

Balance the Equation Application Questions

A Grand Challenge for Algebra 1

Overview

Thank you for participating in the Balance the Equation: A Grand Challenge for Algebra 1. We are excited you have decided to share your solution with us. A solution can be a program, practice, instructional model, platform, or tool supporting priority students.

Before you start your application journey, we recommend that you take our [pre-application survey](#), a self-assessment to determine if you may be a good fit for this challenge, and review our [rules and guidelines](#). If you choose to take our pre-application survey, please note that the Bill & Melinda Gates Foundation will not use responses to collect data about individual applicants. Completion of the pre-application survey is also not a guarantee of Phase 1 or Phase 2 funding.

A few things to note:

- Applications must be submitted in English.
- Balance the Equation grantees are to be based solely on information submitted through their application that are best positioned to support priority students and the desired outcomes identified by the Gates Foundation.
- **Applications must be submitted through our [online portal](#) by responding to the questions within SurveyMonkey Apply. Applications submitted via email will not be considered.** If you are an existing user, you can log in to your existing account. New users must create an account.
- The submission system will allow you to save your work as you progress, return to it, and then submit when you are ready up until the challenge closes on **Thursday, November 06, 2020 at Noon Pacific Time.**
- Please reference the [Glossary of Terms](#) for definitions of terminology used throughout.

Section 1: Organization Identification

- **Please indicate your role or organization type. If you selected "Other" please supply an answer for further detail.** [multi-select]
 - Collegiate Educators and Researchers.** Those developing academic models, have written papers, or are doing/have done research projects in math.
 - Community Leaders, Coaches, and Classroom-based Educators.** Those working directly with middle or high school students and have implemented or developed their own strategies, approaches, or tools.

Content Developers and/or Publishers. Individuals responsible for the creation of curricula, defining strategic curriculum goals, content distribution, or determining content quality and/or effectiveness. (e.g., publishers, state education agencies, districts, schools, or teachers).

EdTech Developers. Institutions developing digital tools, games, and applications.

Professional Learning Communities. Groups that meet regularly, share expertise, and work collaboratively to improve teaching skills and the academic performance of students. (i.e.: development networks)

School and District Administrators. Those implementing district initiatives or strategies for their charter, magnet, or public school and/or district.

Other [open field]

2. Which priority students do you have experience working with or developing a solution for in the United States? [check all that apply]

Black students

Latino students

English Learners (ELs)

Students experiencing poverty

None of the above

3. If you answered yes to either Black or Latino students, is your solution centered primarily on supporting Black or Latina girls in mathematics? [single choice]

Yes, the solution focus is primarily on supporting Black girls in mathematics

Yes, the solution focus is primarily on supporting Latina girls in mathematics

Yes, the solution focus is primarily on supporting both Black and Latina girls in mathematics

No, the solution focus is on supporting both boys and girls in mathematics (Black or Latino)

4. Have you previously applied for a Grand Challenge through the Bill & Melinda Gates Foundation? [single choice]

Yes

No

5. Have you previously received funding from the Gates Foundation? [single choice]

Yes

No

6. **This is a global challenge. If your organization is located outside the U.S., please detail any considerations that may impact your ability to implement your solution with priority students based in the U.S.** [open field; 100 words max]

7. **Does your organization have a website? If so, please include a direct link here.** [open field; 200 characters max]

8. **Is your solution standalone or in partnership with another organization, foundation, or funder?** [single choice]

Standalone

In partnership with another organization, foundation, or funder

[Please list names here] [open field; 100 characters max]

9. **We are committed to increasing the presence of Minority-led organizations (MLOs) in our investment portfolio. We believe that organizations that draw on diversity in the leadership and staff structures are well-equipped to serve a U.S. public school population that continues to become more ethnically and racially diverse. Does your organization qualify as a MLO per the definition below?** [single choice]

Yes

No

We define MLOs as those that meet one or more of the following criteria:

- An organizational leader (e.g., Superintendent, Executive Director, President, or Chief Executive Officer) identifying as Black and/or Latino.
- An executive leadership team (e.g., center directors, CFO) in which at least 40% of the members identify as Black and/or Latino.
- A Board of Directors in which at least 40% of the members identify as Black and/or Latino.
- An organization with programmatic staff (i.e., full-time staff members that make programmatic design and implementation decisions) of which at least 40% identify as Black and/or Latino.

If your organization is led by Indigenous people or another racial or ethnic group that reflects the student population you serve, please email us directly at balancetheequation@gatesfoundation.org to discuss MLO status.

10. What aspects of diversity, equity, and/or inclusion are strong within your organization?

Describe any specific actions that have been implemented over the last couple years focused on improving diversity, equity, and/or inclusion. You might have this information in the form of an organizational theory of change or theory of action. [open field; 200 words max]

11. We believe the success of a project is connected to who is carrying out the work. Briefly describe your background and expertise and/or that of that of your team or organization.

