# LEGO® Education's Guide to Writing Grants





# Writing Successful Grants

Basic but essential rules to follow for completing a successful grant are to follow the grantor's exact format, guidelines, and directions as well as to provide succinct information without using unnecessary jargon.

This guide offers suggestions on how to write and deliver a grant using sections that appear in most applications.

### Common grant sections include:

Introduction/Summary

Need Statement

Project Description

<u>Budget</u>

### Organizational Information

While these sections are common, it's important to understand that these sections might not match the actual grant you are completing. You might need additional information. Use the "Questions to consider" to help you think about information that might need to be included.

### Introduction/Summary:

Here is where you state your case. Grantors should have a solid understanding of your entire proposal if they read nothing else, so you need to grab their attention and provide just enough information to keep them reading.

- Provide a summary of key details, including a statement of the problem.
- · Introduce the basics of the project (where, who, why).
- Explain the money needed and how it will be used.
- Explain any acronyms used to avoid confusion.

Questions to consider:

- Did you include a summary of the entire proposal with information from each section?
- Did you provide enough information for the reader to see the whole picture?
- · Did you provide information that will get the reader excited about the project?



# **Need Statement:**

This is your time to get the reader to understand the situation and more about the issues that affect your students. Grantors need to see that there is a reason to fund your project and that the funds will make a difference.

- · Detail the reason you need funding and what you are trying to accomplish.
- · Provide facts and data to support your case.
- · Be persuasive and specific.
- · Show that the issue can be resolved with the funding.
- · Keep your tone positive and confident.

Questions to consider:

- · Do you state your case clearly to make sure the reader can understand your needs?
- · Do you provide facts or statistics to support your claims?
- · Are your facts and figures accurate?
- Are you providing enough information for the reader to understand the whole picture without seeming desperate or overdoing it?

# **Project Description:**

Here is where you outline the entire project and explain your plans for implementation.

- State your project objectives and goals. Consider formatting them as bullets so they stand out.
- Explain how you will accomplish your project objectives and goals. Be detailed, with an eye on showing alignment between objectives and goals.
- · Demonstrate how you will measure success.
- Provide facts such as how many students will be involved, how long the project will last, and what teachers/ professionals will be involved.
- If you have a goal of increasing scores, include statistics about current scores and the desired increase.
- Share research that supports your actions and shows that they will be effective (for example, "this is a best teaching practice that has proven effective to raise scores").
- Include a timeline of events. This demonstrates that you have a plan and are ready to implement your project.

Questions to consider:

- Have you included all the details of the program so that the reader can follow exactly what will happen?
- Did you set measurable goals and/or objectives that can be assessed at the end of the project?
- · Did you include research to support why the project will be successful?
- · Does your timeline of events align to the grant timelines?
- Did you consider your needs for professional development to receive proper training for implementing and using the new program?



# **Budget:**

The key to this section is clearly explaining how you will spend the money awarded in the grant, so be sure to provide a detailed list. Include explanations as necessary to ensure the grantor understands how every dollar supports the project.

You'll also want to consider the purpose of the grant and how the grantor would like the money spent. Some grantors do not want a large portion of the money spent on staffing but will allow for professional development with existing staff. Others will not allow equipment to be purchased. If you request funds to be spent in a way that the grant does not allow, the reader will discard your application.

Questions to consider:

- · Have you carefully reviewed what money can and cannot be used for in the grant?
- Are the categories used in the budget understandable? Will the reader know what the money is allocated to do? Do you need additional descriptions for the headings?
- If you show a need for more money than promised by the grant, do you show where additional funds will come from?

# **Organizational Information:**

It should come as no surprise that grantors want to know the organizations they're funding.

- Detail the organization's purpose and normal function.
- Explain how the new project (that is, the project for what you've asked the grantor to fund) aligns with the organization.
- · Identify who is involved with the organization, including anyone who is relevant to the new project.

You don't need to overwhelm grantors with information in this section; just help them understand the organization that is hoping to get their support.

Questions to consider:

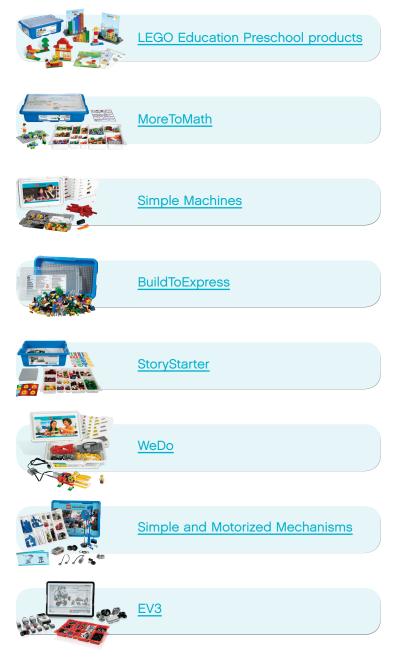
- Did you provide a clear understanding of your organization, who is involved, and the purpose?
- Is there a clear alignment to this project and the organization?



