

IES Learning *Acceleration* Challenges

Virtual Information Session

August 17, 2022

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Introductions and background

Introductions

Dr. Joan McLaughlin

Commissioner of the National Center
for Special Education Research

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Commissioner of the National Center for
Education Evaluation and Regional Assistance

The U.S. Department of Education's Institute of Education Sciences (IES) has launched the **Learning Acceleration Challenges** to identify and test interventions to improve math and science achievement.

Why IES is running these challenges now

Mastering **foundational math and science competencies in elementary and middle school is crucial** for future learning as well as to navigate an increasingly technological world. Many students — particularly those historically underserved — have faced barriers to attaining these skills.

With three school years already impacted by the COVID-19 pandemic, the **need for evidence-based, scalable interventions is greater than ever.**

The **Math Prize** seeks **school-based, digital interventions** to significantly improve math outcomes for upper elementary school students with or at risk for a disability that affects math performance. Interventions should **specifically focus on fractions**, and can also include prerequisite skills such as whole numbers and operations.

The need for impactful math interventions

- In 2019, 54% of fourth graders with disabilities scored Below NAEP Basic in mathematics, compared with only 15% of their peers without disabilities.
- Success in the upper elementary grades is critical to ensure students master **foundational concepts** such as **whole numbers, rational numbers, and fractions**.

The **Science Prize** seeks interventions to significantly improve science outcomes for middle school students with low performance in science. Interventions may be **digital, non-digital, or hybrid** and designed for implementation at **school or in out-of-school-time programs.**

The need for impactful science interventions

- In 2019, over 33% of students in eighth grade performed Below NAEP Basic in science.
- This achievement gap widens by the end of high school with over 40% of all 12th graders performing Below NAEP Basic.
- **Early intervention** is needed to ensure that all students can **meet science benchmarks** before graduation.

Benefits for intervention providers

Impact

Opportunity to **test your intervention** and **gain valuable data** about its effectiveness.

Prizes

A chance to receive a share of the **\$1.8 million prize pool**.

Support

Access to **resources** and **expert guidance** around impact and cost evaluations.

Benefits for schools

Student impact

Access to **innovative interventions** for your students — including those who are often underserved.

Evidence base

Contribute to building the **evidence base around what works** so that other students can benefit.

Overview

Challenge structure

Phase 1: Intervention design	August 4, 2022	Phase 1 submissions open Intervention providers invited to submit intervention proposals.
	September 30, 2022	Submissions close Entrants must submit their intervention proposals, along with supporting documentation, by 5:59 p.m. ET on September 30, 2022.
	November 2022	Finalists announced Up to five intervention providers per challenge will be selected to progress to the Phase 2 implementation period.
Phase 2: Implementation and evaluation	November 2022	Implementation period starts Selected intervention providers will implement their interventions in schools or out-of-school-time programs. Participating students will need to complete the relevant fall NWEA MAP Growth Assessment prior to implementation starting.
	April 2023	Implementation finishes All participating students will complete the relevant spring NWEA MAP Growth Assessment. NWEA will use this assessment data to measure the impact of each intervention.
	September 2023	Winners announced Up to three prize winners will be selected per challenge.

Math Prize: Focus

The proposed intervention must be a **school-based, digital** intervention. Interventions should specifically focus on **fractions**, and can also include prerequisite skills such as **whole numbers and operations**, as defined in state standards for grades 3-5.

Instructional practices should align with the best practices outlined in the “IES Practice Guide, Assisting Students Struggling with Mathematics: Intervention in the Elementary Grades”.

Math Prize: Eligible students

Eligible students are those in **third, fourth, and/or fifth grade** who **have, or are at risk for, a disability that affects math performance.**

This includes students who:

- Have IEPs with goals related to math.
- Are enrolled in a tier 2 or 3 interventions in multitiered systems of support (MTSS).
- Are identified through another well-defined process.

Science Prize: Focus

The proposed intervention should align with the *Framework for K-12 Science Education from the National Research Council (NRC)* with a focus on standards for grades 6-8.

