationally. Our engineering curricula (PreK-12), resources, and teacher professional development are designed to innovate for the reality of today's educational landscape, combining the best in theory, research, teaching practice, and thought leadership.

5 Questions to Ask Before You Start

1 WHAT IS YOUR GOAL?

Every successful implementation plan begins with a clear and direct goal. Lay out realistic goals and aim for measurable results; e.g., “We plan to launch a pilot program to integrate engineering and science education for third-grade students in two schools, reaching 400 students over two years.”

2 HOW WILL YOU MEASURE SUCCESS?

Determine how you will measure whether your new program made a difference. Higher student test scores? An improvement in post-implementation vs. pre-implementation assessments?

3 WHAT DO YOU NEED TO ACCOMPLISH YOUR GOAL?

Money, people, time, equipment, supplies...these are all resources that you can leverage to accomplish your goal.

4 SHOULD YOU HIRE A GRANT WRITER?

Factors that can affect your decision:

- a. Do you have a great writer within your community willing (and able) to dedicate time to your grant applications and any required post-grant reporting?
- b. How many grants will you apply to? What's the cost of hiring a grant writer?

Remember that even if you do hire an external grant writer, you'll want someone to work with the grant writer to make sure the writer has the information they need to write a great application.

5 HOW MUCH DO YOU NEED FOR SUCCESSFUL IMPLEMENTATION?

Research the programs that you would like to implement and calculate the total cost of the program and the resources that you will need to implement. For example, our [budget calculator](#) can help you calculate how much you need to buy our curricula, and our [professional development](#) page lists prices for the various workshops that we conduct locally (in Boston) or upon request in your home city with one of our approved facilitators. Remember to include costs for staff time along with materials and supplies.

6 Roles Helpful to Your Funding Efforts

1 PROJECT LEAD

Applying for grants is a collaborative process that requires many moving parts. Appoint one person to be the leader who organizes brainstorming sessions, keeps track of progress, answers everyone's questions, and ensures that everyone knows their roles and deadlines.

2 SCHOOL AND DISTRICT LEADER

The District Leader helps identify potential partners and key stakeholders to ensure your team has the necessary resources you'll need to achieve your goal. They'll need to provide necessary documents like audited financials, budgets, and 501(c)(3) letters.

3 TEACHER

A teacher's insight and expertise is invaluable. Their continued support will help your school and district implement over many years.

4 WRITER

Whether you hire an external grant writer or go with someone internal, designate someone to be the main grant writer.

5 FACT CHECKER

The writer will take care of the application's content, but it's still a good idea to have someone with fresh eyes making sure all the information listed is accurate.

6 TECH SUPPORT

Enlist the help of your school's IT staff. This person(s) can help you understand your school's technology capabilities and provide troubleshooting support during the grant submission process.

Head Start Funding

WHAT DOES HEAD START FUNDING SUPPORT?

Administered by the Department of Health and Human Services, **Head Start** pre-kindergarten programs promote school readiness for children ages birth to five from low-income families by supporting children's growth and development in a positive learning environment. Funding supports activities across these three broad categories:

- **Early Learning:** Foster children's readiness for school and beyond through individualized learning experiences.
- **Health:** Support each child's perceptual, motor, and physical development, permitting them to explore and function in their environment.
- **Family well-being:** Support parents and families in achieving goals like housing stability, continued education, financial security, strengthening parent-child relationships, and/or engaging families around children's learning and development.

HOW ARE THESE FUNDS DISTRIBUTED?

Head start grants are competitive. They are awarded directly to public or private non-profit organizations, including community-based and faith-based organizations, or for-profit agencies within a community.

HOW CAN HEAD START FUND STEM?

Head Start grants provide comprehensive education, health, nutrition, and parent involvement services to low-income children and their families. You can use Head Start funds to implement high-quality engineering curriculum that integrates and supports science and math standards. Discover Head Start funding opportunities in your state on the [ACF Funding Opportunities Announcements website](#).