# **Product Information**

Our educational solutions meet many of the guidelines listed by leading grant funding sources. When writing a grant, it is sometimes necessary to provide details on what you plan to do with or why you need the grant. To prevent you from having to look for the details of our solutions, we have compiled a quick guide including everything from the features of the solution to what our solution can help overcome in your classroom and what students will learn with the solution.

Product lines:





# LEGO Education Preschool products

Use the following information when writing a grant for products to use in your preschool classroom.

# **Need Statement**

The issue in my early learning classroom is (select an area of issue below or create your own).

**Issue 1:** students are not engaged in learning.

**Issue 2:** students with an extreme diversity of abilities.

Issue 3: students need better opportunities to enhance speaking or listening skills.

Issue 4: students need to work effectively in teams.

Issue 5: a lack of hands-on exploration of early numeracy or literacy.

Issue 6: incorporating more creative or project-based learning opportunities.

Issue 7: creating a play-based environment that involves experimentation.

# **Project Description**

My solution is to utilize LEGO<sup>®</sup> Education Preschool products in the classroom to engage every student and create a hands-on learning environment that promotes school readiness.

LEGO Education products are 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 collaboration, communication, creativity, critical thinking, and problem solving.

It creates a learning environment that fosters early understandings of reading, writing, mathematics, science, listening, and speaking.

Students demonstrate an increased ability to (Add goals you want students to achieve using this program.).

Skills assessment will take place through student presentations, ongoing observation, and written work.

# **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 the area of issue using the product(s) you select.)





### Option 1: Build! Explore! Learn! Preschool Activity Pack and XL Brick Set

Preschool students build environments and models that develop school-readiness skills and spatial-recognition skills.

- Inspire creativity.
- Promote discussion and expressive language.
- · Support collaboration and teamwork skills.
- · Learn how to use fantasy and imagination.

As they create together, students cover curriculum areas such as language arts, mathematics, science, social and emotional development, and social studies.

The activity pack includes:

- ·80 activities based on 16 common preschool themes.
- ·40+ hours of instruction for hands-on learning.
- Customizable and reproducible templates for planning, documentation, and assessment.
- Teacher's notes, sample builds, vocabulary, and extension ideas for expanding learning opportunities.
- · Learning grids mapping all activities to key standards.

The I-cap set comes with 562 DUPLO® elements, including many special elements for student creations.

### **Option 2: Tubes Experiment Set**

Provide an interactive way for students to discover how things work in the world around them.

- Explore dimensions and shapes
- · Experiment with cause and effect
- ·Ask "what if I," "how do I," and "I wonder if" questions
- · Strengthen questioning and critical-thinking skills
- •147 DUPLO elements

### **Option 3: Animal Bingo**

Present new challenges based on a classic game by having students collect bricks that match their building cards and construct their animals.

- Build models
- · Recognize and match shapes and colors
- Build collaboration skills
- · Learn the rules of playing games with others as a team
- •49 DUPLO elements



### **Option 4: Creative Builder Set**

Explore shapes, space, position, numeracy, and storytelling in a fun, hands-on way.

- · Develop an understanding of 2-D and 3-D shapes
- · Work on descriptive language skills through collaborative storytelling
- · Gain a better understanding of community and the larger world
- •124 DUPLO elements
- •2 students per set

Includes getting-started materials, four double-sided activity cards, and a sturdy plastic storage bin

### **Option 5: Math Train**

Explore math in an imaginative way. Students work intuitively with early math skills to learn about numeracy and quantities while playing different roles around a railway.

- 124 DUPLO elements
- 3 double-sided activity cards to stimulate students' thinking to solve basic problems to build their critical thinking in math

### **Option 6: StoryTales**

Develop a strong foundation for primary students in literacy and comprehension. Students build basic skills in storytelling through a rich environment including a range of characters, settings, and plots to unfold as they create and retell stories.

- · Themed around the Three Billy Goats Gruff fairy tale
- •109 DUPLO elements
- ·3 baseplates with five double-sided story starter backdrops

### **Option 7: Playground Set**

Introduce mathematics and language as students explore people, communities, social roles, feelings, and behaviors in the popular and universal playground setting. The set encourages creative play, imaginative storytelling, and the use of language related to shape, color, and position to build foundational concepts for students in the core curriculum.

- •104 DUPLO elements
- Includes getting-started materials, two activity cards, and a sturdy plastic storage bin



### **Option 8: Early Structures Set**

Expose students to STEM basics by investigating concepts of balance, strength, and stability when building solid structures such as towers, bridges, and walls. The set challenges students to solve problems while practicing collaboration and experimenting with various designs to develop early engineering skills.

- •107 DUPLO elements
- •1 set per two to three students
- Includes teacher notes with support for 16 activities, 14 investigation and problem-solving cards, an inventory list, and a sturdy plastic storage box

### **Option 9: Café+ Set**

Explore numbers, shapes, and colors while learning about trade, money, and social roles. First-grade students work cooperatively while role-playing as customers, chefs, and servers at the café to learn job-related skills. As the orders come in, students interact with numbers in several ways through counting, adding, and subtracting.

- 131 DUPLO elements
- •1 set per minimum four students
- · Includes activity ideas, menu cards, and a sturdy plastic storage box

### **Option 10: Tech Machines Set**

Use tools in a safe way while taking their first steps into science and technology by learning about machines and their functions.

