Bajillions Early Math

Marsico Institute for Early Learning
UNIVERSITY OF DENVER

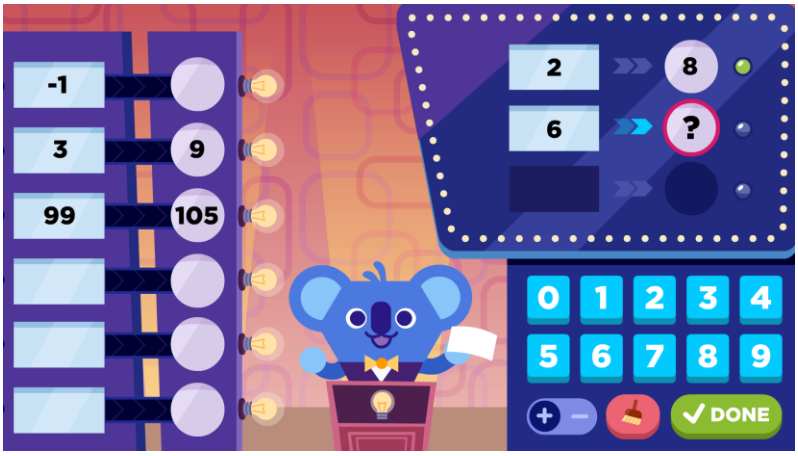
Bajillions Early Math Study

An Invitation to School & Program Administrators

Partner with the Marsico Institute for Early Learning to advance early mathematics education through research.

The Bajillions Early Math Study is an opportunity for schools to partner with nationally recognized researchers to better understand how digital math activities support young children's mathematical learning and engagement.

This guide provides a brief overview of the study, what participation involves, and what is required of participating schools.



About the Study

The Bajillions Early Math Study is conducted by the Marsico Institute for Early Learning at the University of Denver and is led by internationally recognized early mathematics researchers Dr. Douglas Clements and Dr. Julie Sarama. The study is supported through funding from the National Science Foundation (NSF).

The purpose of the study is to better understand how digital mathematics activities support young children's mathematical learning and engagement in authentic classroom settings. By partnering with schools, educators, and families, researchers can evaluate the effectiveness of Bajillions Early Math while providing a needed resource in research-informed digital learning experiences.

The study will set up causal conditions by randomly assigning children to one of two conditions (Number or Geometry) in the Fall, with groups switching in the Spring. Child assessments at the beginning, middle, and end of the year will measure impact.

About Bajillions

Bajillions Early Math is a research-based digital learning system that supports the teaching and learning of early math for children ages 3 to 8. Developed through a collaboration between the Marsico Institute for Early Learning and FableVision Studios, Bajillions combines decades of research on early mathematics learning with engaging digital experiences that adapt to learner needs and complement classroom instruction.

The Bajillions Early Math platform was built with accessibility in mind and strives for intuitive design that is seamless to the user experience. The platform includes adjustable captions, adaptive keyboard options, and translations in English and Spanish.

What Does Participation Involve?

Participating schools agree to support implementation of the study within participating classrooms while allowing the research team to conduct approved research activities.

Minimum teacher requirements:

- Share study information with families.
- Provide each child in their class with an opportunity to engage with Bajillions at least once a week.

Additional requirements, depending on participation option:

- Coordinate child assessments with the research team.
- Complete two questionnaires and one interview.

What Is Required from the School?

Participation in the Bajillions Early Math Study requires a Letter of Support from an authorized school or program administrator to document your agreement with the University of Denver's Institutional Review Board.

The Letter of Support confirms that your school agrees to:

- Offer Bajillions as part of your math curriculum.
- Communicate study information with families.
- Depending on your participation option, you may also be asked to:
- Support researchers with space and scheduling of child assessments within your school's visitor and safety policies.

The Letter of Support does not indicate endorsement of the study or its products. Rather, it confirms your school's willingness to allow the approved research activities described in the study protocol.

Safeguards for Schools and Students

The Bajillions research team is committed to conducting research responsibly and with minimal disruption to instruction.

- Participation is voluntary for schools, teachers, families, and children.
- Child participation requires signed parent or guardian permission.
- Research staff have completed required background checks and research ethics training.
- Assessments are scheduled to minimize disruption to classroom instruction.
- The study has been reviewed and approved by the University of Denver Institutional Review Board (IRB #1916264).

Next Steps

If your school is interested in participating, the enrollment process is straightforward:

1. **Complete the online Application for Access** if this has not already been done for your school by an interested teacher or other staff.
2. **Complete a Letter of Support.** This letter confirms your school's willingness to participate and allows the research team to move forward with the enrollment process.
3. **The research team will review** the Application for Access and Letter of Support, then contact you to discuss participation, answer any remaining questions, and coordinate next steps.
4. **If your school is selected** to receive access to Bajillions Early Math, the research team will guide the school and teacher(s) through the onboarding process and provide implementation support throughout the study.

Questions?

Contact Project Director, **Dr. Shannon Stark Guss**
Marsico Institute for Early Learning
University of Denver