If the intervention is not aligned with the NRC Framework, a clear description of how the intervention integrates the **teaching and learning of disciplinary core ideas** in science with **scientific practices** should be provided.

Science Prize: Eligible students

Eligible students are those in **sixth, seventh, and/or eighth grade** who **score in the bottom 25th percentile** on the fall 2022 **NWEA MAP[®] Growth[™] science assessment**, based on NWEA national norms.

Phase 1: Intervention design

August 2022 - October 2022

Phase 1: Overview

- Intervention providers are invited to submit proposals by **September 30, 2022.**
- Entrants will need to ensure that students at their partner schools have taken the NWEA MAP[®] Growth[™] assessment by November 1, 2022.
- Interventions will be scored by a panel of judges against the Phase 1 selection criteria.
- Up to five finalists per challenge will be selected to progress to the Phase 2 implementation period based on their scores.

Phase 1: Technical assistance

Online resources	Guidance on conducting randomized controlled trials, collecting student-level and school-level data, and collecting cost analysis data.
Webinars	Two webinars with subject matter experts: <ul style="list-style-type: none">● Setting up a Randomized Controlled Trial, August 23, 2022● Cost Analyses and Implementation Planning, August 30, 2022
Office hours	Virtual office hour sessions with subject matter experts.

Phase 1: Math Prize selection criteria

Impact

The strength of the evidence demonstrating the potential for the digital intervention to improve math outcomes, specifically in the area of fractions, for students with or at risk for a disability that affects math performance.

Implementation plan

The extent to which the entrant has articulated a feasible plan to effectively implement their intervention under routine conditions in Phase 2.

Scalability

The extent to which the intervention could be scaled to other schools and settings, with reference to factors such as cost and generalizability.

Aligned to student needs

The extent to which the entrant demonstrates how they will meet the unique learning needs, specifically in the area of fractions, including the prerequisite skills such as whole numbers and operations, of students with or at risk for a disability that affects math performance. Interventions should align to the “IES WWC Assisting Students Struggling with Mathematics: Intervention in the Elementary Grades Educator’s Practice Guide”.

Team

The extent to which the entrant demonstrates the skills and resources to implement their intervention and support data collection during Phase 2, including team track record and familiarity with educational evaluations.

Phase 1: Science Prize selection criteria

Impact

The strength of the evidence to demonstrate the potential for the intervention to have the desired impact on science outcomes for students performing in the bottom 25th percentile for science as measured by student performance on the NWEA MAP Growth science assessment in fall 2022.

Implementation plan

The extent to which the entrant has articulated a feasible plan to effectively implement their intervention under routine conditions in Phase 2.

Scalability

The extent to which the intervention could be scaled to other schools and settings, with reference to factors such as cost and generalizability.

Aligned to student needs

The extent to which the entrant demonstrates how they will address the learning needs of students performing in the bottom 25th percentile for science.

Team

The extent to which the entrant demonstrates the skills and resources to implement their intervention and support data collection during Phase 2, including team track record and familiarity with educational evaluations.

Phase 1 awards: Math Prize

Up to

\$125,000

\$25,000 each

Up to five finalists based on highest scores
against criteria

Phase 1 awards: Science Prize

Up to

\$125,000

\$25,000 each

Up to five finalists based on highest scores
against criteria

Phase 2: Implementation and evaluation

November 2022 - September 2023

Phase 2: Overview

- Finalists will implement their interventions at schools (both prizes) or out-of-school time programs (Science Prize only) under routine conditions.
- Participating students will take the NWEA MAP Growth assessment again at the end of the implementation period (before May 1, 2023).
- NWEA will use the assessment results, student-level and school-level data, and cost data submitted by the finalists to prepare evaluation reports that describe the efficacy and cost-effectiveness of each intervention.
- These evaluation reports, along with finalists' Phase 2 submissions, will be reviewed by a panel of judges against the Phase 2 selection criteria.