- Investigate career skills
- · Communicate and collaborate to solve problems
- •95 DUPLO elements include screwdrivers, integrated screws, reels, hooks, scoops, and propellers.
- · Activity pack with story starters, problem-solving tasks, and full-color inspiration cards
- Includes sturdy plastic storage box





This hands-on workshop features intense communication, reflection, and application that helps teachers create a safe environment for all students to share their ideas.

The workshop lets participants experience being both a student and a teacher as they learn how to apply the concepts behind LEGO Early Education Learning products in their classrooms, as well as to meet NAEYC and/or Head Start standards.

Participating in the workshop leads to a greater understanding of when and how to use LEGO to get 100 percent of students participating and communicating effectively.

# Learning theory

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

# Hands-on

- Build machines and see how they can teach specific concepts to gain confidence in the classroom.
- Discover how to use LEGO Education products beyond free play.
- 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 LEGO Education Preschool Learning products 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.
- ·Keep the sets organized and ready for student use.



# **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.

# We callect eighteen eggs together. The three hens lay See hen lay?

# **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<sup>®</sup> 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 curriculums includes open-ended problem-solving activities that engage students.



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 cirriculum 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.



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.



### (click here to navigate back to product lines page)

# **Simple Machines**

Use the following information when requesting grants for manipulatives used to teach basic physical science concepts in Grades 2-4.

# **Need Statement**

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

Issue 1: students have low interest and engagement levels.

Issue 2: students are struggling with problem-solving skills.

Issue 3: students are not engaged in learning math and science.

Issue 4: students have extremely diverse abilities.

Issue 5: too few opportunities for creative or project-based learning.

**Issue 6:** a lack of good opportunities for students to communicate in the language of mathematics and science, both orally and in writing.

Issue 7: students need to learn how to work effectively in teams.

# **Project Description**

My solution is to engage students in a cross-curricular, hands-on learning environment using LEGO Education Simple Machines<sup>®</sup>.

The Simple Machines Set and curriculum are 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, and critical thinking.

It creates a learning environment that 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, **(number)** students will learn how to design and create working models that represent machines or machine components used in real life.

- Build models around themes that push brainstorming.
- Analyze cause and effect.
- Make observations during testing.





- Display and communicate data.
- Create working models.

These experiences expand a student's knowledge of simple machines and how to make them move and interact to solve problems. 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's **(number)** hours of classroom instruction include open-ended problem-solving activities that engage students.

Students will demonstrate an increased ability to comprehend and solve basic problems by applying their science, technology, engineering, and mathematics skills to address challenges they encounter. Additionally, these experiences will help students develop a better attitude toward solving 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, science, and so forth 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 Simple Machines.)

### **Option 1: Simple Machines Set**

Students design machines that incorporate gears, pulleys, levers, and wheels and axles and explore basic physical science concepts through observation, reasoning, prediction, and critical thinking.

- •204 elements
- · Full-color building instruction booklets and an element overview
- Storage bins

This program teaches students the underpinnings of physical science and prepares them for further study in robotics using LEGO Education WeDo.

### **Option 2: Simple Machines Activity Pack**

When used with the Simple Machines Set, this activity pack helps develop elementary students' understanding of basic physical science concepts such as gears, pulleys, levers, and wheels and axles through observation, reasoning, prediction, and critical thinking.

- •16 principle model activities
- 4 main activities
- 4 problem-solving activities
- Aligned to NSTA and NCTM standards

The CD-ROM includes teacher's notes, student worksheets, and a glossary.



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 the concepts behind simple and complex machines within science and math curricula 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 Simple Machines Set and lessons with the required curriculum.

# Learning theory

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

# Hands-on

- Build machines 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 Simple Machines Set 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.
- · Keep the sets organized and ready for student use.



# **BuildToExpress**

Use the following information when requesting grants for manipulatives used to develop character and effectively communicate to others for all Grades.

# **Need Statement**

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

Issue 1: students are struggling to produce writing.

Issue 2: students are not engaged in learning.

**Issue 3:** getting all students to participate.

Issue 4: students with an extreme diversity of abilities.

**Issue 5:** the need to incorporate more creative or project-based learning opportunities.



Issue 6: students need better opportunities to enhance speaking and listening skills.

Issue 7: students need to reflect before they speak.

Issue 8: students need to learn how to listen actively and ask appropriate questions.

# **Project Description**

My solution is to utilize LEGO<sup>®</sup> Education BuildToExpress in the classroom to engage every student in a crosscurricular, hands-on learning environment.

BuildToExpress 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, and critical thinking.

It creates a learning environment that addresses the challenges associated with (area of issue).

Through this program, (number) students will create models that represent their thoughts, ideas, and beliefs.

- Practice metaphorical language, empathy, sympathy, and reasoning.
- Explain what they would do, feel, see, say, and experience in situations.
- · Hone speaking and listening skills.
- · Practice asking relevant questions in an appropriate way.



Students demonstrate an increased ability to express what they have read/learned and to communicate more effectively in speaking, listening, questioning, and writing. Students' skills will assessed throughout the project through ongoing observation, presentations, and written work.

