Grant Assistance Toolkit



Enhancing Education Through Technology

Featuring *FASTT Math*[™]

Tom Snyder Productions® has prepared this Grant Assistance Toolkit to assist Local Education Agencies (LEAs) in the development of a grant project for the *Enhancing Education Through Technology (Ed Tech) Program* that incorporates *FASTT Math.* The Toolkit provides key information in these areas:

- Funding program information
- Alignment of **FASTT Math** to **Ed Tech** requirements
- Grant writing support

FASTT Math is the Tom Snyder Productions program featured in this Toolkit.

FASTT Math, which stands for Fluency and Automaticity through Systematic Teaching with Technology, combines research-validated methods and technology to help struggling students develop fluency with basic math facts. Using built-in, ongoing assessment, the software provides a continuously adaptive program that efficiently increases fluency in customized, 10-minute sessions. Students develop automatic recall of basic math facts in addition, subtraction, multiplication, and division from numbers 0-9 or 0-12.

FASTT Math offers educators a variety of effective professional development solutions for implementing the program to raise student achievement. These include a **FASTT Math** Teacher's Guide and several other options for implementation training, which present research-based strategies. In addition, Tom Snyder Productions offers on-site technology integration workshops that help teachers weave technology into the math curriculum.

Using the Toolkit

This Toolkit is designed as a resource to provide information that can be used when completing a local application for grant funds. It <u>only</u> addresses application requirements that are pertinent to **FASTT Math** and does not cover all grant expectations. The Toolkit also includes grant writing tips and examples of the types of information needed when applying for a grant. Please contact your state department of education for the official application that has <u>all</u> the requirements and guidelines.

Please note these symbols throughout the Toolkit to help you write your application:

- Highlights additional support and suggestions for writing your application.
- Refers to Tom Snyder Productions' **FASTT Math** features.

Scholastic's and Tom Snyder Productions' Commitment

Scholastic and Tom Snyder Productions are committed to the sustainability of quality programs in order to improve teaching and learning. For more information about the products included in this Toolkit, please contact Tom Snyder Productions at 800-342-0236.



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Because every grant project is unique, it is important to adapt the language provided in this Toolkit rather than copy it. Your proposal is more likely to be successful if you customize your application. Be sure to incorporate specific information about your project's needs, vision, programs, and design when you write your application.

### Funding Program Overview: Enhancing Education Through Technology

The information in this section of the Toolkit is based on the final *Guidance on the Enhancing Education Through Technology (Ed Tech) Program,* March 11, 2002 that is available at this website: <a href="http://www.ed.gov/programs/edtech/guidance.doc">http://www.ed.gov/programs/edtech/guidance.doc</a>

### Goal of Ed Tech

Title II, Part D, of the No Child Left Behind Act of 2001 (NCLB) is known as the Enhancing Education Through Technology (Ed Tech) Program. Ed Tech provides funds to:

- Increase student achievement in elementary and secondary schools through the use of technology
- Help students become technologically literate
- Integrate technology into the curriculum through professional development and the use of research-based instructional methods

### Allocation of Funds

After 5% of *Ed Tech* funds are reserved for state-level activities, the remainder of the funds must be divided equally between competitive grants and formula grants.

Formula Grants are distributed based on Title I, Part A allocations.

**Competitive Grants** are defined by each state according to federal guidelines and made available to eligible local entities.

### **Acceptable Use of Funds**

LEA recipients are required to use at least 25% of *Ed Tech* funds for ongoing professional development in the integration of advanced technologies into the curricula and use technology to create new learning environments. In addition, recipients may use funds for:

- Acquiring proven and effective courses and curricula that include integrated technology and are designed to help students meet challenging academic standards
- Increasing access to technology for students and teachers, with special emphasis on the access of high-need schools
- Adapting or expanding applications of technology to allow teachers to use researchbased teaching practices and distance learning to increase student achievement
- Implementing effective technology-based courses and curricula that are designed to help students meet challenging academic standards
- Promoting parent involvement and communication with students, parents, and teachers about curricula, assignments, and assessments
- Training teachers to become Technology Leaders who will assist other teachers
- Using technology to gather and analyze data in order to enhance teaching and improve academic achievement
- FASTT Math effectively integrates technology to raise student achievement; therefore, it qualifies for purchase with either Ed Tech formula or competitive grant funds.



### **Eligibility**

LEAs receiving Title I, Part A funding are eligible to receive *Ed Tech* formula funding. Eligibility for competitive *Ed Tech* grants is determined by each state according to the federal guidelines, so please refer to your state's RFA for the specific details.

### **Required Project Components**

To apply for both formula and competitive grant funds, an LEA must have a new or updated long-range strategic educational technology plan that is consistent with the objectives of the statewide technology plan and aligned to these 13 federal *Ed Tech* components:

- 1. Strategies for improving academic achievement and teacher effectiveness
- 2. Specific goals aligned with challenging state standards
- 3. Steps to increase accessibility
- 4. Promotion of curricula and teaching strategies that integrate technology
- 5. Ongoing, sustained professional development
- 6. Technology type and costs
- 7. Coordination with other resources
- 8. Integration of technology with curricula and instruction
- 9. Innovative delivery strategies
- 10. Parental involvement
- 11. Accountability measures
- 12. Supporting resources
- 13. Collaboration with adult literacy service providers
- For the **FASTT Math** alignment to 12 of these criteria, please see the chart on pages 5-16 of the Toolkit.

### **Accountability**

In addition to having a long-range technology plan, LEAs and eligible local entities must evaluate which funded activities are effective in 1) integrating technology into the curriculum and instruction, 2) increasing the ability of teachers to teach, and 3) enabling students to meet challenging state standards.

- FASTT Math, which has been proven to be highly effective, puts research into practice to increase students' fluency with basic math facts through:
  - Identification of fluent and non-fluent facts
  - Restricted presentation of non-fluent information
  - Student generation of problem/answer pairs
  - Use of controlled response times
  - Spaced presentation of non-fluent information



### FASTT Math Alignment to Federal Ed Tech Requirements

According to the federal guidance for *Ed Tech*, an LEA's technology plan must address 13 specific components in order to qualify for either formula or competitive funding. The following chart details how *FASTT Math* meets 12 of these required *Ed Tech* components.

