

PDF available at TeacherGeek.com/lowaSTEM

These are the questions you will see when you apply online plus some helpful info you'll need to craft your responses.

Fill out and submit your application at iowastem.org/Scale-Up-Application

Applicant Information

- Applicant First Name: Applicant Last Name:
- City: Applicant STEM Region:
- Applicant Organization/School Building:
- Applicant Title in Organization/School:
- Applicant Organization/School Address:
- Applicant Organization/School Address 2:
- County: Zip Code:
- Applicant Phone Number (with area code):
- Applicant Summer Phone Number (with area code):
- Applicant School/Organization Email:
- Confirm Applicant School/Organization Email:
- Is your shipping address for STEM Scale-Up Program materials and equipment different from above?
- Administrator's First Name:
- Administrator's Last Name:
- Administrator's Email:
- Administrator's Phone Number:
- Institution's Fiscal Agent/Business Manager First Name:
- Institution's Fiscal Agent/Business Manager Last Name:
- Institution's Fiscal Agent/Business Manager Email:
- Institution's Fiscal Agent/Business Manager Phone Number:
- Educators Implementing and Attending Required Professional Development:
- Educator 1 Information
 - First Name:
 - Last Name:
 - o Title:
 - Phone Number (Ex. 111-111-1111):
 - o Email:
 - Summer Email:
 - Grade Level(s):



- **1.** Who are your intended participants?
- 2. Grade Levels: Will this program be implemented in school or out of school or both?

Help with Answering this Question

Cart activities span grades Pre-K to 12+ (ages 4 to 18+)

Kids grades 3 (age 8) and below will need some adult assistance

3. How many classrooms, sections, or youth groups will implement the program during the year?

Help with Answering this Question	
These educators may apply to Share a Cart (max of 3 educators per Cart)	These educators should apply for Their Own Carts (sharing not recommended)
Elementary Classroom TeachersSecondary Science Teachers	 STEM Teachers Elementary Specials/Enrichment Teachers Secondary Elective Teachers (e.g. Technology, Engineering, etc.)

4. Estimated total number of youth who will participate:

Help with Answering this Question

The STEM Cart has enough components to make 100 of any activity (300 kids in groups of 3), and enough tools for one class of 36 kids to be making at one time.

- 5. What percentage of youth are on free/reduced lunch? (round to nearest whole number) Please refer to https://educateiowa.gov/data-reporting/education-statistics-pk-12#Student_Enrollment for guidance of free/reduced lunch by Iowa Schools. Any questions about this report, please email them to info@iowastem.org.
- 6. What will be the estimated number of females participating in the program?
- **7.** What will be the estimated number of youth of diversity (e.g. youth of color, disability) participating in the program?
- **8.** If applying for more than one STEM Scale-Up Program for this location, please rank preference for this program (e.g. 1st of 3, 2nd of 2).

9. How will the STEM Scale-Up program fit into and improve your current STEM units, lessons, curricula? Please provide a specific example. (500 word limit)

Help with Answering this Question

How this question will be scored...

(from IowaSTEM.org/Scale-Up-Application)

Score	Reason for assigning the score	
	Clear, thorough, and systematic description of integration into established practices/programs. Includes	
4	details about school/organization's current practices and how the Scale-Up program will address gaps,	
	refresh, or extend current practices.	
3	Detailed description of the integration elements. Provides a practice/program context for implementing the Scale-Up	
	program.	
2	Limited description of program integration, missing some important details of more than one component of how this	
2	Scale-Up program aligns with current school/organization practices/programs.	
1	Not enough information provided to assess the quality of the response.	
0	Information provided does not address the question.	

Ideas for writing your response...