### (Add current figures from scores and the percentage increase you wish to achieve from using this program.)

Students will accomplish their goals by engaging a curriculum that incorporates language arts, social studies, social skills, science, and more, as well as teacher-created challenges and writing assignments.

(Add information on the standards and types of lessons you will utilize in this program to achieve the growth indicated above.)

# **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 the area of issue using BuildToExpress.)

### Option 1: BuildToExpress Core Set

Designed for use with the BuildToExpress classroom-facilitation process, the set contains a unique collection of bricks, props, and minifigures to inspire learners and stimulate their creative-thinking skills and imaginations.

All materials, including a building plate, come in a sturdy storage box with lid.

### Option 2: BuildToExpress Guide and Activity Pack

The guide and activity pack teaches the BuildToExpress classroom- facilitation process and how to integrate it in the classroom.

- Lesson plan examples
- Teacher's guide
- Classroom-management tools
- Getting-started exercises
- · 30 age-segmented, cross-curricular build-and-share challenge cards
- Challenge card creator to generate custom BuildToExpress lessons

A self-paced instructional DVD demonstrates how to facilitate and integrate the method in the classroom with explanations of best practices from experienced BuildToExpress teachers.

### **Option 3: BuildToExpress Extension Activity Pack**

Designed for use with the BuildToExpress Extension Activity Pack, it encourages communication and learning through building.

- ·20 age-segmented, cross-curricular lesson activities designed for easy implementation
- Up to 40 hours of hands-on activities
- Meets curriculum expectations in character education, language arts, mathematics, science, and social studies
- · Additional activities and challenges to inspire students

Teacher resources include rubrics, customizable activity plans and calendars, and reproducible worksheets, along with suggestions for differentiated learning.



This hands-on workshop is six hours of intense communication, reflection, and application that help teachers create a safe environment for all students to share their ideas.

The workshop lets participants experience being both a student and a teacher as they learn how to apply the concepts behind BuildToExpress in their classrooms.

Participating in the workshop leads to a greater understanding of when and how to use BuildToExpress to get 100 percent of students participating and communicating effectively.

# Learning theory

- Discover a process of reflection and dialogue to cultivate a positive learning environment and achieve learning targets across the board.
- · Awaken students' interests in given subjects.

# Hands on

- · Build metaphors and share insights and experiences.
- Examine how effective facilitation combined with LEGO bricks allows for everyone to be treated as equals and all opinions to be heard.

# Tools for planning

- Explore ways to apply the BuildToExpress process to curricula.
- Practice planning BuildToExpress sessions.
- Write challenges and determine follow-up activities.

# Materials management

- · Organize and label the materials and do periodic inventory.
- ·Keep the sets organized and ready for student use.



# StoryStarter

Use the following information when requesting grants for manipulatives used to teach language arts skills for Grades 2-5.

# **Need Statement**

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

**Issue 1:** students have low reading comprehension.

**Issue 2:** students are struggling to produce writing.

**Issue 3:** students are not engaged in learning.

Issue 4: getting all students to participate.

**Issue 5:** students with an extreme diversity of abilities.

# **Project Description:**

My solution is to utilize LEGO<sup>®</sup> Education StoryStarter in the classroom to engage every student in a cross-curricular, hands-on learning environment.

StoryStarter 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 collaboration, communication, creativity, critical thinking, and problem solving.

It creates a learning environment that fosters growth in reading, writing, listening, and speaking and addresses the challenges associated with (area of issue).

Through this program, **(number)** students will create models that represent the beginning, middle, and end of a story or relevant parts of something they have read or researched.

- · Compare and contrast stories and characters.
- Explain the importance of setting.
- · Determine alternate endings based on readings.
- · Portray the points of view of various characters.
- Explain the most important ideas found in research.





Using StoryVisualizer, students will publish their stories or reports, putting together text and graphic illustrations. Their finished work can be printed, emailed, or placed on a webpage.

Students demonstrate an increased ability to comprehend what they have read, communicate more effectively, and write their own creative stories or research-based reports. Students' skills will be assessed throughout the project through ongoing observation, presentations, and written work.

### (Add current figures from scores and the percentage increase you wish to achieve from using this program.)

Students will accomplish their goals by engaging the StoryStarter curriculum, which includes (number) hours of classroom instruction involving open-ended problem-solving activities that engage students. This curriculum features StoryVisualizer, which enables students to publish their stories, write research reports, and document their ideas.

# (Add information on the standards and types of lessons you will utilize in this program to achieve the growth indicated above.)

# **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 the area of issue using StoryStarter.)

### **Option 1: StoryStarter Core Set**

Designed for Grades 2 through 5, LEGO Education StoryStarter is a hands-on learning tool that enhances students' reading, writing, speaking, and listening skills.

- •1 set per three students
- •1,147 elements, including baseplates, activity spinners, organizational stickers, specialty bricks, and minifigures
- · Storage bin with sorting trays

### Option 2: StoryStarter Curriculum Pack & StoryVisualizer Software

Create more engaging language arts lessons focused on enhancing students' reading, writing, speaking, and listening skills. When combined with the StoryStarter Core Set and downloadable StoryVisualizer software, the curriculum pack makes it easy to develop rich language arts lessons that inspire teamwork, critical thinking, and creativity.