### Required Ed Tech Components

# 1. <u>Strategies for improving academic achievement and teacher</u> <u>effectiveness:</u>

A description of how the applicant will use *Ed Tech* funds to improve the academic achievement, including technology literacy, of all students attending schools served by the LEA and to improve the capacity of all teachers in schools served by the LEA to integrate technology effectively into curriculum and instruction

### ☐ FASTT Math

**FASTT Math,** which stands for Fluency and Automaticity through Systematic Teaching with Technology, delivers individualized instruction and practice that helps students develop automatic recall of basic math facts from numbers 0-9 or 0-12. Computer-based, customized practice activities and worksheets help students achieve math-fact fluency. In addition, the *Fact Fluency Foundations Guide* provides instruction in number sense and operations for those students who lack a foundation in basic math concepts.

Dr. Ted Hasselbring, the William T. Bryan Professor of Special Education Technology at the University of Kentucky and Laura Goin, Chief Executive Officer of Designs for Learning, designed *FASTT Math* for all students needing assistance with developing fact fluency. Research has shown that the adaptive program is especially effective for students with mild disabilities and those who are at risk of school failure.

**FASTT Math** employs a proven approach called "expanding recall" to help students move newly acquired math facts from working to long-term memory. No more than three new facts are introduced during any given 10-minute session. Students practice holding new facts longer and longer in working memory until they make the leap to automatic retrieval. Developing automatic recall of basic facts provides the foundation needed for later development of higher-order math skills.

### FASTT Math uses this effective procedure:

- The student is introduced to two or three non-fluent facts to study. Typically, but only when possible, the session's "Study Facts" appear as a commutative pair. He/she is encouraged to read the facts aloud. The student can also watch an animated representation of each fact to help remind him/her in a more concrete way of what the fact represents.
- 2. After seeing and speaking the new "Study Facts," the student is asked to type each number sentence into the computer. If he/she fails to type the facts correctly, the facts are redisplayed, and the process is repeated. This helps establish a memory relationship with the fact in the student's mind.

(continued)



### Required Ed Tech Components ☐ FASTT Math 3. Once the student can correctly type the number Strategies for improving academic achievement and teacher sentences of the new "Study Facts." the program then effectiveness. Continued presents a practice session with these facts. The program mixes presentations of the two "Study Facts" with a gradually increasing number of fluent facts. The student builds the capacity to hold the fact in memory for a longer and longer period of time. FASTT Math limits the allowed response time to prevent the student from employing non-automated strategies. 4. When the student is able to recall the current "Study Facts" consistently, the facts are added as "Focus Facts" to the student's Fact Grid. The software provides extra practice to help the students solidify them in memory and increase recall speed. 5. Once a student is able to recall his or her "Focus Facts" in less than .8 of a second, those "Focus Facts" are changed to "Fast Facts" on the student's Fact Grid. FASTT Math also provides students with customized worksheets to practice their math facts in a paper-and-pencil format. Teachers can print problems in a vertical or horizontal format and in single- and multi-digit operations. These worksheets only include the math facts that a student is fluent with or is currently studying. Teacher implementation tools **FASTT Math** provides teachers with tools to ensure effective integration of the program into the curriculum and instruction: Classroom implementation strategies Procedures for customizing the student software experience Alert messages that notify teachers when a student is having trouble using the software or has successfully completed a level in the Fact Grid Progress monitoring and performance reports, with suggestions for their use Installation and setup procedures Classroom management software features Software implementation training Optional on-site workshops that help teachers integrate technology into curricula

### FASTT Math

### 2. Goals:

A description of the applicant's specific goals, aligned with challenging state standards, for using advanced technology to improve student academic achievement

**FASTT Math** combines research-validated methods and technology to help struggling students develop fluency with basic math facts in addition, subtraction, multiplication, and division. Using built-in, ongoing assessment, the software provides a continuously adaptive program that efficiently increases fluency. **FASTT Math** reports can help educators compare students' achievement to state and district gradelevel expectations and gauge students' progress toward reaching goals.

**FASTT Math** correlates to state standards in the areas of:

- Basic math facts
- Computational fluency
- Numbers and operations

The program also correlates to the National Council of Teachers of Mathematics Principles for Grades Pre-K-2, 3-5, and 9-12.

For more information, please visit: <a href="http://www.tomsnyder.com/standards/">http://www.tomsnyder.com/standards/</a>

3. Steps to increase accessibility:
A description of the steps the applicant will take to ensure that all students and teachers have increased access to technology

Through *FASTT Math's* adaptive technology, all students can receive the targeted instruction and systematic, repetitive practice they need to develop accurate and automatic recall of facts. Research has shown that *FASTT Math* is especially effective for students with mild disabilities and those who are at risk of school failure.

Teachers can customize software features to support children with special needs and English-Language Learners.

- The 1.25-seconds monitored response time can be lengthened for students with processing difficulties.
- The number of problems presented during instruction can be reduced for students who need more time to absorb new information.
- The audio function can be turned on or off.
- Students can listen repeatedly to any instructions they may have missed.
- Problems can be spoken aloud in English and Spanish.
- The high-contrast for screen text option benefits visually impaired students.

**FASTT Math** maximizes teacher effectiveness by providing them with the step-by-step instructions and tools they need to effectively install and setup the software, manage the class, and generate performance and progress monitoring reports.

### A FASTT Math

4. <u>Promotion of curricula and teaching strategies that integrate technology:</u>

A description of how the applicant will identify and promote curricula and teaching strategies that integrate technology effectively into curricula and instruction, based on a review of relevant research and leading to improvements in student academic achievement

**FASTT Math's** software-based teaching strategies supplement and strengthen a core math program by helping children develop automatic recall of basic math facts. Research supports the notion that fluency in basic skills is a necessary prerequisite to higher-level functioning in both reading and math (LaBerge and Samuels, 1974; Lesgold, 1983; and Torgesen, 1984). Scientific studies have proven **FASTT Math's** effectiveness in raising student achievement.

To help children fluently retrieve math facts in addition, subtraction, multiplication, and division, *FASTT Math* establishes a mental link between the facts and their answers. The program accomplishes this through these unique, research-based design features:

Identification of fluent and non-fluent facts – For each operation, FASTT Math software assesses a student's fact fluency with all facts in the operation. The program diagnoses which facts he/she can retrieve automatically from memory and which are unknown or not being recalled efficiently.

Most math-delayed children, along with those who have never received systematic math fact instruction, show a serious problem with respect to the retrieval of elementary number facts. Fleischner, Garnett, and Shepard (1982), as well as Hasselbring, Goin, and Bransford (1988), have found that learning-disabled children are substantially less proficient than their non-disabled peers in retrieving the answers to basic math facts in addition and subtraction.