DID YOU KNOW

in FY 2017, Head Start served nearly 1 million children and pregnant women in centers, family homes, and in family child care homes in urban, suburban, and rural communities throughout the nation?

STEM Funding Under the Every Student Succeeds Act (ESSA)

EVERY STUDENT SUCCEEDS ACT

Signed by President Obama in 2015, the Every Student Succeeds Act (ESSA) reauthorized the Elementary and Secondary Education Act (ESEA). The [Every Student Succeeds Act](#) replaced No Child Left Behind (NCLB). It is the primary source of federal funding to support and improve our nation's schools. ESSA includes multiple Titles and funding streams, several of which provide flexibility for schools to use funds to support different aspects of STEM education.

To tap into this funding, State Education Agencies (SEAs) submit an ESSA plan for approval by the Secretary of Education. Once the funds are approved, the funds are distributed to states by a formula (more on the formula for each below). The Local Education Agencies (LEAs) are then required to submit applications and provide reports for various funding opportunities.

FOUR MAIN FUNDING AREAS OF ESSA

1. **Title I, Part A:** Improving Basic Programs
2. **Title II, Part A:** Teacher Quality Improvement Grants
3. **Title IV, Part A:** Student Support and Academic Enrichment
4. **Title IV, Part B:** 21st Century Community Learning Center

Getting smart about federal funding doesn't have to be intimidating or confusing. We've got you covered. [Learn more about these funding areas and how they are allocated in this guide!](#)



DEFINITIONS

Formula/Block Grants are funds that are distributed to states (or administrative agencies) by formula, which is typically determined by the level of poverty in a neighborhood or community.

State Education Agency (SEA) is the state-level government organization within each U.S. state or territory responsible for education, including providing information, resources, and technical assistance on educational matters to schools and residents.

Local Education Agency (LEA) is a common term for a school district, an entity which operates local public primary and secondary schools in the United States.

WHAT IS TITLE I, PART A: IMPROVING BASIC PROGRAMS FUNDING?

Title I is the largest source of federal education funding, providing more than \$15 billion annually to schools with high percentages of children living in poverty. The goal of Title I is to help ensure that all children meet challenging state and student academic achievement standards.

HOW CAN TITLE I, PART A SUPPORT STEM LEARNING?

Title I funds can be used to:

- **Support STEM** coursework for students
- **Support students** who do not meet state academic standards with expanded learning time, before- and after-school programs, and/or summer programs; e.g., implementing high-quality STEM programs that have success in improving science outcomes and developing important 21st century skills
- **Provide** extra teachers, intervention programs, supplemental materials, technology, professional development, or programs to incorporate a well-rounded education, including engineering education
- **Update** existing STEM-related labs and lab materials, or other specialized learning spaces.
- **Support field trips** to increase access to real-world, hands-on STEM experiences, activities, and applications, including experiences that expand student knowledge of the impact of STEM in the world



TIP

If you're ever in the Massachusetts area, check out the Museum's Field Trip Planning Guide and plan your trip today!

HOW ARE THESE FUNDS DISTRIBUTED?

Title I dollars are distributed based on four separate formulas, which primarily allocate funds based on the number of children living in poverty that the district serves.

- A district qualifies for the funding if it has at least **10 children who live in poverty and/or 2% of students who live in poverty.**
- Schools with **more than 75% of children** who live in poverty receive Title I funds in ranking order.

Visit the [Title I website](#) to learn more about this funding source.

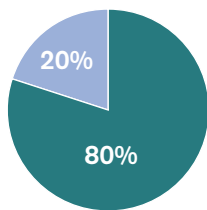
You can use Title I, Part A funds to implement hands-on EiE curricula like EiE for Kindergarten, Engineering is Elementary, Engineering Adventures, and Engineering Everywhere. Contact the EiE team to find out how to use Title I funds for STEM and engineering.