The curriculum Pack includes:

- •24 project-based language arts activities correlated to Common Core Standards.
- · A learning grid aligning activities to key standards and objectives.
- Rubrics for ongoing student self-evaluation.
- An element survey, lesson plans, student worksheets, and tips and tricks.

StoryVisualizer enables students to document and present their stories. Using a webcam, digital camera, or smart device, students take images of their storiescreations and import them into the software or application. The program enables users to select from a variety of preexisting writing templates or to customize their own.

StoryVisualizer includes:

- Site license
- Downloadable software
- · Downloading tablet application (iOS and Android)

Laptop and tablet not included.



This hands-on workshop features intense creativity, communication, reflection, and application that help teachers create a safe environment for all students to share their ideas.

The workshop lets participants experience being both a student and a teacher as they learn how to apply the concepts behind StoryStarter in their classrooms.

Participating in the workshop leads to a greater understanding of when and how to use StoryStarter to get 100 percent of students participating, communicating, and writing effectively.

# Learning theory

- Discover a process of reflection and dialogue to cultivate a positive learning environment and achieve learning targets across the board.
- · Awaken students' interests in given subjects.

# Hands on

- · Build metaphors and share insights and experiences.
- Experience using StoryVisualizer to produce and publish finished stories, papers, and reports.
- · Learn how to print or email students' work or create ideas as story starters.

# Tools for planning

- Explore ways to apply the method to curricula.
- Practice planning StoryStarter sessions.
- · Write challenges and determine follow-up activities.

# Materials management

- · Organize and label the materials and do periodic inventory.
- ·keep the sets organized and ready for student use.

# E-Learning: Getting Started with StoryStarter

This online E-Learning program for LEGO Education StoryStarter consists of lessons and software tutorials presented in full HD video and led by a LEGO Education Master Trainer and Content Developer.

- •8 five minute video lessons
- 5 software tutorials
- 3 course levels, from complete beginner to confident user.
- A series of questions help participants reflect on the information covered and further strengthen the learning process.
- · Built-in progress tracking makes it easy to pick up where training was left.
- Participants obtain the official Certificate of Completion upon successfully completing the Certificate quiz.



# WeDo

Use the following information when requesting grants for manipulatives used to teach science, technology, engineering and math for Grades 2-5.

# **Need Statement**

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

Issue 1: students have low interest and engagement levels.

Issue 2: students are struggling with problem-solving skills.

**Issue 3:** students are not engaged in learning math and science.

Issue 4: students have extremely diverse abilities.

Issue 5: too few opportunities for creative or project-based learning.

**Issue 6:** a lack of good opportunities for students to communicate in the language of mathematics and science, both orally and in writing.

Issue 7: students need to learn how work effectively in teams.

# **Project Description**

My solution is to engage students in a cross-curricular, hands-on learning environment using LEGO Education WeDo®.

WeDo 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, and critical thinking.

Additionally, WeDo Software introduces students to basic programming skills that allow them to create movement in robots and program sensors to take in information.

Together, WeDo and WeDo Software establish a learning environment that 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, **(number)** students will learn how to program, design, and create working models that represent machines or machine components used in real life.





- · Build models around themes that push brainstorming.
- Analyze cause and effect.
- Make observations during testing.
- Display and communicate data.
- · Create working models with effective programming.

These experiences expand a student's knowledge of simple machines and how to make robots move and interact to solve problems. 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's **(number)** hours of classroom instruction include open-ended problem-solving activities that engage students.

Students will demonstrate an increased ability to comprehend and solve basic problems by applying their science, technology, engineering, and mathematics skills to address challenges they encounter. Additionally, these experiences will help students develop a better attitude toward solving 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, science, and so forth. 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 WeDo.)

### **Option 1: WeDo Construction Set**

This easy-to-use set introduces young students to robotics as they explore working motors and sensors and program their models. It includes a series of cross-curricular, theme-based activities designed to help develop STEM skills as well as language, literacy, and social studies.

- 158 elements
- Full-color building instruction booklets and element overview
- Storage bin

### Option 2: WeDo Software v1.2 & Activity Pack

The icon-based, drag-and-drop Software v1.2, powered by LabVIEW™, complements the WeDo Construction Set to provide students with an intuitive programming environment.

- · Program, design, and create a working model.
- Acquire information.
- · Use feedback to adjust a programming system output.
- Work with simple machines such as gears, levers, pulleys, and transmission of motion.



• Includes a programming block and support for the Power Functions Light (sold separately).

The activity pack includes 12 activities divided into four themes – Amazing Mechanisms, Wild Animals, Play Soccer, and Adventure Stories – for up to 24 hours of instruction and project-based learning.

The CD-ROM includes teacher's notes, student worksheets, and a glossary.

### **Option 3: WeDo Resource Set**

Designed to serve as a parts supplement for the WeDo Construction Set, this set takes STEM concept learning with WeDo to the next level, extending the possibilities for creative problem-solving challenges, literacy lessons, and math connections for elementary students.