 Restricted presentation of non-fluent information – No more than three new math facts are introduced during any 10-minute session. Students practice holding new facts longer and longer in working memory until they make the leap to automatic retrieval.

Research has shown that all human beings have a limited information-processing capacity and that one way around these limits is to have certain components of a task become so routine and over-learned that they become automatic (Whitehurst, 2003). Research by Hasselbring et al. (1988) suggests that it is best to work on developing math fact knowledge by focusing on a very small set of new target facts at any one time.

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Required Ed Tech Components	FASTT Math		
Promotion of curricula and teaching strategies that integrate technology, Continued	3. Student generation of problem/answer pairs – FASTT  Math explicitly requires students to type each newly introduced fact. By generating the problem/answer pair, students connect the two elements together. When students falter in holding that connection in memory, the program demands that they retype the fact to reestablish the relationship.		
	Research findings suggest that math-delayed children do not suffer from a conceptual deficit (Russell & Ginsburg, 1984), but rather from some sort of disruption to normal development of their network of relationships between facts and answers.		
	4. <u>Use of controlled response times</u> – Once a problem/answer relationship is established, <i>FASTT Math</i> uses controlled response times to reinforce the memory connection and inhibit the use of counting or other non-automatic strategies. <i>FASTT Math</i> begins with a controlled response time of 1.25 seconds, forcing students to abandon inefficient strategies and to retrieve answers rapidly.		
	If fluent retrieval does not develop, the development of higher-order mathematics skills—such as multiple-digit addition and subtraction, long division, and fractions—may be severely impaired (Resnick, 1983).		
	5. Spaced presentation of non-fluent information – FASTT Math intersperses the two new "target" facts with other already automatized facts in a pre-specified, expanding order. Each time the target fact is presented, another automatized fact is added as a "spacer" so that the amount of time between presentations of the target fact is expanded. The "expanding recall" model requires the student to retrieve the correct answers to the target facts over longer and longer periods.		
	Results from a scientific study conducted by Hasselbring and Goin (1988) showed that students using <b>FASTT Math</b> retained their fact fluency at a high level.		
	(continued)		

### A FASTT Math

Promotion of curricula and teaching strategies that integrate technology, Continued

6. Appropriate use of drill and practice – FASTT Math systematically builds a memory relationship before it reinforces speed of recall with appropriate drill and practice activities. The FASTT Math software provides children with individualized practice activities both in the software and through software-generated customized worksheets. Worksheets only include the math facts that a student is fluent with or is currently studying.

Hasselbring, Goin, & Sherwood (1986) determined that drill and practice routines had no effect on developing automaticity for non-recalled facts. Consequently, instruction must be focused on non-automatized facts, while practice and review are given on facts that are already being recalled from memory.

The principles embodied in *FASTT Math* have been validated over several years of research with more than 400 students. Generally, the findings show that when used daily, for about 10 minutes, most math-delayed children can develop fluency with all basic facts in a single operation after approximately 100 sessions. Students who use the program regularly do much better than students who are only occasional users.

In a scientific study conducted by Hasselbring and Goin (1988), three groups of students were matched for age, sex, and race. Two of the groups consisted of math-delayed students and the remaining group consisted of non-math-delayed students. In the experiment, one of the math-delayed groups (Math-Delayed Experimental) received an average of 54 10-minute sessions on the software program for addition; the other two groups (Non-Math-Delayed and Math-Delayed Contrast) received only traditional fluency instruction delivered by their classroom teachers.

The math-delayed students receiving instruction with the **FASTT Math** approach gained, on the average, 19 new fluent facts while their math-delayed peers receiving traditional instruction gained no new facts and their non-math-delayed peers gained only seven new facts. When the experimental students were tested four months after the post-test (following summer vacation), the students regressed by only six facts. This indicates that once facts become fluent through this method, they are retained at a high level. The results of this experiment have been replicated several times across all four operations (addition, subtraction, multiplication, and division).

5. Professional development:
A description of how the applicant will provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel to further the effective use of technology in the classroom or library media

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### FASTT Math

**FASTT Math** offers educators a variety of professional development options:

- FASTT Math Teacher's Guide provides strategies for effectively implementing the program and using software-generated reports to monitor and manage student progress.
- Fact Fluency Foundations Guide, written by Dr.
  Katherine Garnett, Professor and Chairperson of the
  Department of Special Education at Hunter College,
  offers concrete guidelines and resources for assessing
  and addressing students' needs in understanding
  number sense and operations.
- Fact Fluency: The Phonics of Mathematics features program author Dr. Ted Hasselbring in a one-hour video presentation.
- Research Foundation & Evidence of Effectiveness for FASTT Math presents the research-based principles behind the program and data that shows how effective FASTT Math is in increasing math fact fluency.
- Tom Snyder Productions provides a variety of on-site, customized FASTT Math implementation training to ensure effective use of the program, including Implementation Training, Train-the-trainer sessions, Administrator Workshops, and Technical Training. For example, in the FASTT Math Implementation Training, participants:
  - Learn the research foundation for FASTT Math and why it is uniquely effective at building math fact fluency
  - Explore the program's systematic approach of instruction and practice
  - Learn how to use the reporting features to track students' progress
  - Begin to develop an implementation plan tailored to their curriculum and resources
- Tom Snyder Productions offers optional on-site, customized technology integration workshops, including the following:
  - Critical Thinking, Cooperative Learning, and Technology
  - Handhelds in the Classroom

# Required Ed Tech Components 6. Technology type and costs: A description of the type and costs of technology to be acquired with education technology funds, including provisions for interoperability of components

### A FASTT Math

**FASTT Math** can be used with a Windows® or Macintosh® platform. The following specifications are recommended to operate the program:

### System requirements for Windows

Windows 98 SE, ME, 2000, XP

Pentium II or better, 350 MHz or better

128 MB installed RAM

800x600 minimum monitor resolution, 16-bit or better color 650 MB free disk space

LAN connection and file server database to be shared among multiple, simultaneous users

Direct X 9 (automatically installed with *FASTT Math*)

### System requirements for Macintosh

Mac OS X 10.3.4

G3 or better, 350 MHz or better

256 MB of RAM

800x600 minimum monitor resolution, thousands of colors 650 MB free disk space

LAN connection and file server database to be shared among multiple, simultaneous users