STEM FUNDING UNDER THE EVERY STUDENT SUCCEEDS ACT (ESSA)

TITLE II, PART A: SUPPORTING EFFECTIVE INSTRUCTION

Title II, Part A funds are intended to improve teacher and leader quality and increase student success by:

- Providing evidence-based STEM professional development activities for teachers, principals, or other school leaders who are sustained, intensive, collaborative, job-embedded, data-driven, and classroom- and STEM-focused.
- Setting aside up to 3% of a school's district allocation to support school leaders



■ census poverty population
■ census population

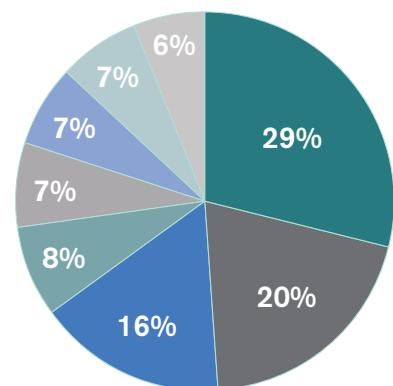
HOW ARE FUNDS DISTRIBUTED?

Funds are distributed from the U.S. Department of Education to states by formula and from States to their districts by formula. Districts receive their allocation based on a district's share of the census poverty population (80% of funds) and of the census population (20% of funds) for ages 5-17.

WHAT CAN BE FUNDED?

- Professional development and other comprehensive systems of support for teachers; including preschool teachers, principals, or other school leaders; to promote high-quality instruction and instructional leadership in science, technology, engineering, and mathematics subjects, including computer science.
- Preparation, recruitment, induction, and retention strategies
- Evaluation and support systems
- Educator equity
- Additional teachers to reduce class size

Professional development for teachers



Source: ed.gov

■ Reading/ELA
■ Math
■ Not specified
■ Science
■ Technology
■ Foreign languages, fine arts, SPED, and ESL
■ Non-Academic
■ History/social studies

DID YOU KNOW

a school district or local education agency (LEA) can use their sub-grant funds to partner with a non-profit, like a science center, to develop and provide professional development support? Learn more about EiE's Professional Development offerings.

TITLE IV, PART A: STUDENT SUPPORT AND ACADEMIC ENRICHMENT (SSAE)

Title IV, Part A grants support states and district activities across three broad categories:

- **Well-rounded education:** Providing students with a well-rounded education through STEM programs, including computer science (CS), music, art, health, and physical education.
- **Safe Schools:** Supporting safe and healthy students with comprehensive mental health, drug and violence prevention, training or trauma informed practices, and health and physical education.
- **Technology Use:** Supporting the effective use of technology, via teacher professional development, to improve and increase the digital literacy of all students.



DID YOU KNOW

Title IV, Part A funding increased significantly in FY18 to 1.1 billion ?

HOW CAN TITLE IV, PART A SUPPORT STEM EDUCATION?

Funding can be used to support a wide range of activities to improve STEM learning and teaching. Title IV, Part A allows schools to:

- Expand and implement high-quality STEM programs and curricula in school
- Increase access to STEM for underserved and at-risk student populations
- Provide hands-on STEM learning opportunities for students and professional development for teachers.
- Collaborate with after-school STEM and informal STEM educators (e.g., science museum educators) to improve integration and instruction in STEM subjects
- Integrate other academic subjects, including the arts, into STEM subject programs
- Create or enhance STEM speciality schools with STEM-rich curricula
- Support student participation in STEM nonprofit competitions