Ways to integrate STEM Cart	How STEM Cart integration addresses gaps, refresh, or extend current practices
	 Included curriculum makes Science/STEM truly interdisciplinary, incorporating Science, Technology, Engineering, Math, Reading, and sometimes other core subjects (e.g. Social Studies) in essential documents; optional modules extend any activity into Art and Marketing disciplines
Incorporate Activities into Science Units	 Easily meet NGSS standards for Engineering while connecting engineering activities to many other NGSS Disciplinary Core Ideas and mathematics through optional labs and inquiry that's infused in STEM Cart curriculum
Recommended for elementary classroom teachers and secondary	 d for issroom Makes science more engaging (hands-on learning, competitions + challenges, immersive scenario videos)
science teachers	 Kids apply the science they are learning, bringing them to higher cognitive domains (Bloom's Taxonomy, Depth of Learning); this leads to deeper understanding of information and reduces the time kids need to review their learning
Retool or Create STEM/Engineering	 Included curriculum makes Science/STEM truly interdisciplinary, incorporating Science, Technology, Engineering, Math, Reading, and sometimes other core subjects (e.g. Social Studies) in essential documents; optional modules extend any activity into Art and Marketing disciplines
Curriculum Recommended for Jedicated STEM teachers and elective teachers	 Easily meet NGSS standards for Engineering while connecting engineering activities to many other NGSS Disciplinary Core Ideas and mathematics through optional labs and inquiry that's infused in STEM Cart curriculum
	 Perfect amount of structure – guided activities get students started, guide their exploration, and push them create their own unique designs
Upgrade/Create	 Real engineering – kids actually design, test, redesign, and repeat; there's no perfect design so kids are never done making
a Makerspace or STEM Room	 Real data – data so good kids can measure the effects of design changes, even using the data to complete optional science labs
	 Tons of ready-to-go resources from editable guides, labs, and challenge documents to scenario videos that launch and immerse kids in an engineering problem
	Be sure to describe and relate to your current practices

10. Describe the implementation plan and the students for whom, when and where the Scale-Up program will be used so that reviewers can understand for whom and where the program will be implemented. (500 word limit)

Help with Answering this Question

How this question will be scored...

(from IowaSTEM.org/Scale-Up-Application)

10) Describe the implementation plan and the students for whom, when and where the Scale-Up program will be used so that reviewers can understand for whom and where the program will be implemented.

Score	Reason for assigning the score	
Clear, thorough, and systematic description of how you will implement the program, including who will be implementing the program, where it will be implemented within your organization (e.g., physical location, age band/grade level, etc.), and approximately when during the upcoming academic year y 4 plan to implement the Scale-Up program if selected.		
3	3 Detailed description of most implementation components of who, when, and where.	
2	Limited description of implementation, missing some important details of more than one component of who, when, and where.	
1	Not enough information provided to assess the quality of the response.	
0	Information provided does not address the question.	

Info for writing your response...

Who may implement the	Where it will be implemented	Approximately when you plan
STEM Cart	within your organization	to implement the STEM Cart
 Elementary Schools: Classroom Teachers max of 3 teachers taking turns with 1 cart STEM Teachers teachers need own carts sharing not recommended Specials/Enrichment Teachers teachers need own carts sharing not recommended Other appropriate faculty Secondary Schools: Science Teachers max of 3 teachers sharing 1 cart Elective Teachers (e.g. Tech, Engineering, STEM, etc.) max of 1 teacher per cart Other appropriate faculty Other appropriate faculty Other appropriate faculty Other appropriate faculty 	 Physical Location: Cart Dimensions: 52" wide x 72" tall x 17" deep dimensions are approximate The Cart can be rolled from location-to-location and should be stored where kids do not have unsupervised access to the Cart Ages & Grades: Activities for grades Pre-K to 12+ (ages 4 to 18+) Kids grades 3 (age 8) and below will need some adult assistance 	 11/01/2023 is the safest date to begin implementation. Plan your implementation using the dates below: PD Sessions to be completed over summer break before the 2023-24 school year Curriculum is always publicly available at TeacherGeek.com/learn (no purchase or login necessary) Cart Deliveries expected to be complete by 08/31 (no carts will be delivered after 10/31)

11. The goal of the STEM Scale-Up Program of the Iowa Governor's STEM Advisory Council is to "seed" or start programs (not sustain). What is your plan to cover the costs of sustaining this program in future years (supplies and materials, fees, additional training, etc.)? (300 word limit)

Help with Answering this Question

How this question will be scored...