### Network File Servers

Cross-platform use: Windows NT4/2000/2003 Server;

Novell® Netware 6.0

Windows only: All cross-platform servers; Novell Netware 5 Macintosh only: All cross-platform servers; MAC OS X 10.2

(Jaguar) Server, MAC OS X 10.3 (Panther) Server

7. Coordination with other resources: A description of how the applicant will coordinate activities funded through the education technology program with technology-related activities supported with funds from other sources

**FASTT Math** can be integrated with specific technology-related school activities using *Ed Tech* funds and money from state, local, foundation, and other sources. The federal funding programs for which **FASTT Math** qualifies include:

- Title I, Part A Improving Basic Programs
- Title I Supplemental Educational Services
- Title II, Part D Ed Tech (Formula)
- Title V, Part A Innovative Programs
- 21st Century Community Learning Centers
- Comprehensive School Reform
- Individuals with Disabilities Act (IDEA)

### A FASTT Math

# 8. <u>Integration of technology with curricula and instruction:</u>

A description of how the applicant will integrate technology (including software and electronically delivered learning materials) into curricula and instruction, and a timeline for this integration

Designed for children in Grades 2 and above, *FASTT Math* works in a variety of settings—regular classroom, pull-out program, computer lab, and after-school environment. Students use the program daily during 10-minute sessions. Although each student's experience with the software is different, a typical sequence of sessions follows a 58-day cycle for each math operation.

At the beginning of the **FASTT Math** program, students take a placement quiz to determine his/her baseline fact fluency. Then the software provides systematic, adaptive instruction, practice, and review of facts to fill the gaps.

Students must have the appropriate conceptual foundation to use the *FASTT Math* software. The *Fact Fluency Foundations Guide* provides instruction in number sense and operations for those students who lack a foundation in basic math concepts.

The Teacher's Guide provides suggestions for ways teachers can integrate the program into the classroom schedule:

- Early-morning math—Students complete their 10-minute sessions before school or during homeroom.
- 10-minute computational warm-up—At the beginning of math time or math class, students using *FASTT Math* work on the computer while other students complete curriculum-appropriate computational worksheets.
- Lunchtime math—Children can use the program right before or right after eating.
- Activity rotation—Over the course of the day, students rotate through FASTT Math sessions during both math and non-math activities.
- After-school math—Teachers can include FASTT Math as part of any existing after-school academic programs already offered.
- Pull-out program—The FASTT Math placement quiz can be used to identify students for more general remedial math instruction. The 10-minute sessions can be included as part of this time.

9. Innovative delivery strategies: A description of how the applicant will encourage the development and use of innovative strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distancelearning technologies, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources

### ☐ FASTT Math

FASTT Math's technology embodies unique design features that help math-delayed children develop mathematical fluency. The program:

- Individualizes instruction, practice and review based on students' responses
- Assesses which facts a student doesn't know and focuses instruction on those
- Presents small, manageable amounts of new information
- Requires recall from memory by controlling response
- Presents new information using the systematic "expanding recall" model
- Provides corrective feedback during instruction
- Generates customized worksheets that only include the math facts that a student is fluent with or is currently studying

The **FASTT Math** software has built-in features to recognize the progress that students make and reward their hard work.

- Students feel a deep sense of accomplishment as they master math facts and watch them recorded on their Fact Grid.
- The program divides the facts in the Fact Grid into levels. Each level that students achieve adds more choices for customizing the interface of their "Fast Tracker" device.
- When a student reaches a new level in the software, the FASTT Math Manager notifies the teacher, who can print out an award certificate.
- When students are learning new facts or playing a game, they are rewarded with points. Students compete with their own previous scores, which focuses them on progressive self-improvement.
- The program provides a certificate students can print out when they have completed all the facts in the operation.

### 10. Parental involvement:

A description of how the applicant will use technology effectively to promote parental involvement and increase communication with parents. including a description of how parents will be informed of the technology used

A Parent Letter, available in English and Spanish, explains the goal of the program, steps children will be completing as they learn, and ways to reinforce their learning at home. Teachers can share with parents the Student Fact Grid report, which displays the student's fluency status with all facts in the operation.

### ☐ FASTT Math

11. Accountability measures: A description of the process and accountability measures that the applicant will use to evaluate the extent to which activities funded under the program are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to reach challenging state academic standards

For each operation, FASTT Math begins with a placement guiz to determine the student's baseline fact fluency with all facts in the operation. This guiz diagnoses exactly which facts a student can retrieve automatically from memory (in less than .8 of a second) and which are either unknown or being processed using an inefficient strategy. Educators can compare results with state or district grade-level expectations to see which students are on track and which have fallen behind.

**FASTT Math** periodically assesses students' learning through two instruments:

- Fast Fact Challenge (Mastery): After an appropriate amount of instructional time is spent in the software, this tool determines which Focus Facts students can retrieve in .8 of a second or less.
- Fast Fact Challenge (New Level): This challenge determines whether the student is now able to respond fluently to a fact in the next level, even if he/she was not able to do so during the placement quiz. It accounts for facts the student may have learned outside the software, and keeps the instructional focus where needed.

FASTT Math generates actionable reports that provide critical data for managing and monitoring students' progress while using the software. Teachers can view and print:

- A student's Fact Grid, which can be shared with parents, to see his/her fluency status with all facts in an operation
- Graphs of a student's developing fluency over time
- Records of students' software usage over time
- Summary reports showing key data for all students in the
- A comparative graph of the fluency status of all students in the class
- Alert messages that notify teachers when a student is having trouble using the software or has successfully completed a level in the Fact Grid

In addition, administrators can view and print:

- Summary data that shows how many students are currently using the program at the teacher, grade, and school levels
- Snapshots of the fluency status of all students at the teacher, grade, and school levels

The Class List Manager allows student demographic information to be entered for any student account. These include gender, ethnicity, English proficiency, meal status, special education, migrant status, and other subpopulations.

