**TITLE OF PROJECT: Terrific Trigonometry**

***Contact person for this proposal* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**School \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Principal's**

**Signature *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

**SUMMARY INFORMATION \_**

Total students directly benefiting from this project: \_\_\_\_\_\_\_\_\_\_

Number of general education students \_\_\_\_\_\_\_\_\_\_

Number of special education students \_\_\_\_\_\_\_\_\_\_

Total cost of project $\_\_750\_\_\_\_

Total amount requested through this grant $\_\_750\_\_\_\_

**NARRATIVE**

**1. Program Synopsis:** ***Provide a short, informative description of the program. What do you want to do and why?***

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| **SAMPLE:** I want to help students strengthen their number sense and prepare them for difficult mathematical concepts like trigonometry, which they will most likely encounter in the future. This experience would support the child’s understanding of the concept of geometry and how math is critical to success in later classes. I want to create a way for children to have an educational experience that supports their lifelong success in mathematics and academia in general. Trigonometry is an extremely difficult subject for most students mainly due to the fact that many of them have not encountered any of its concepts, studied any of its formulae, or have an already shaky foundation with geometry. These floor mats will help me and my school set an educational and confidence-boosting foundation for each student taking math and those who expect to see trig in their futures. We are piloting a project in our school where we use movement-based learning to increase our students’ critical thinking skills and mastery of NYS Learning Standards. My contribution is to develop an efficient model for teaching students about addition and the various techniques one can implement to achieve total understanding of the subject. Based on research of kinesthetic learners, I will create the best practice that will be used throughout our district. |

***How will this proposal enhance student achievement?***

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| **SAMPLE:**This project will use movement-based learning to improve student achievement and health. Our plan is to develop a scalable model for integrating math throughout the school day, during PE class, before and after school, during recess and transition times. Our project focuses on two national concerns: low student achievement and obesity. We will pre- and post-test our students and carefully document the results. We anticipate that teachers will observe our strategies in order to adapt the techniques for their own classrooms.If special education students are involved, how will this program meet their IEP goals?Teacher will need to complete this section based on their own students |

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 **2. Objectives:**  ***What will the students in the program be able to do once they have completed the program?***

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| **SAMPLE:****The objectives are as follows:** * At least 90% of participating students will master basic trigonometry/geometry concepts like partitioning circles and rectangles into two and four equal shares.
* At least 90% of participating students will be able to recognize angles as geometric shapes that are formed wherever two rays share a common endpoint and understand concepts of angle measurement.
* At least 80% of participating students will increase their skill/success with word/picture problems by 40% (as evaluated by the Easy CBM test).
* At least 80% of participating students will increase their leadership skills. My students will be trained to be “math buddies” who will learn how to teach math to younger students in our Math Buddy Program.
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***Describe how this project relates to your curriculum.***

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| **SAMPLE:**This project helps me teach my curriculum in a way that students learn the information quickly and easily. The materials and activities are easily aligned with my current curriculum and various state standards. The best practices model I develop will make it easy for other teachers to implement in their classrooms as well. |

***Identify specific learning standards and performance indicators that this project addresses.***

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| **SAMPLE:**This enabling project (Terrific Trigonometry) utilizes floor mats that fulfill many different state standards: the Unit Circle (Trig) Floor Mat, the Angle Hop Floor Mat, and the Fraction Walk Floor Mat. The Unit Circle (Trig) Floor Mat helps students learn how to partition circles and rectangles into two three or four equal shares and how to recognize that equal shares of identical wholes need not have the same shape. Students will be able to draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines (and be able to identify these in two-dimensional figures) using the Angle Hop Floor Mat. Students will also be able to classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size. The Fraction Walk mat will provide a foundation of mathematical knowledge to help support the study of these complex trigonometric concepts. On a basic level, students will be able to solve word problems involving addition and subtraction of fractions referring to the same whole including cases of unlike denominators using this mat and be able to interpret a fraction as division of the numerator by the denominator. |

**3. Activities:  *What are the students going to be doing? Be Specific!!***

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| **SAMPLE:**For most of my older students, the Unit Circle (Trig) Hop floor mat will function mainly as a visual guide to supplement their learning. They, and younger students learning geometry, can jump on the mat onto a desired angle measurement that they find after they fill out an answer on their worksheets. I can also ask them to jump to the angle measurement in degrees while I give them the answer in radians. I can also have them do add and subtraction angle problems on the mats themselves, where they can jump to the answer. The Angle Hop floor mat can also be used in this way to strengthen each student’s geometric foundation through simple problems solved by jumping. The Fraction Walk floor mat provides each student who is struggling with more challenging trig problems, or possesses a wavering understanding of basic fractional concepts, a visual and interactive guide. Students who fail to provide a correct fraction for the trig problem, or students who appear to have trouble understanding fractions in general, I will send to the Fraction Walk floor mat to work alone or with a buddy. |

**4. Proposed Timeline**: ***How much time will be involved in this project?***

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| **SAMPLE:**We will use the materials at least three times per week for five to 20 minutes each time, depending on what concepts and skills we are working on that week. |

***How long will it take to achieve your objectives?***

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| **SAMPLE:** We will meet, and likely exceed, our objectives within the four-month project period. The materials are flexible so that we can take the concepts deeper as students gain the necessary skills and understanding. |

***What is the proposed starting date? What is the completion date?***

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| **SAMPLE:**We will use the materials to increase student understanding of trigonometric concepts from the date we are able to obtain materials (within one month of being funded) . The materials are flexible in content – they can be used progressively in ways that support the students as they gain new skills and understanding. |

**5. Evaluation:  *How will you determine if the objectives have been accomplished and that student learning has occurred? What plan do you have for sustaining this project beyond this year?***

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| **SAMPLE:**The success will be evaluated by pre- and post-testing of the students early trig and math abilities over the four-month project period. We will also track our activities – which ones we do and for how long – so we can determine what is creating the greatest impact in the project and to identify anything that needs to be improved. |

 **6. Budget:**  ***An itemized budget must be accurate and complete. All items must be connected directly to your project. For unique items, please include detailed information or copies from catalogs.***

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| **SAMPLE:**I propose to purchase the following items to support my students’ number sense and understanding of trigonometric concepts: 1) Math & Movement Unit Circle (Trig) Floor Mat ($395); 2) Math & Movement Angle Hop Floor Mat ($95); 3) Math & Movement Fraction Walk Floor Mat (thirds and sixths) ($175); 4) Reduced shipping.The total for these four items is $750.  |