- 325 elements
- Combine with the Construction Set to build a tower crane, an intelligent house, a Ferris wheel, and a car.

### **Option 4: WeDo STEM Expansion Activity Pack**

Introduce more advanced STEM activities to existing WeDo sets.

- Physical science
- Mathematical thinking
- Engineering
- Technology
- Applications of science
- · Designed for Grades 3 and up

The activity pack features:

- 6 main activities
- 4 problem-solving activities

A CD-ROM includes teacher notes, lesson-planning guidelines, assessment tools, classroom-management tips, and element surveys to help educators easily integrate lessons into the classroom.

The activity pack requires the following WeDo solutions:

- •1 LEGO Education WeDo Construction Set
- •1 LEGO Education WeDo Software and Activity Pack

### 1 LEGO Education WeDo Resource Set

### **Option 5: WeDo Adventure Stories Extension Activity Pack**

LEGO Education WeDo Extension Activity Packs complement the WeDo Activity Pack to create more engaging learning experiences in science, literacy, math, and social studies. Using the LEGO Education WeDo hardware and software in combination with these activities, educators can easily create rich, cross-curricular lessons to inspire critical thinking, problem solving, and creativity.

- Activities cover Airplane Rescue, Giant Escape, and Sailboat Storm theme models
- · 36 hours of classroom time across 12 activities



Each theme model includes:

- · Mathematics, literacy, science, and social studies activities
- Standards covering visual arts, dramatic arts, music, physical education, and technology
- · Learning grid to map activites to key standards and learning objectives

Each activity includes:

- · Lesson-At-A-Glance overview
- Teacher's guide with a detailed lesson plan
- Worksheet(s)
- Rubric for evaluation
- Programming and building guidance
- Tracking sheets for organization and program planning

### **Option 6: WeDo Amazing Mechanisms Extension Activity Pack**

LEGO Education WeDo Extension Activity Packs complement the WeDo Activity Pack to create more engaging learning experiences in science, literacy, math, and social studies. Using the LEGO Education WeDo hardware and software in combination with these activities, educators can easily create rich, cross-curricular lessons to inspire critical thinking, problem solving, and creativity.

- Activities cover Dancing Birds, Smart Spinner, and Drumming Monkey theme models
- ·36 hours of classroom time across 12 activities

Each theme model includes:

- · Mathematics, literacy, science, and social studies activities
- · Standards covering visual arts, dramatic arts, music, physical education, and technology
- · Learning grid to map activities to key standards and learning objectives

Each activity includes:

- Lesson-At-A-Glance overview
- · Teacher's Guide with a detailed lesson plan
- Worksheet(s)
- Rubric for evaluation
- Programming and building guidance
- Tracking sheets for organization and program planning

### **Option 7: WeDo Play Soccer Extension Activity Pack**

LEGO Education WeDo Extension Activity Packs complement the WeDo Activity Pack to create more engaging learning experiences in science, literacy, math, and social studies. Using the LEGO Education WeDo hardware and software in combination with these activities, educators can easily create rich, cross-curricular lessons to inspire critical thinking, problem solving, and creativity.



· Activities cover Goal Kicker, Goal Keeper, and Cheerful Fans theme models

·36 hours of classroom time across 12 activities

Each theme model includes:

- · Mathematics, literacy, science, and social studies activities
- · Standards covering visual arts, dramatic arts, music, physical education, and technology
- · Learning grid to map activites to key standards and learning objectives

Each activity includes:

- Lesson-At-A-Glance overview
- · Teacher's guide with a detailed lesson plan
- Worksheet(s)
- Rubric for evaluation
- Programming and building guidance
- Tracking sheets for organization and program planning

### **Option 8: WeDo Wild Animals Extension Activity Pack**

LEGO Education WeDo Extension Activity Packs complement the WeDo Activity Pack to create more engaging learning experiences in science, literacy, math, and social studies. Using the LEGO Education WeDo hardware and software in combination with these activities, educators can easily create rich, cross-curricular lessons to inspire critical thinking, problem solving, and creativity.

- · Activities cover Hungry Alligator, Flying Bird, and Roaring Lion theme models
- ·36 hours of classroom time across 12 activities

Each theme model includes:

- · Mathematics, literacy, science, and social studies activities
- · Standards covering visual arts, dramatic arts, music, physical education, and technology
- · Learning grid to map activities to key standards and learning objectives

Each activity includes:

- · Lesson-At-A-Glance overview
- · Teacher's guide with a detailed lesson plan
- Worksheet(s)
- Rubric for evaluation
- Programming and building guidance
- Tracking sheets for organization and program planning



This workshop consists of hands-on activities, communication, reflection, and application that are 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 the concepts behind simple and complex machines within science and math curricula and practice differentiated instruction.

Participating in the workshop leads to a greater understanding of how LEGO 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 STEM and WeDo sets and lessons with the required curriculum.

# Learning theory

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

# Hands on

- Build machines and see how they can teach specific concepts to gain confidence in the classroom.
- · Learn how to program using drag-and-drop icons.
- · Use motors and sensors to understand inputs and outputs.
- · Discover how to integrate WeDo into multiple subject areas.
- 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 WeDo sets 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.
- · Keep the sets organized and ready for student use.