12. Supporting resources:
A description of the supporting resources, such as services, software, other electronically delivered learning materials, and print resources, that will be acquired to ensure successful and effective uses of technology

### ☐ FASTT Math

### <u>Technology Resources</u>

- FASTT Math Mac/Win CD-ROM for network and standalone use
- Step-by-step software installation and setup procedures presented in the Teacher's Guide
- On-site software implementation training
- Toll-free technical support line
- Online FAQs and other resources
- E-mail support

### **Printed Materials**

- Customized student worksheets
- Parent Letters
- Reproducibles in the Fact Fluency Foundations Guide
  - Blank Fact Grids
  - Addition Facts
  - Subtraction Facts
  - o Multiplication Facts
  - Division Facts
  - Facts Answers

### **Professional Resources**

- Teacher's Guide, which includes implementation strategies, summaries and suggested use of FASTT Math reports, and a research and validation overview
- Fact Fluency Foundations Guide, by Dr. Katherine Garnett, which includes the Math Fact Foundations Diagnostic Assessment and other resources
- Research Foundation & Evidence of Effectiveness for FASTT Math Professional Paper
- Fact Fluency: The Phonics of Mathematics video presentation by program author Dr. Ted Hasselbring
- Optional Tom Snyder Productions on-site workshops that help teachers integrate technology into the curricula

### **Customize Your Competitive Grant**

This section of the Toolkit provides basic information for those preparing to write a competitive *Ed Tech* grant. It is *not* intended to fully explain every grant application, but should help you understand what to include. While applications do vary, the basic parts of a competitive *Ed Tech* grant are fairly consistent.

Because each state has considerable flexibility in developing the criteria and priorities for awarding Ed Tech competitive grants, it is important to obtain the official application from your state department of education as it contains the official instructions, schedules, and application requirements.

### Parts of an *Ed Tech* Grant Application

There are 11 basic parts to a competitive grant application. Information is provided for each of these parts to help you make sure all components are thoroughly addressed. Remember to incorporate specific information that is unique to your project for each of these areas.

- 1. Summary or Abstract
- 2. Needs Assessment
- 3. Educational Goals and Objectives
- 4. Activities and Timeline
- 5. Professional Development
- 6. Project Management
- 7. Resource Management
- 8. Sustainability
- 9. Assessment and Evaluation
- 10. Budget
- 11. Appendix

### 1. Summary or Abstract

The *summary or abstract* encapsulates all the components of the proposal and gives an overview of the proposed project; it is basically, the project "in a nutshell." The summary/abstract includes the following information:

- The audience Who will the project directly impact?
- The need/problem What need will the project address?
- The educational goals What does the project strive to ultimately accomplish?
- The performance targets and indicators Who will do what by when?
- The activities How will the project be carried out?
- Because the abstract is essentially a summary of the project, you should write it after the grant proposal is completed. It can be summarized from other parts of the proposal.



### 2. Needs Assessment

The needs assessment is one of the most critical parts of the proposal as it specifies the educational needs that the project addresses and indicates how they were identified. Relevant data, such as standardized test scores or survey results, are used to substantiate the educational needs of the targeted population, which should include students, teachers, and parents.

The focal point of the needs assessment should be acquisition of services for the targeted population, and not acquisition of technology or funds.

### Step One: Gather the Data

Before any writing can begin, you will need to gather all of the relevant data for the targeted population. Examples of the types of data to gather might include, but not be limited to:

- Demographic Data
- Student Performance Levels
   Parental Involvement Needs
   Instructional Needs
   Technology Needs
- Professional Development Needs
- Socioeconomic Data
- Instructional Needs

It is important to conduct a staff needs assessment survey prior to determining goals, performance targets, and activities. Conduct the same survey at the end of the project as part of the evaluation plan to determine if goals have been achieved.

### Step Two: Review the Data

Have several people, such as classroom teachers, curriculum specialists, technology leaders, and special education teachers, review the data. Look at the student performance data as a whole set, but then disaggregate the data into subsets by demographic focus groups.

### Step Three: Determine Needs Based Upon the Data

Based upon the disaggregated data, determine the specific needs for students, teachers, and parents. The educational goals, performance targets, and activities, will be based upon these specific needs.

### Step Four: Write the Needs Assessment

Using the data gathered in Step One and the needs established in Step Three, develop a clear and detailed statement that specifies needs for academic achievement, technology, professional development, and parental involvement.

FASTT Math fills the gaps in a core math program by providing individualized instruction and practice of basic math facts in addition, subtraction, multiplication, and division. Research has shown that FASTT Math is especially effective in helping students with mild disabilities and those who are at risk of school failure to develop math fact fluency.



### 3. Educational Goals and Objectives

First and foremost, your *educational goals* must be aligned with the project's assessed educational needs and consistent with the goals of the federal and state *Ed Tech* grant program. An educational goal states the planned outcome that will solve the problems addressed in the needs assessment. Project goals must be *educational* goals and not merely the acquisition of technology.

- Be sure to develop goals and activities within each of the following four areas, as these are areas addressed by Ed Tech legislation for the application of competitive funds.
  - 1. Instructional Design/Content
  - 2. Professional Development
  - 3. School-to-Home Connection
  - 4. Assessment/Evaluation

Objectives help meet the educational goals. They clearly define the *performance targets* that must be measurable and related to a specific time. A series of objectives, or performance targets, should increase in expectation as they progress on a timeline, culminating in an overall performance or educational goal. The expectation is that at the end of the grant project calendar, the applicant meets the goals.

Objectives should be Specific, Measurable, Attainable, Relevant, and Timely (SMART).

*Effectiveness indicators* detail the type of information used to measure whether or not objectives are reached. These indicators should be objective and quantifiable. Effectiveness indicators can include, but are not limited to:

- Number of teachers trained
- Cost per student for technology services
- Number, types, and frequency of technology staff development sessions
- Percent of parents participating
- Student achievement scores
- Drop out rates
- Percent of students in high-needs schools with increased access to technology
- Percent increase in all students' technology skills
- Please see examples of ways to organize your goals, objectives, and effectiveness indicators on pages 25-27 of this Toolkit.

### 4. Activities and Timeline

Activities are even more specific than goals. They explain who will do what, when, where, and for how long. For each goal, list the activities to be conducted. The activities should address these areas:

- <u>Methods</u> used to identify and promote educational strategies that integrate technology effectively into the curriculum
- Steps taken to ensure access to technology for students and teachers
- Actions to promote parental involvement and increase communication
- Strategies for using innovative means to deliver specialized curricula



- **𝒇** Be sure your activities:
  - Relate directly to the program goals, as well as to the project description and project requirements of the RFA
  - Address the identified needs of the targeted population, which should include students, teachers, and parents
  - Are clearly stated and sufficient to carry out the proposed program
  - Are designed to provide measurable outcomes
- Sample activities for the goal area of Instructional Design/Content can be found on page 28.