[open field; 150 words max]

Section 1: Solution Identification

12. Which Area(s) of Focus does your solution aim to address? Select all that apply. [multi-select]

- Builds out Support Systems:** Facilitates the creation and maintenance of inclusive mathematics communities – in person or virtual – between students and adults to build relationships. These supports build: critical consciousness among educators, an

understanding about sharing power with students in co-constructing the mathematics learning community; a more expansive view of mathematics among adults and students; and promote meaningful collaboration, deep mathematical thinking, and exploration among students and adults. (S2S, T2T, S2T, S2Adult, T2SFamily)

- Improves Relevance of Algebra Content:** Increases the relatability by using real-world examples that connect to the interests of students in the mathematics community (e.g. classroom) and increase focus on making sense of Algebraic concepts.
- Elevates Understanding of Math Language:** Improves linguistic awareness and practices by tackling math vocabulary, syntax, morphology [changing word forms], argument structure, or feedback for students (in a manner that especially prioritizes emerging multilingual students, but also benefit monolingual English speakers) and/or teachers. Leverages linguistic and other assets of emerging multilingual students. Takes care not to create avoidable linguistic barriers to mathematical concepts.
- Empowers and Strengthens Teacher Practices:** Offers new materials, tools, and strategies that empower, support, and expand teachers' knowledge and use of instructional practices that meet individual student needs, develop mathematical proficiency, and create positive class experiences on a daily basis.
- Develops New or Better Feedback Mechanisms:** Explicitly applies assessment or progress monitoring data for instructional purposes to enhance access to core Algebraic content.

13. Briefly describe your solution and its mission by answering the questions below. Keep in mind that reviewers may not be from within your field. We recommend using simple language and providing definitions for any field-specific terminology. [open field; 450 words max]

- What is the problem you are trying to solve? How does your solution address it?
- How does your solution benefit priority students? What is new?
- Why do you think it will be successful? Are there risks?
- How would you implement it in the classroom? How would it be maintained?
- If your solution is successful, what impact will it make? What outcomes?

We define outcomes by a combination of:

- 1. Existing evidence that the solution and/or critical components of the solution can move one or more of these outcomes, and*
- 2. A compelling, evidence-based articulation of the reasons why the solution has a likelihood of moving one or more of these outcomes ("why it will work").*

14. The Gates Foundation views core curriculum as a crucial lever for improving instruction and promoting equity while serving as the best starting point for coherence at scale due to price and adaptability. Successful solutions will be designed to expand students' access to grade-level expectations for algebraic content and approaches to reasoning, not merely generate growth toward those expectations. Which high-quality Algebra 1 curriculum does your solution align or cohere with? [open field; 150 characters max]

Developments funded under this initiative **should be supplemental**, but designed for use together with a high-quality full curriculum. Preexisting formal partnerships with a publisher or developer of core curriculum **is not** required at this stage.

15. To ensure a high-quality curriculum has been selected for your solution to align and/or cohere with, please upload a third-party review from either [EdReports](#), [Instructional Materials Evaluation Toolkit \(IMET\)](#), or [Equip rubrics \(K8 math units\)](#). If your curriculum of choice does not yet have a third-party review, please check the box below. [upload button; 4KB Max]

A third-party review does not yet exist for the Algebra 1 curriculum I plan to align/cohere with. [checkbox]

16. Which of these three components does your solution cover? Please select all that apply.

[multi-select]

- Independent Practice:** Exercises and problems tied to core curriculum. Could be assigned in class or as homework or provides students the opportunity to wrestle with content they have yet to master.
- Intervention:** Designed specifically to help struggling students participate in mainstream classes or provide additional enrichment opportunities for students ready to extend their learning.
- Assessment to Inform Instruction:** Diagnostic and interim assessments that provide data to inform instruction.

17. How will your solution coherently reinforce key mathematical concepts from earlier grades in ways that foster positive mathematical identities in students? Provide specific examples that include naming the specific mathematics content and how the solution will address it in this manner. [open field; 150 words max]

18. We are interested in what priority and non-priority students have said about your solution—both what they like and what can be improved. Please include student quotes and summarize the feedback you have received and how you collected it. If your solution is still in ideation, we’d like you to share students' reactions to it below. [open field; 150 words max]

Please share the grade of the student (i.e. 8th grade student) but do not share student names or personally identifiable information. Be sure that the students are not identifiable and the appropriate consent has been secured (in compliance with [FERPA](#) and any other privacy laws).