(from IowaSTEM.org/Scale-Up-Application)

Score	Reason for assigning the score	
	Clear, thorough, and systematic description of strategies to sustain and grow STEM programs. Examples include funding sources, leadership involvement, increasing participation of educators and youth, a	
4 integration into standard practice and organization culture.		
3	Detailed description of future sustainability practices e.g., ongoing funding, training, integration into current practice and culture, and support from leadership, etc.	
2	Limited description of plans for future use. Response includes how the Scale-Up program could integrate into established program or curriculum.	
1	Not enough information provided to assess the quality of the response.	
0	Information provided does not address the question.	

Ideas for writing your response...

	Sustainability Cost: under \$200/year for most schools	
	Possible Community Partners: see TeacherGeek.com/lowaFunding	
Funding	Perks for Community Partners: (why might they fund your program?)	
	 Low-cost way for partners to positively impact their community 	
	 Partners can showcase their social impact to strengthen their brands 	
	Community Partners will ideally go beyond funding – they should participate in	
	STEM Cart engineering challenges with students, preferably following a routine (e.g.	
	once per quarter)	
Leadershin	 All community partners can connect students' STEM problem solving to the 	
Involvement	problem solving that adults do in real-life	
mvolvement	 Community partners with backgrounds in STEM can give STEM-specific 	
	feedback to students during engineering challenges	
	 Business-minded partners can assist students in the STEAM Market-It 	
	Challenge, where kids transform their STEM Cart creations into retail products	
	Educators:	
	Free Professional Development videos will be available starting Summer 2023	
	to train new teachers (note: in-person PD is required to get the STEM cart	
	award – video PD can be used to sustain only)	
Increasing	Youth:	
Participation of	 The STEM Cart increases participation of youth by: 	
Youth &	 Engaging kids with hands-on learning, competitions + challenges, 	
Educators	immersive scenario videos, picture-heavy documents	
	 Scaffolds that support struggling learners who might otherwise 	
	become disengaged due to frustration	
	 Giving students equal access to quality building components, leveling 	
	the competition for kids who are economically disadvantaged	
Integration into	 Ideally, community partners assist with engineering challenges a few times 	
Standard Practice	each year, and the relationship would persist, where their involvement	
	becomes an integrated into standard practices for engineering activities	

12. The STEM Council established the priority to reach children of high need and/or under-served (specifically rural/urban, ethnic/racial minority, gender distribution, free or reduced lunch, special needs and low STEM academic performance). Please identify the high-need groups you will serve using this program. (500 word limit)

Help with Answering this Question

How this question will be scored...

(from IowaSTEM.org/Scale-Up-Application)

Score	Reason for assigning the score
	Clear, thorough, and systematic description of <i>how applicant will use this program</i> to provide greater
4	access and equity to underserved groups in their community.
	Identifies the high-need/under-served learner groups served by applicant's organization or school. Describes how
3	the applicant will provide greater access and equity to underserved groups in their community.
	Limited description of the high-need/underserved learner groups served by the applicant's organization or school
2	and how the applicant will provide greater access and equity to underserved groups in their community.
1	Not enough information provided to assess the quality of the response.
0	Information provided does not address the question.

Ideas for writing your response...

Identify and remedy barriers for underrepresented youth in STEM

Barrier	Remedy
Financial hardship	STEM Carts level the playing field for materials. All students have access to the same components, so the child whose guardian has a machine shop in their garage will no longer outperform the child repurposing items from the recycling bin.
Frustration, gaps in prior knowledge, or insufficient support	Guided activities appropriately balance challenge and support by getting students started, ensuring some initial success, and guiding students through testing and re- engineering their creations. Documents are rich with pictures and graphics to assist struggling readers. They are also editable and modular, so curriculum can be customized to meet the needs of specific populations.
Insufficient engagement due to lack of interest or relevance	Curriculum is designed to engage all students. Documents are picture-heavy, connecting to real-world applications and, where possible, other subjects and cultures. Activities are hands-on with heavily graphical documents and videos to engage different learning styles/preferences. Optional scenarios and scenario videos immerse kids and the challenges, making them more relevant and fun.

Ways that <u>you</u> (not your district/organization) can use this program beyond the classroom to impact underrepresented youth, if none are in your classroom

- Collaborate with other classrooms or schools who may have more students with disadvantages (e.g. share the Cart, create an afterschool program, peer mentorship program, etc.)
- Create an afterschool or lunch workshop for students outside your classroom who are struggling/unengaged in science