

MoreToMath

Use the following information when requesting grants for manipulatives used to teach basic math concepts in Grades 1-2.

Need Statement

The issue in my classroom is **(select an area of issue below)**.

Issue 1: students' interest in math is low.

Issue 2: students struggle to understand story problems.

Issue 3: students are not engaged in learning.

Issue 4: students have extremely diverse abilities.

Project Description:

My solution is to engage students in a cross-curricular, hands-on learning environment using MoreToMath 1-2.

MoreToMath is based on constructivism. This educational theory states that children learn best when they experience things firsthand and within a meaningful context.

The curriculum, which is aligned to national standards, engages students to become more independent learners. The 21st-century skills they will develop include problem solving, comprehension, communication, creativity, critical thinking, and technology.

It creates a learning environment that fosters growth in perseverance, reasoning, precision, modeling, representation of story problems, and problem solving. It also addresses the challenges associated with **(area of issue)**.

(Add statements as needed to show how you will address the area of issue utilizing the curriculum.)

The use of LEGO bricks® helps students overcome difficulties and persevere when a first attempt does not work. Students stay motivated to continue to try and learn rather than give up.

Through this curriculum, students will learn how to design and create working models that represent what is happening in situations involving math – the basic story problem. The curriculum features MathBuilder software, which enables students to demonstrate the way that they solved a problem and provide the rationale.

- Work independently or in teams.
- Create models that demonstrate solutions.
- Explain the reasoning behind solutions and discuss alternative approaches.

Additionally, these experiences will help students hone speaking and listening skills as they present their ideas and listen to the ideas of others.

The curriculum includes open-ended problem-solving activities that engage students.



education

Students will demonstrate an increased ability to comprehend and solve basic mathematical problems and explain their reasoning. Additionally, these experiences will help students develop a better attitude toward solving math problems and increase their confidence. Skills assessment will take place through student presentations, ongoing observation, and written work.

(Add information on current scores in mathematics or other issues as it pertains to this grant to reemphasize need and the increases you hope to achieve.)

(Add information on the standards and types of lessons you will utilize in this program to achieve the growth indicated in the paragraph above. Be specific about the way you will implement the program so readers will understand exactly how the program will help students succeed in math.)

Curriculum Information

(Select relevant description options. Be sure to include information on the area of issue. Add additional statements to show how you will address area of issue using MoreToMath.)

Option 1: MoreToMath Core Set 1-2

This innovative classroom resource utilizes the familiar LEGO brick as the tool that makes abstract math tangible. The set contains all the LEGO elements needed for two students in first and second grades to build and apply the practices of mathematical problem solving.

Option 2: MoreToMath Curriculum Pack 1-2 and MathBuilder Software

When the curriculum pack and software are used with the MoreToMath Core Set 1-2, educators can create rich mathematics lessons that also inspire teamwork, encourage perseverance, and promote a positive attitude toward solving math problems.

- Investigate the principles of simple machines, mechanisms, and structures.
- Experiment with balanced and unbalanced forces.
- Measure distance, time, speed, and weight.
- Investigate powered forces and motion, speed, and pulling power.
- Learn the underpinning of physical science.
- Prepare for further study in robotics.

The digitally-delivered curriculum pack features:

- 48 activities teaching eight practices of mathematical problem solving.
- Curriculum standards descriptions with a learning grid aligned to key national standards and objectives.
- Content editor section for creating custom lesson plans.
- MathBuilder interactive whiteboard software.

The digital building tool inside the whiteboard software encourages students to share their problem-solving solutions with each other, further promoting student communication and collaboration skills.

The software includes all the resources in the curriculum pack, including a teacher guide, student worksheets, notes, videos, and assessment tools, making it easier to integrate technology into the lesson plan.



Professional Development

This workshop consists of hands-on activities, communication, reflection, and application that is tailored to meet the needs of the participants.

The workshop lets participants experience being both a student and a teacher as they learn how to apply typical math concepts for first and second grades within the math curriculum and practice differentiated instruction.

Participating in the workshop leads to a greater understanding of how LEGO Education creates an environment where all students can share their ideas and knowledge. It also provides the tools necessary to engage students throughout the year by connecting the possibilities of the MoreToMath Core Set 1-2 and lessons with the required curriculum.

Learning theory

- Apply the 4Cs in the classroom.
- Awaken students' interests in given subjects.

Hands on

- Build models and see how they can teach specific concepts to gain confidence in the classroom.
- Learn how to begin and how to take a simple concept and make it complex through a series of intermediate steps.

Tools for planning

- Explore ways to apply the MoreToMath Core Set 1-2 and lessons to curricula.
- Share ideas with other participants and leverage best practices to get the most from professional development.

Materials management

- Organize and label the materials and do periodic inventory.
- Keeps the set organized and ready for student use.