# Simple and Motorized Mechanisms

- Use the following information when requesting grants
- for manipulatives used to teach physical science
- concepts for <u>Grades 5 and up.</u>

# **Need Statement**

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

Issue 1: students have low interest and engagement levels.

**Issue 2:** students are struggling with problem-solving skills.

**Issue 3:** students are not engaged in learning math and science.

Issue 4: students have extremely diverse abilities.

**Issue 5:** too few opportunities for creative or project-based learning.



**Issue 6:** a lack of good opportunities for students to communicate in the language of mathematics and science, both orally and in writing.

Issue 7: students need to learn how work effectively in teams.

# **Project Description**

My solution is to engage students in a cross-curricular, hands-on learning environment using Simple & Motorized Mechanisms.

The Simple & Motorized Mechanisms Base Set and curriculum options are 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, and critical thinking.

It creates a learning environment that 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<sup>®</sup> 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, **(number)** students will learn how to design and create working models that represent machines or machine components used in real life.



- · Build models around themes that push brainstorming.
- Analyze cause and effect.
- Make observations during testing.
- Display and communicate data.
- Create working models.

These experiences expand a student's knowledge of simple machines and how to make them move and interact to solve problems. 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.

Students will demonstrate an increased ability to comprehend and solve basic problems more effectively by applying their science, technology, engineering, and mathematics skills to address challenges they encounter through the lessons. Additionally, these experiences will help students develop a better attitude toward solving 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, science, and so forth. 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 Simple and Motorized Mechanisms.)

### Simple & Motorized Mechanisms Base Set

Students will build and explore machines and mechanisms, investigate motorized machines, calibrate and capture wind, and study gearing mechanisms with this base set. The set contains 396 LEGO Technic elements and full-color building instruction booklets for 10 principle models and 18 main models, all in a sturdy storage bin that includes a sorting tray.

Combine the Simple & Motorized Mechanisms Base Set with curriculum-relevant activity packs to carry out a broad range of activities within design technology, science, and mathematics:

- Introducing Simple & Motorized Mechanisms
- Advancing Simple & Motorized Mechanisms
- Pneumatics Add-On Set and Activity Pack
- Energy Add-On Set and Activity Pack

### **Option 1: Introducing Simple & Motorized Mechanisms**

When used with the Simple & Motorized Mechanisms Base Set, this activity pack gives students a fundamental understanding of simple machines, structures, and mechanisms.



- 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.

The activity pack provides 30 lessons featuring 37 principle model activities; 14 main activities, each with extension activities; and six problem-solving activities.

The CD-ROM includes teacher's notes, student worksheets, and glossary. This program enables students to learn the underpinning of physical science, preparing them for further study in robotics, especially using LEGO MINDSTORMS Education EV3.

### **Option 2: Advancing with Simple & Motorized Mechanisms**

When used with the Simple & Motorized Mechanisms Base Set, this activity pack enables students to get an in-depth understanding of simple machines, mechanisms, structures, and mechanical advantage.

- · Explore mechanical advantage.
- Experiment with balanced and unbalanced forces, equilibrium, and more.

The activity pack provides 20 lessons featuring 38 principle model activities, four main activities including extension activities, and eight problem-solving activities. Real-life video clips introduce students to the activities. Teacher's notes, student worksheets, and glossary are also included.

### **Option 3: Pneumatics Add-On Set and Activity Pack**

Combining the set with the Simple & Motorized Mechanisms Base Set enables you to carry out engaging crosscurricular activities.

- Explore power systems and components.
- Experiment with sequence and control, pressure, prototyping, kinetic and potential energies, and more.

The add-on set features 14 principle model activities that introduce students to the basics of pneumatics. In addition, four main models and activities and two additional open-ended problem-solving activities thoroughly educate students about pneumatics. The set features 31 specialty elements including pumps, cylinders, valves, an air tank, tubes, and a manometer.

The Pneumatics Activity Pack includes 14 principle model activities, four 45-minute pneumatics lessons each with extension activities, and two additional problem-solving tasks. Also includes video clips of real-life machines, printable worksheets, and teacher materials. This activity pack is appropriate for fifth grade and up.

### **Option 4: Renewable Energy Add-On Set and Activity Pack**

Students explore renewable energy sources; investigate energy supply, transfer, accumulation, conversion, and consumption; and use measurements and data analysis to describe and explain outcomes through hands-on activities and exciting, real-life models.

The Renewable Energy Activity Pack includes six 45-minute lessons and four problem-solving activities. It also includes a wide range of real-life images, teacher's notes, student worksheets, and glossary.



This workshop consists of hands-on activities, communication, reflection, and application that are 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 the concepts behind simple and complex machines within science and math curricula 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 Simple & Motorized Mechanisms Base Set and lessons with the required curriculum.