Proposals should include a *timeline* indicating when project activities will occur. The timeline should indicate the anticipated starting and ending dates (i.e., month and year) for <u>each major</u> activity.

Please see examples of ways to organize your activities into a Quarterly Timeline on page 29 of this Toolkit.

### 5. Professional Development

Recipients of *Ed Tech* competitive grants must use *at least 25%* of the funds to provide sustained, intensive, high-quality *professional development* that will help teachers, administrators, and staff learn to use technology to improve teaching and learning.

This section should specify professional development goals that address the *how* and *why* of teaching and learning with technology. Relate professional development to curriculum development and integration, access to technology or student achievement.

- Sample goal: All teachers and administrators will receive professional development to expand their understanding of how to apply effective researchbased methods and strategies to teach mathematics.
- In the **FASTT Math** Implementation Training, participants:
  - Learn the research foundation for **FASTT Math** and why it is effective
  - Explore the program's systematic approach of instruction and practice
  - Learn how to use the reporting features to track students' progress
  - Begin to develop an implementation plan tailored to their curriculum and resources

### 6. Project Management

A *project management* plan specifies how grant activities will be managed and monitored on a day-to-day basis to ensure successful implementation.

In a grant proposal, describe the members of the project management team, indicating the responsibilities of each member and the credentials that support their selection. Include the background training, experience, and qualifications of the grant project director, who is responsible for the day-to-day activities.

- You may refer to each member's credentials, but include résumés <u>only</u> in the appendix and <u>only</u> if the RFA instructions allow for them.
- Information about the project team members can be presented in a chart similar to the one on page 30.



### 7. Resource Management

Applications require an explanation about how <u>existing</u> resources will be managed so that grant funds are maximized. Provide an explanation of the relationship and coordination of the proposed project with other programs in the district or on a school's campus and with other community, state, and federal resources.

- The purpose of a resource management description is to illustrate the costeffectiveness of the project. Keep the "cost per pupil" aligned to the local or state "per pupil expenditure" for the LEA.
- FASTT Math provides the technology, printed materials, and professional resources to ensure the cost-effective, successful implementation of the program to increase student achievement. These include:
  - Software that provides personalized instruction, practice, and review of basic math facts
  - Teacher's Guide, which presents step-by-step installation and setup procedures, implementation strategies, and suggested use of **FASTT Math** reports
  - Customized worksheets

(Please contact a Tom Snyder Productions representative to discuss program costs.)

- FASTT Math can be effectively integrated with other technology-related school or district activities that are being funded from sources other than Ed Tech. The federal funding programs for which they qualify include:
  - Title I, Part A Improving Basic Programs
  - Title I Supplemental Educational Services
  - Title V, Part A Innovative Programs
  - 21st Century Community Learning Centers
  - Comprehensive School Reform
  - IDEA or Special Education Funds

### 8. Sustainability

Sustainability refers to how the program will continue when grant funds expire. Describe the commitment to continuing the project in subsequent years with reduced levels of funding and support from the administration in terms of financial resources, space/facility resources, and personnel dedicated to the project.

Tom Snyder Productions is committed to ensuring the sustainability of **FASTT Math** beyond the period funded by an Ed Tech grant. To this end, the company offers a variety of ongoing support to ensure the continued development of the skills and strategies students need for academic success.

### 9. Assessment and Evaluation

Assessment recaptures data and highlights the project accomplishments. Conduct it during the course of the project timeline and at the conclusion of the project. Both process and product data should be included in the evaluation plan.

Process Evaluation is used to gather information about how successfully the project was implemented as planned and to assess its impact on the targeted population.

- Site visits or administrative observations
- Integration surveys
- External evaluation of long-term impact on student achievement
- Professional development training completed

<u>Product Evaluation</u> focuses on measuring final outcomes against project goals, objectives, and performance targets.

- Pre- and post-staff needs assessment surveys
- Evaluation of professional development activities
- Standardized or benchmark tests of student achievement.
- A sample evaluation plan is provided on pages 31-33. Because every grant project is unique, it is important to adapt the language in the evaluation plan so it is customized to your specific project.

Be sure to detail a comprehensive evaluation plan with specific accountability measures and procedures that identify and assess:

- <u>Student Academic Achievement</u>—To meet one of the required performance indicators and educational goals, determine how the proposed project will increase student achievement and then measure the success of the project's methods. Acceptable measures of student achievement should be standards-based, criterion-referenced assessments.
  - FASTT Math generates actionable reports that provide critical data for monitoring students' progress while using the software. For instance, teachers can print and view graphs of a student's developing fluency over time and a comparative graph of the fluency status of all students in the class. Administrators can view and print summary data that shows how many students are currently using the program at the teacher, grade, and school levels, as well as snapshots of the fluency status of the students.
- <u>Teachers' ability to effectively integrate technology into curricula and instruction</u>—An *Ed Tech* competitively funded project must improve the capacity of teachers to successfully integrate technology into curricula and instruction.
  - At the end of the grant project period, repeat the administration of the same Technology Survey for Teachers and Administrators that was given at the beginning of the project period. Analyze the differences in responses to determine growth.
  - The Teacher's Guide and the **FASTT Math** Implementation Training provide detailed information on how teachers can effectively use **FASTT Math** to help students develop math fact fluency.



- Parental Involvement—An extremely important requirement of the Ed Tech competitive
  grant program is that projects demonstrate an increase in parental involvement and
  communication. One way to gather the parental involvement data is to survey parents'
  opinions and behaviors regarding their involvement in schools. Match your goals to the
  needs identified in the survey.
  - FASTT Math provides opportunities for parents to become involved in their children's learning.
    - A Parent Letter, available in English and Spanish, explains the goal of the program, steps children will be completing as they learn, and ways parents can reinforce learning at home.
    - Teachers can share with parents the Student Fact Grid report, which displays the student's fluency status with all facts in the operation.

### 10. Budget

When preparing a *budget*, keep in mind that at least 25% of *Ed Tech* funds must be used to provide ongoing, high-quality professional development. The remaining funds can be used to carry out other activities aligned with the state's priorities and the LEA's technology plan.

- The budget is an estimate of the project costs, but the project budget should be as accurate as possible at the time of submission. It should not include any "padded" amounts for expenditures.
- The budget and narrative should align directly. It is best to make a list of all budgetary costs, based upon the narrative sections. Make sure that the budget includes a line item for every cost that the narrative describes.
- It is advisable to consult with your business office <u>prior to submitting the application</u>.