TIP

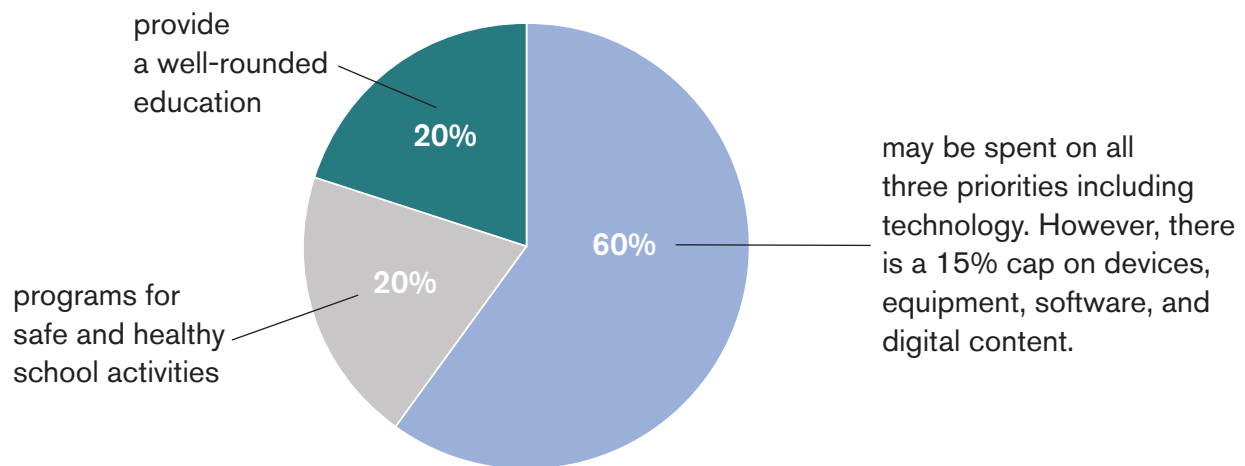
For help on how to navigate this great funding opportunity, contact the EiE team.

STEM FUNDING UNDER THE EVERY STUDENT SUCCEEDS ACT (ESSA)

HOW ARE THESE FUNDS DISTRIBUTED?

Each state allocates funds to the school districts based on their Title I formula. States with a higher Title I get a higher funding level. Each school district must develop its application for funds in consultation with community stakeholders, including community-based organizations, such as science museums and others, with relevant and demonstrated expertise in programs and activities designed to meet the purpose of this subpart.

- Schools or districts that receive **an allocation above \$30,000** must do a needs assessment and spend at least:



- Schools or districts that receive **an allocation below \$30,00** must spend money in at least one of the three categories of well-rounded education, safe schools, or technology, but they do not need to do a needs assessment. The 15% technology purchase cap still applies.

Visit the [Title IV, Part A](#) website to learn more about this funding source.

WHAT IS TITLE IV, PART B: 21ST CENTURY COMMUNITY LEARNING CENTERS FUNDING?

Title IV, Part B grants, which average \$1 billion each year, provide opportunities for communities to create or expand activities in community learning centers that provide academic enrichment during non-school hours for students—in particular, those students who attend high-poverty or low-performing schools.

HOW ARE THESE FUNDS DISTRIBUTED?

Each state receives an allocation based on their Title I funding formula.

WHAT CAN BE FUNDED?

- Afterschool and summer learning programs that provide academic enrichment activities that can help students meet state and local achievement standards
- Programs promoting STEM skills and non-traditional STEM teaching methods; e.g., hands-on, active STEM-rich experiences
- Partnerships with science centers that offer engineering professional development and curriculum

Visit the [Title IV, Part B](#) website to learn more about this funding source.

Learn more about our afterschool curricula: [Engineering Adventures](#) and [Engineering Everywhere](#).



DID YOU KNOW

the 21st Century Community Learning Centers initiative is the only federal funding source dedicated to supporting local summer learning and afterschool programs?



DID YOU KNOW

states often prioritize applications that are jointly submitted by a local educational agency and a community-based organization (like a museum)?

Grant Funding

There are many different types of grant opportunities available. The key to finding grant funding opportunities is knowing where to look for opportunities and understanding what funders want to read. In this section, we provide an overview of different grant opportunities, resources to help you identify funding opportunities, and tips for writing grants.