# Learning theory

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

# Hands on

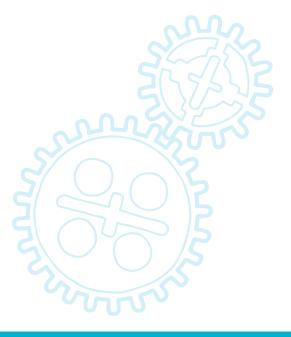
- Build machines and see how they can teach specific concepts to gain confidence in the classroom.
- Learn how to begin and how you can take a simple concept and make it complex through a series of intermediate steps.

# Tools for planning

- Explore ways to apply the Simple & Motorized Mechanisms Base Set 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.
- · Keep the sets organized and ready for student use.





# EV3

Use the following information when requesting grants for manipulatives used to teach computer science concepts and real-life robotics technology for Grades 6 and up.

# **Need Statement**

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

Issue 1: underperforming students.

Issue 2: students are not engaged in learning.

Issue 3: students with an extreme diversity of abilities.

**Issue 4:** not enough real-life or project-based learning opportunities.



# **Project Description**

My proposed solution is to engage students in a cross-curricular, hands-on learning environment using LEGO MINDSTORMS® Education EV3 robotics.

EV3 curriculum, including Design Engineering Projects, Space Challenge, and Middle School Science, 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 collaboration, communication, creativity, critical thinking, and problem solving.

It creates a learning environment that addresses the challenges associated with (area of issue).

### (Add statements as needed to show how you will address the area of issue utilizing the EV3 curriculum.)

Through this curriculum, **(number)** students will design, build, program, and test robots to do a variety of tasks. They learn to control motors and collect data using of a variety of sensors and log the results of experiments at up to 1,000 samples per second.

The curriculum's classroom instruction includes open-ended problem-solving activities designed to make learning science, technology, engineering, and mathematics through real-life robotics engaging and fun.

Students will demonstrate an increased ability to solve problems and communicate more effectively by applying their science, technology, engineering, and mathematics skills to address challenges they encounter through the lessons. Additionally, these experiences will help students better comprehend and apply scientific and technical language.

Skills assessment will take place through student presentations and ongoing observation.



# **Curriculum Information**

Select relevant description option:

### **Option 1: EV3 Design Engineering Projects**

EV3 Design Engineering Projects is a curriculum package with 30 hours of classroom instruction. The curriculum features three main sections: Make It Move, Make It Smarter, and Make a System. Each section includes five design projects.

### **Option 2: EV3 Space Activity Pack and Challenge Set**

The EV3 Space Challenge Set includes three 2' x 3' learning mats, one 4' x 6' challenge mat, and a large number of LEGO elements for building the challenge models. When the challenge set is combined with the EV3 Space Activity Pack, you can teach 30+ hours of activities in the following categories: Basics of Gears, Learning Missions, Challenge Missions, and Research Projects.

### **Option 3: EV3 Science Activity Pack**

The EV3 Science Activity Pack is the result of a close collaboration with science teachers and Fraunhofer, a global application-oriented research organization. It consists of 14 physical science experiments that utilize the data-logging capabilities of the LEGO MINDSTORMS Education EV3 hardware and software, as well as the LEGO Education Renewable Energy Set and the MINDSTORMS Temperature Sensor (each sold separately).

The experiments focus on:

- renewable energy (energy production and consumption)
- thermal physics (boiling/melting points and heat transmission)
- mechanics (force and motion)
- light (light intensity)

Each experiment fits within a 45- to 90-minute science lesson with small, engaging LEGO models that students can build and program in a short amount of time.





This hands-on workshop is six hours of intense 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 about EV3 programming, discover how STEM fits the curriculum and subject area they teach, 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 EV3 with the required curriculum.

# Learning theory

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

# Hands on

- Learn how to get started and how to take a simple concept and make it complex through a series of intermediate steps.
- Develop confidence in leading students through building and programming a robot.

# Tools for planning

- Apply EV3 to curricula programs.
- Share ideas with other participants and leverage the knowledge of best practices from the facilitator to get the most from professional development.

# Materials management

- · Organize and label the materials and do periodic inventory.
- Keep the sets organized and ready for student use.







# **Justification Letter**

Dear School Administration,

I am writing to inform you about LEGO<sup>®</sup> Education \_\_\_\_\_\_, a unique and cross curricular tool I feel will be a valuable addition to my classroom.

This solution is based on the educational theory of constructionism, which is rooted in the belief that children learn best when they experience things firsthand and within a meaningful context. I truly believe that this handson experimentation with concrete materials will lead to deeper engagement and development of skills of the 21st century: collaboration, communication, creativity, critical thinking, and problem solving.

Perhaps the best news is that the cost of an entire classroom implementation of LEGO Education \_\_\_\_\_\_\_\_\_\_ is affordable, so we could finance it with a reasonable budget.

I would like to quickly review the benefits of integrating this solution:

- · Directly addresses several areas of our curriculum
- · Constructionist approach to learning, resulting in higher student engagement and memorable experiences
- · Supports fundamental skills of the 21st century
- · Very affordable (doesn't compete with books or other materials)
- · Reputable company in education for more than 30 years
- · Materials are not consumable and last for years

I truly hope you are as excited about this idea as I am, and I look forward to hearing your thoughts and fielding any questions you might have.

Thank you for your time.