### 11. Appendix

The *appendix* will vary depending on what the application allows. Some do not allow an appendix, while others require that such documents as letters of support, résumés of key personnel, job descriptions, and schematics of technology networks be included.

The applicant should submit only what the official application allows.



### **Grant Writing Tools and Tips**

### **Helpful Hints**

Grant writing is a challenge for both novice and experienced writers. Grants are highly competitive, and rejection is disappointing. To avoid undue stress, realize that your proposal may be funded or it may not. A grant proposal is similar to a personal résumé; you have only one chance to make a good impression and grab the reviewers' attention. Here are some helpful hints to ensure that your proposal is effective and competitive.

- FOLLOW THE DIRECTIONS! Carefully read the RFA/RFP to ensure that you include all
  of the required information and forms.
- Disaggregate student achievement data and identify your needs.
- Write concisely and in the active voice.
- Write to communicate, not to impress.
- Write, rewrite, and then ask an objective reader to comment and edit.
- Use a simple document design—Times New Roman or Arial, 10- or 12-point font.
- Note the application deadline. Send or deliver your proposal *prior* to the deadline.
- If your proposal is not funded, be sure to request copies of the reviewers' comments and use them to improve the proposal before the next submission.
- Be persistent. Consider the grants that are not funded as valuable practice and choose to learn from the experience.
- If you do not qualify, do not apply!
- Start early, plan ahead, and allow plenty of time for writing, revising, and editing.
- Remember that a deadline is a deadline.
- For more **FASTT Math** information that you can use in writing your grant, please contact your Tom Snyder Productions representative.



### Sample Goals, Objectives, and Effectiveness Indicators

Writing clear and precise goals and performance targets (objectives) with related effectiveness indicators is crucial to implementing and evaluating an effective, research-based grant project.

Goals state the planned outcome that will solve the problem addressed in the needs statement.

Performance targets are a series of clearly defined objectives that increase in expectation as they progress on a timeline, culminating at an overall performance or educational goal. Performance targets are Specific, Measurable, Attainable, Research-based, and Timely (SMART).

Effectiveness indicators detail the type of specific information used to measure whether or not an objective is reached.

The following charts provide examples of how goals, objectives, and effectiveness indicators are related and can be identified for these areas:

- Instructional Design/Content
- Professional Development
- School-to-Home Connection
- Assessment/Evaluation
- Be sure to develop your own goals, performance targets, and effectiveness indicators that relate specifically to your project's needs.



### **Instructional Design/Content**

Identifying curricula and teaching strategies that integrate technology effectively into curricula and instruction, based on a review of relevant research and leading to improvements in student academic achievement, as measured by challenging State academic content and student academic achievement standards

### **Educational Goal:**

All Grades 2–8 teachers will implement proven and effective technology-based programs that are designed to help raise student achievement in math.

Objective	Positions	Timeline	Effectiveness
(Performance Target)	Responsible		Indicators
Beginning in September <year>, all Grades 2–8 teachers will effectively integrate technology to maximize student achievement in acquiring basic math facts through the use of the <i>FASTT Math</i> program.</year>	Grades 2–8 Teachers Administrators	September <year> through June <year></year></year>	Teachers' lesson plans  Administrative observations

- FASTT Math maximizes student achievement through software that individualizes instruction based on built-in, ongoing assessment. The program uses proven, research-based strategies that help students develop automatic recall of basic math facts from numbers 0-9 or 0-12.
- FASTT Math's powerful technology accommodates all students who need assistance with developing fact fluency in addition, subtraction, multiplication, and/or division. Teachers can customize software options to support students with special needs, including those with disabilities and English-Language Learners.

### **Professional Development**

- Adapting or expanding applications of technology to allow teachers to use research-based teaching practices and distance learning to increase student achievement
- Training teachers to become Technology Leaders who will assist other teachers

### **Educational Goal:**

All Grades 2-8 teachers and administrators will receive professional development to expand their understanding of how to use technology and research-based teaching strategies to teach mathematics.

Objective (Performance Target)	Positions Responsible	Timeline	Effectiveness Indicators
By June of <year>, all Grades 2–8 teachers and administrators will have completed at least six hours of professional development that focuses on using technology to apply research-based methods and strategies in the teaching of mathematics.</year>	Grades 2–8 Teachers Administrators	June <year></year>	Number of Grades 2–8 Teachers and Administrators completing six hours of professional development  Types and levels of professional development workshops and courses



### **School-to-Home Connection**

Promoting parental involvement and communication with students, parents, and teachers about curricula, assignments, and assessments

### **Educational Goal:**

Parents will be regularly informed about the effectiveness of the technology-based programs at raising their child's achievement in mathematics.

Objective (Performance Target)	Positions Responsible	Timeline	Effectiveness Indicators
For the <year> academic year, teachers will share results of benchmark reports and classroom activities with parents to communicate students' progress, strengths, and weaknesses, as well as suggest ways to build math skills at home.</year>	Grades 2–8 Teachers	September <year> through June <year></year></year>	Number of parent/teacher conferences  Dates when Parent Letters are mailed

In the **FASTT Math** program, teachers can share with parents a variety of computergenerated reports that detail their children's performance and progress in learning basic math facts.

### **Assessment/Evaluation**

Using technology to gather and analyze data in order to enhance teaching and improve academic achievement

### **Educational Goal:**

All Grades 2–8 teachers will continually collect and use meaningful information to measure students' academic progress and inform instruction.

Objectives (Performance Targets)	Positions Responsible	Timeline	Effectiveness Indicators
For the <year> academic year, all Grades 2–8 teachers will use quarterly benchmark assessments as diagnostic, progress monitoring, and evaluative tools to assess student progress.</year>	Grades 2–8 Teachers	September <year> through June <year></year></year>	Type of assessment instrument and schedule of testing dates
By Spring of <year>, 80% of students involved in the technology-based math intervention program will raise their scores on the state math assessment by five points.</year>	Grades 2–8 Teachers Administrators	Spring <year></year>	Number of points gained on the state math achievement assessment

FASTT Math uses built-in, ongoing assessment to measure each student's development of math fact fluency. The software uses the results to customize instruction, practice, and review. In addition, teachers can generate detailed performance and progress monitoring reports.



### **Sample Activities**

Activities explain who will do what, when, where, and for how long. You need to include detailed activities for each goal and performance target. The table below gives specific examples and shows the alignment of the goal, objective, and effectiveness indicators to the activities.