TYPES OF GRANT OPPORTUNITIES

FEDERAL GRANTS

In addition to Department of Education funds, there are additional federal agencies that provide funding for STEM programs; e.g., National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), United States Department of Health and Human Services (HHS), and National Oceanic and Atmospheric Administration (NOAA).

Federal funding announcements and grant applications can be intimidating and highly competitive. Typically, federal funding sources have strict requirements on how funds can be spent, but researching and understanding how federal funds are distributed will help. The effort can be well worth it!

Federal grants tend to fund only direct costs of program implementation including teacher/leader salaries, equipment or materials needed to implement the project, evaluation of project impact, and dissemination of the project's outcomes. Federal grants come with strict requirements for reporting both program and project outcomes as well as expenditures.

STATE AND LOCAL FUNDING

In addition to federal funding opportunities, there is may be state and local funding available in your state for STEM education initiatives and teacher professional development.

STEM education is of top interest to many states across the country. Your state may have various initiatives, such as a STEM Council or Task Force, a STEM Ecosystem, or a P-16 council that aims to tackle education issues from Pre-K through college by distributing funds to support STEM education. This could be a worthwhile avenue as state or local grants can be less restrictive than federal grants.

Even if these initiatives do not offer direct grant funding, staff may be able to offer support and provide guidance on your goals, potential partners, funding priorities, and what opportunities may fit your needs.

Additionally, state universities and institutions of higher education that train teachers might be good collaborators on grants, and they may know STEM funding sources and contacts.



TIP

Our dedicated team knows the ins and outs of funding opportunities for STEM learning. Talk to a member of the EiE team and learn more today.

COMMUNITY FOUNDATION

Community foundations are grantmaking public charities that aim to better the lives of people who live in a defined local area. Often varying in size, these foundations combine financial resources from individuals, families, and businesses. They work to meet the needs of the community they serve, and often play a crucial role in identifying and solving issues within their local communities. Because of this role, community foundations often seek to support local education proposals and initiatives.

Created by the Council on Foundations, [The Community Foundation Locator](#) is a useful tool to view a list of community foundations in the United States and to identify a foundation near you.

PRIVATE FOUNDATION

Private foundations make grants based on charitable funds. Typically, these funds come from one or several small sources; e.g., an individual, a family, or a corporation.

A private independent foundation is distinct from a private family or corporate foundation because it is not governed by a benefactor, the benefactor's family, or a corporation. A private foundation may have started as a family or corporate foundation, but converted over time.

TIPS FOR FINDING GRANT OPPORTUNITIES

To save time and resources, it's important that you make sure you identify grant opportunities and funding sources that align with your goals and priorities.

1. **Check out STEMfinity**, which aggregates information about available grants. The **Foundation Center Directory** is also a good resource for finding funders, but registration is necessary. Check with school district personnel or a District Educational Foundation, if there's one in your district, they may have access to the Foundation Center Directory.
2. **Sign up** for newsletters like **STEM Connector** and **Link Engineering**, which often list grant opportunities.
3. **Check with your district administration** to see if they have a fundraising office that can handle or support your STEM funding efforts.
4. **Do an online search** for potential foundations by typing in “foundation and [insert your town, city, region, and then state].” You may discover a foundation that you hadn't heard of.
5. **Make a list** of potential foundations.
6. **Review** each foundation's website carefully for grantmaking guidelines or FAQs that describe the scope and timing of their grants.



TIP

Increasingly, grants may require evidence of partnership or collaboration with community groups, organizations and/or educational institutions. It can be worthwhile to foster strong partnerships with these entities so you can take advantage of opportunities as they arise. In some cases, only nonprofit agencies can apply for a grant, while in other cases, only schools can apply.

QUESTIONS TO HELP YOU IDENTIFY A “GOOD FIT”

Before applying to any grant, determine whether your goals align with the foundation's goals.