19. In the coming school year, how will your solution navigate the challenges of blended learning environments created by the impact of COVID-19? How might it support students who have been impacted? Please list any specific features, special dependencies, or device-specific formats. [open field; 150 words max]

20. To keep solutions centered around priority students, we require applicants to co-create with a cohort of students. How would you involve priority students in order to gather feedback, iterate, and test the scalability of your solution? How would you keep the Gates Foundation up to speed with the intel from your community feedback loop? [open field; 150 words max]

21. We believe, “What is good for “English Learners (ELs)” is good for all students.” How does your solution support ELs? Do you have someone from the EL community to support you

throughout your grant duration? If your solution does not have an EL component, please indicate that in the space below. [open field; 150 words max]

Federally defined, “English Learners (ELs),” or Emerging Multilinguals, are from homes where languages other than English are primarily spoken. ELs are a rich and heterogeneous group of learners who bring significant intellectual and cultural assets to the mathematics classroom, which is not always designed with their success in mind. Providing math content that is designed to build the language of mathematics will be important to serve the nation's growing population of EL students, in ways that are culturally relevant to their linguistic assets as well as mathematically rigorous and appropriate per grade level. Please see the [Migration Policy Institute](#) or [ELSF](#) for further information.

22. Is your solution for 7th, 8th, or 9th grade priority students? [single choice]

- 7th Grade
- 8th Grade
- 9th Grade
- Combination/All

23. Is your solution applicable for Title 1 funding? [single choice]

- Yes
- No
- I don't know

While the Gates Foundation will fund activities related to the study of your solution during the Grand Challenge, applicants need to ensure that their solution could be eligible to receive Title 1 funding and affordable for Title 1 Schools. [Read here for more on Title I-A funds.](#)

24. How might your solution address ‘equity of access’ for all? [open field; 150 words max]

Equity: *Universal exposure so individual student goals can be achieved. “This requires all stakeholders:*

- Ensure that all students have access to a challenging mathematics curriculum, taught by skilled and effective teachers who differentiate instruction as needed;
- Monitor student progress and make needed accommodations; and
- Offer remediation or additional challenges when appropriate.”¹

¹ "Access and Equity in Mathematics," April 18, 2014, <https://www.nctm.org/Standards-and-Positions/Position-Statements/Access-and-Equity-in-Mathematics-Education/>

25. How might your solution meet accessibility guidelines? If you are unsure of how your solution addresses accessibility at this time, please check the box below. [open field; 150 words max]

- I don't know how my solution will address accessibility.

[Please see W3 guidelines](#) for more information.

26. Does your solution integrate with any of the following? Check all that apply. [multi-select]

- Single Sign-on (e.g. [Clever](#))
- Student Information System (e.g., [Infinite Campus](#), [PowerSchool](#))
- Learning Management System or similar (e.g., [Canvas](#), [Google Classroom](#))
- None of the above
- I do not know

27. How might your solution comply with technical standards of interoperability and data storage? If you are unsure of how your solution complies with technical standards of interoperability at this time, please check the box below. [open field; 150 words max]

- I do not know how my solution complies with technical standards of interoperability and data storage.

Solutions could use any of the following: [LTI Advantage](#), [OneRoster](#), [The CASE Registry](#), [CALIPER](#), [X/API](#), [Ed-Fi](#), [Project Unicorn](#), an open and well documented API, etc.

Section 3: Pilot and Partnership with AIR

The Gates Foundation has partnered with [American Institutes for Research \(AIR\)](#) to further develop and study the extent to which the grantees' solutions improve key priority student outcomes; including experience in mathematics classrooms, positive identification as mathematicians, and math growth and proficiency. If awarded a grant, you will:

1. Develop a plan for a pilot study in partnership with AIR.
2. Submit a proposal to apply for Phase 2: Pilot Study (up to US\$1 million to carry out the pilot study during the 2021-2022 or 2022-2023 school year).
3. Submit a final report.

28. How will you stay within the budget (US\$100,000) and time period (four months) allocated for the Phase 1: Planning and Prototyping? Please download our budget template, complete to the best of your ability, and reupload. [upload button; 4MG file size limit]

29. Do you currently have a local organization or school/district in place to pilot your solution in Phase 2: Pilot Study for the 2021-2022 or 2022-2023 school year? [single choice]

- Yes
 No

Submissions are not required to have an organization or school/district identified at the time of application submission. Pilot placement will occur during Phase 1: Planning and Prototyping in partnership with AIR.

30. If you answered 'Yes' to the above, please list the organization(s) or school/district(s), and state where located. [single select with open field]

Organization and location (state)

- Please type organization

School and/or district and location (state)

- Please type school and/or district

31. If you have previously worked with the local organization or school/district stated above, please describe any assets, as well as any challenges, that disproportionately affect these students and their communities. If not applicable, please write N/A. [open field; 150 words max]

32. We understand we may not have asked all the right questions and there may be more to your solution. Please provide any additional details that may strengthen your application. [open field; 150 words max]