Phase 2: Data collection requirements

During Phase 2, intervention providers will work with their partner schools to collect:

- **Student-level and school-level data**
 - **Start of Phase 2:** Information on each student's teacher, classroom, school assignment, and intervention eligibility.
 - **End of Phase 2:** Information on each student's engagement with the intervention during the implementation period.
- **Cost data**
 - **Personnel time:** hours personnel devote to implementing, or preparing to implement, the intervention.
 - **Non-personnel resources:** materials, digital software licenses, equipment, transportation, participant costs, and building space.

Phase 2: Technical assistance

Onboarding webinar

Overview of the activities, milestones, and expectations of Phase 2 before the start of the implementation period.

Expert guidance

Personalized support from Abt Associates through one-on-one monthly calls. Topics may include:

- Implementation measures
- Troubleshooting implementation challenges
- Collecting cost analysis data

A summary of this technical assistance will be shared with the judges at the end of Phase 2.

Phase 2: Math Prize selection criteria

Cost effectiveness	The ratio of the cost of the intervention over the impact of the intervention.
Impact	The extent of the digital intervention's impact on achievement growth for students with or at risk for a disability that affects math performance, as measured by student performance on the NWEA MAP Growth math assessment in spring 2023 compared with fall 2022.
Scalability	The extent to which the finalist provides evidence their intervention could be feasibly scaled to other schools and settings, with reference to factors such as cost and generalizability.
Sustainability	Demonstrated ability, resources, and commitment of the team to iterate, scale, and continue their intervention beyond the challenge.

Phase 2: Science Prize selection criteria

Cost effectiveness	The ratio of the cost of the intervention over the impact of the intervention.
Impact	The extent of the intervention's impact on achievement growth for students performing in the bottom 25th percentile for science, as measured by student performance on the NWEA MAP Growth science assessment in spring 2023 compared with fall 2022.
Scalability	The extent to which the finalist provides evidence their intervention could be feasibly scaled to other schools and settings, with reference to factors such as cost and generalizability.
Sustainability	Demonstrated ability, resources, and commitment of the team to iterate, scale, and continue their intervention beyond the challenge.

Phase 2 awards: Math Prizes

Up to

\$725,000

Grand prize: \$500,000

Effect size of 0.77 or statistically equivalent and minimum score against criteria

First prize: \$150,000

Highest score against the criteria

Runner up: \$75,000

Second-highest score against the criteria

Phase 2 awards: Science Prizes

Up to

\$825,000

Grand prize: \$500,000

Effect size of 0.40 or statistically equivalent and minimum score against criteria

First prize: \$150,000 - \$250,000

Highest score against the criteria

Runner up: \$75,000

Second-highest score against the criteria

How to enter

Submission requirements

All submissions must be uploaded to Challenge.gov by **5:59 p.m. ET on Friday, September 30, 2022.**

Entrant overview	Description of entrant type (individual/entity) and confirmation of eligibility requirements.
Letter(s) of commitment	Agreement from partner schools and out-of-school-time programs, where appropriate.
School acknowledgement	All schools listed in the letter(s) of commitment must provide digital acknowledgement using the template of provided on Challenge.gov.
Intervention proposal	<ul style="list-style-type: none">● Intervention overview● Evidence of potential impact● Description of eligible students● Scaling considerations● Implementation plan — including random assignment, professional development, data collection● Team description

Q&A

Please submit questions in the Q&A window in Zoom.

Apologies if we don't get to your question. Please check the Challenge.gov page for each challenge, where we will publish an FAQ section with responses to many of the questions received today.

Published answers (not live answers to questions) will be considered final responses.

Additional questions may also be sent to Challenges.IES@ed.gov

Next steps

Follow the challenges on **Challenge.gov**:

- Math Prize: challenge.gov/?challenge=iesmathprize
- Science Prize: challenge.gov/?challenge=iesscienceprize

Register for the upcoming webinars:

- Setting up a Randomized Controlled Trial — August 23, 2022
- Cost Analyses and Implementation Planning — August 30, 2022

Email Challenges.IES@ed.gov with questions.