1. Who or what does this foundation support?
2. Does the foundation's focus align with your project's?



TIP

You can research a foundation's former grantees and typical amounts of grants by signing up for **Guidestar**, a free tool that allows users to look up charitable organizations' tax forms (IRS Form 990). Many funders have websites that provide information on their area of focus, geographic restrictions, organizations that they have funded in the past, and typical amount of grants as well as the application process.

3. What kind of funding do they offer?

Foundations usually award either program or general operating grants.

4. How do they typically award?

Some foundations award public schools directly while others may work with a district education foundation or nonprofit organization that works directly with the school system.



DEFINITIONS

Program grants are intended for a specific programmatic purpose.

General operating grants are open-ended and allow grantees to use funding without restrictions.

8 TIPS FOR WRITING GRANTS

1 REVIEW GUIDELINES

Follow the grant application directions carefully. Some reviewers will reject applications that do not meet the requirements.



TIP

Make note of any specific page length, font, page margin, or spacing requirements.

2 MAKE A CHECKLIST

There is so much information to keep track of during the grant application process. A detailed checklist or spreadsheet will keep you on track!



TIP

- Identify any documents that might take longer to get than others.
- Organize all important paperwork in one folder that is easy to retrieve for your applications.
- Avoid sending additional documents. Stick to sending only what the reviewers request.

3 CREATE BOILERPLATE LANGUAGE

If you're filling out numerous applications, you'll notice that you will need to answer similar questions over and over. Rather than writing this content fresh, compile your answers to common questions into one document and then customize your answers as necessary.

4 START APPLICATIONS EARLY

Give yourself plenty of time to get this right! Be aware of deadlines for application submission and keep in mind the timelines for decision making. This could take several months and may impact your planning and implementation of the project.

5 CONTACT GRANTMAKERS

Confused by a question on the application? Don't hesitate to reach out and ask by phone or email for clarification!



TIP

Remember to always give a brief description of your school and your primary reasons for applying before asking your questions.

6 TELL YOUR DISTRICT'S UNIQUE STORY WITH ENTHUSIASM AND PASSION

Provide background context, include data where you can, articulate your school or district's needs and priorities and how this funding will help solve those problems.

7 AVOID ACRONYMS AND JARGON

Tell your story in words that are concise and understandable.

8 CHECK FOR TYPOS

Double and triple check your application for typos and calculation errors!

Corporate Funding

OVERVIEW OF CORPORATE OPPORTUNITIES

Many corporations consider supporting STEM education a smart investment, especially if the funds improve student outcomes and have a positive impact on the community where their employees and/or consumers live and work.

Corporate Social Responsibility (CSR) refers to businesses demonstrating that they are good corporate citizens. It's concerned with protecting the interests of all stakeholders, such as employees, customers, suppliers, and the communities in which businesses operate. Examples of CSR include adopting humane employee practices, caring for the environment, and engaging in philanthropic endeavors. It also enhances the brand of the corporation.

Corporations support STEM education in various ways:

1. Direct gifts through grants or giving programs to nonprofits and schools.
2. Employee-matching programs where corporations will double or triple the amount that employees donate to nonprofits and schools.
3. Employee volunteers who can serve as mentors, guest speakers, or in-class volunteers.

Some corporations have philanthropic foundations while others have their giving administered through their marketing departments. Typically, the funding amounts are dedicated on an annual basis.

TIPS FOR FINDING CORPORATE SPONSORSHIP

Begin the search locally. Look for companies that have a STEM or Research & Development focus in your area:

- Company headquarters
- Manufacturing facilities
- Large regional offices

Local businesses are more likely to support schools that are within the communities where their employees work, and they're more likely to become a long-term partner and supporter of your programs.

1. **Make a list of local businesses**—in particular, identify business that would have a vested interest in preparing students for career paths that require scientific and technological literacy.
2. **Visit their websites** to see if they have listed any information about supporting STEM education. Typically, corporations will describe online their commitment to their local communities, recent funding award announcements, and additional information on possible sponsorship opportunities.
3. Once you identify a potential corporate partner, **contact a staff person** to discuss partnership opportunities. You'll want to talk with someone who works on their community outreach—some companies call it community affairs, community investments, corporate social responsibility, or corporate citizenship.



TIP

Some companies list guidelines for how to contact them. Make sure to follow those guidelines!

Why Engineering?

Now that you've read up about all the amazing funding opportunities for STEM education, learn how engineering can help you create a generation of problem solvers.

REACH ALL STUDENTS



Engage students in ways that align with their learning style. So all students—including English learners, students who receive special education services, and those who have not flourished with more traditional instruction—can thrive.

BREAK STEREOTYPES



Start engineering early before stereotypes about who can and can't engineer take hold. Create new paths and possibilities for children as they discover who engineers are, and that they can be one too!

BUILD 21ST CENTURY SKILLS



Throughout the engineering design process (EDP), students develop the skills they'll need for success in college and careers, like problem solving, communicating, thinking critically, collaborating, and persisting through failure.

INCREASE STUDENT ENGAGEMENT



Channel students' energy and develop positive problem-solving and critical-thinking strategies through engaging, hands-on engineering design challenges. These essential skills can change the way students and teachers approach challenges in all subject areas.

IMPROVE SCIENCE OUTCOMES



Engineering helps kids learn science better. Students who use EiE show significant improvement on science outcomes among: girls, students on an IEP, Hispanic and African-American students, and English learners. Each Engineering is Elementary unit aligns to a commonly taught science topic so students can deepen their understanding and see the real-world applications of science knowledge.

MAKE ALL LEARNING DEEPER AND RICHER



Integrate engineering into subjects like literacy and reading, math, and social studies. Help kids make cross-curricular connections and learn to apply skills and knowledge across subject areas.

MEET STANDARDS



Engineering is part of Next Generation Science Standards and many state science standards. Meet those standards with classroom-tested engineering curricula.

EMPOWER INNOVATION IN THE CLASSROOM



Engineering introduces a whole new way to teach. Educators spend less time being the 'sage on the stage' and more time being facilitators of student learning and growth.

INCREASE ACCESS TO STEM CAREERS



80% of the fastest growing jobs in America are in STEM-related fields. Teach important 21st century skills, open doors to new opportunities, and prepare students for future success.

INSPIRE CHILDREN TO BECOME LIFELONG PROBLEM SOLVERS AND STEM LEARNERS



Engineering taps into children's natural curiosity about how the world around them works, inspiring them to think creatively, innovate, and work collaboratively to solve problems that they can relate to their own lives.

6 Reasons Why You Should Use EiE

1 BUILD HABITS OF MIND

EiE develops positive problem-solving and critical-thinking strategies. These essential skills can change the way students and teachers approach challenges in all subject areas.

2 MAKE ENGINEERING ACCESSIBLE

We designed EiE to be inclusive, from the units, varied geographical story settings to the extensive resources for diverse learners, regardless of background or prior knowledge. Our curriculum builds space in time for material and concept exploration to level the playing field and give equal access to all learners. We break down stereotypes about who can engineer and help all children find their inner engineer.

3 ENGAGE LEARNERS IN SCIENCE AND ENGINEERING

Our units tap into children's natural curiosity about how the world around them works, inspiring them to think creatively, innovate, and work collaboratively to solve problems they can relate to their own lives. Each unit aligns to a commonly taught science topic, so students can deepen their understanding and see the real-world applications of science knowledge.

4 REACH ALL STUDENTS

Engage students in ways that align with their learning style. So all students—including English learners, students who receive special education services, and those who have not flourished with more traditional instruction—can thrive.

5 MAKE ALL LEARNING DEEPER AND RICHER

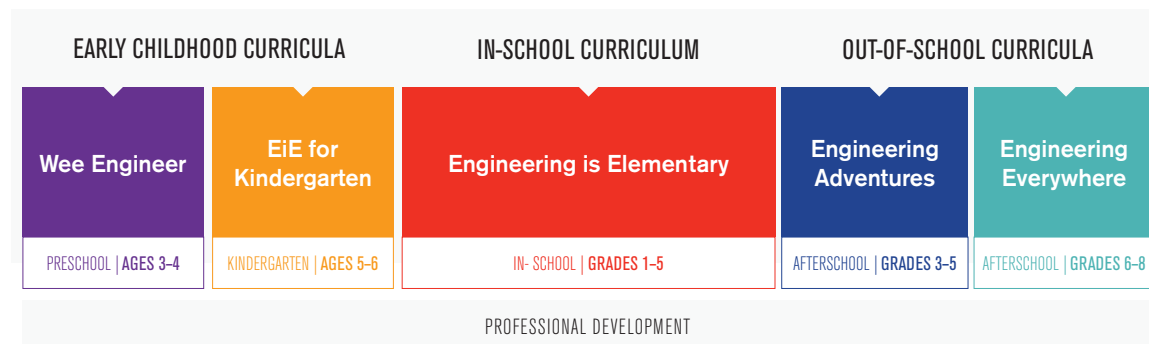
Integrate engineering into subjects like literary arts, math, and social studies. Help kids make cross-curricular connections and learn to apply skills and knowledge across subject areas.

6 INTRODUCE TEACHERS TO INNOVATIVE TEACHING PRACTICES

73% of elementary teachers do not feel adequately prepared to teach engineering. Our educator guides and professional development opportunities lower that number. We help each teacher become a confident facilitator of student learning.

EiE Resources

We do the work so you don't have to!



EiE VIDEO COLLECTION

See our curricula in action with:

- **Getting Started Videos** that can help you choose which unit is right for you!
- **Classroom Videos** of every Engineering is Elementary unit taught by real educators across the country.
- **How-To Videos** that make teaching our curriculum even easier.

BLOG

Stay up-to-date on educator tips, teaching strategies, research, and upcoming professional development opportunities.

EDUCATOR RESOURCES

- **Supporting Guides and Connections** that identify how each Engineering is Elementary unit aligns to a commonly taught science topic so students can deepen their understanding and see the real-world applications of science knowledge.
- **Alignment Guides** that make it easy to learn how Engineering is Elementary connects to your state and national science standards. You can also see what popular elementary science curricula connect to Engineering is Elementary.
- **Extension Lessons** that can help you integrate engineering with other academic subjects like math, reading, social studies, and science.
- **Resource Lists** that deepen your students' understanding of the unit's field of engineering and enrich connections to science and literacy.
- **Assessment Tools** to help you gauge how students are meeting each Engineering is Elementary unit's learning objectives. All EiE assessment tools are research-based and teacher-tested.

Ready to create a generation of problem solvers? Contact the EiE team.



Create a Generation of Problem Solvers

EiE is an award-winning program of the Museum of Science. Our research-based, hands-on engineering curricula (preK-8) introduce learners to the engineering design process and create a generation of problem solvers. We design our engineering curricular materials, resources, and teacher professional development to best innovate for the reality of today's educational landscape. EiE engages all learners and empowers students and educators to discover their inner engineer.

Sources:

- Horizon 2012 report Banilower, E. R., Smith, P. S., Weiss, I. R., Malzahn, K. A., Campbell, K. M., & Weis, A. M. (2013). Report of the 2012 national survey of science and mathematics education. Chapel Hill, NC: Horizon Research, Inc.
- NSTA Every Student Succeeds Act (ESSA) Resources and Information: [https://www.nsta.org/about/clpa/of Science Education](https://www.nsta.org/about/clpa/of-Science-Education), 32(5), 669–685.
- Office of Head Start: <https://www.acf.hhs.gov/ohs>
- U.S. Department of Education: <https://www.ed.gov/programs/landing>