These are provided as examples or suggestions. You should develop your own activities specific to your needs.

### **Instructional Design/Content**

### <u>Goal</u>

All Grades 2-8 teachers will integrate advanced multimedia applications into curricula and instruction and apply scientifically research-based materials, methods, and strategies to teach mathematics.

**Objective:** (Performance Target)

During the <YEAR> academic year, all Grades 2-8 teachers will use the research-based *FASTT Math* interactive software to increase student achievement in developing math fact fluency.

	Specific Activities	Positions Responsible	Timeline	Effectiveness Indicators
1.	Purchase and implement the FASTT Math program	Campus Technology Leaders	Fall <year></year>	Purchase orders
2.	Disaggregate student assessment data, such as from state achievement tests, to determine specific instructional needs and clear benchmarks for students	Teachers Administrators	Fall <year></year>	Student results of state assessments
3.	Monitor student progress by generating electronic reports	Teachers	Academic <year></year>	FASTT Math reports, such as the Student Fluency Growth Report and the Class Summary Report  District benchmark assessments
4.	Based upon progress monitoring data, differentiate instruction to provide skill reinforcement in specific areas	Teachers	Academic <year></year>	Teacher lesson plans
5.	Provide students with computer- generated, customized worksheets to extend learning of math facts beyond software usage	Teachers	Academic <year></year>	Daily classroom schedules  Worksheet generation  Number of worksheets completed by students

### **Sample Quarterly Timeline**

This timeline includes generalized activities that occur quarterly. It is not intended to reflect a specific grant project. Applicants are encouraged to organize their specific grant activities into a similar quarterly timeline. Specific months are not included because grant calendars often fluctuate depending on the release of funds.

First Quarter	Second Quarter
<ul> <li>Organize Executive Committee</li> <li>Plan and begin quarterly meetings to monitor and adjust programmatic and financial activities</li> <li>Review grant activities and organize into quarterly timelines</li> <li>Create a checklist for each quarter's activities</li> <li>Meet with district and campus personnel to distribute quarterly timeline and checklist of activities</li> <li>Meet with project evaluator to plan progress monitoring deadlines and make a list of evaluation documentation to be collected quarterly</li> <li>Begin purchasing</li> </ul>	<ul> <li>Develop evaluation forms and processes for collecting information and data</li> <li>Begin monthly project meetings with campus personnel</li> <li>Conduct professional development and quarterly thereafter</li> <li>Continue purchasing</li> <li>Conduct instructional technology activities</li> <li>Conduct administrative walk-through observations to assess technology integration into instruction</li> <li>Assess program level of success and progress toward goals and objectives</li> <li>Gather documentation of all programmatic activities at monthly meetings</li> <li>Assess project goals, objectives, timelines, and checklists to ensure project is on target</li> </ul>
Third Quarter	Fourth Quarter
<ul> <li>Complete final purchasing of grant materials</li> <li>File required financial and programmatic progress reports</li> <li>Continue professional development activities</li> <li>Continue instructional development activities</li> <li>Continue to gather documentation of project activities</li> <li>Meet with external evaluator to share documentation and set deadlines for final evaluation activities</li> <li>Assess project goals, objectives, timelines, and checklists to ensure project is on target</li> </ul>	<ul> <li>Conclude instructional technology activities</li> <li>Conclude parental involvement activities</li> <li>Conclude professional development activities</li> <li>Meet with school sites to gather final documentation for evaluation plan</li> <li>Executive Committee meets to evaluate project milestones and plan for sustainability of project</li> <li>File final financial reports</li> <li>File final programmatic reports</li> </ul>



### **Sample Staffing Chart of Key Project Members**

Information about program implementation should include the project staff, their qualifications, their responsibilities, and their time commitments.

# These are provided as examples or suggestions. You should develop your own staffing chart specific to your organization.

Program Personnel	Qualifications	Responsibilities	Time Commitments
Fiscal Agent:	List degrees, certifications,	■ Chair, Project	List amount of time staff
List name and title	and professional experience	Executive Committee	member will devote to each
		<ul><li>Supervise grant goals,</li></ul>	responsibility or activity
		objectives, and strategies	
		<ul><li>Coordinate evaluation</li></ul>	
		strategies	
		<ul><li>Ensure dissemination of</li></ul>	
		information to the parents	
		and public	
Project Director:	List degrees, certifications,	■ Member, Project Executive	List amount of time staff
List name and title	and professional experience	Committee	member will devote to each
		<ul> <li>Manage programmatic grant</li> </ul>	responsibility or activity
		activities/strategies	
		<ul><li>Coordinate professional</li></ul>	Recommended 100%
		development activities	
		<ul> <li>File all programmatic reports</li> </ul>	
		with funding agency	
District Technology	List degrees, certifications,	<ul> <li>Member, Project Executive</li> </ul>	List amount of time staff
Coordinator:	and professional experience	Committee	member will devote to each
List name and title		<ul><li>Coordinate technology</li></ul>	responsibility or activity
		implementation	
		<ul><li>Coordinate Instructional</li></ul>	Recommended 100%
		technology activities	
Financial Coordinator:	List degrees, certifications,	<ul> <li>Member, Project Executive</li> </ul>	List amount of time staff
List name and title	and professional experience	Committee	member will devote to each
		<ul> <li>Manage financial activities of</li> </ul>	responsibility or activity
		grant program	
		<ul><li>Coordinate purchasing for</li></ul>	
		grant activities	
		<ul> <li>File all financial reports with</li> </ul>	
		funding agency	
Campus Administrators:	List degrees, certifications,	<ul> <li>Member, Project Executive</li> </ul>	List amount of time staff
List name(s) and title(s)	and professional experience	Committee	member will devote to each
		<ul><li>Manage instructional</li></ul>	responsibility or activity
		implementation of	
		multimedia program	
		<ul> <li>Coordinate professional</li> </ul>	
		development activities	
		<ul> <li>Coordinate parental</li> </ul>	
		involvement activities	
		<ul> <li>Collect and report student</li> </ul>	
		assessment data, formatively	
		and summatively	

### Sample Evaluation Plan

The evaluation plan is one of the most critical elements of your proposal. Because every grant project is unique, it is important to adapt this sample plan to reflect your specific project names, goals, objectives, and activities, rather than copy it.

### **Evaluation Design**

<Project Name> includes a comprehensive evaluation plan developed to determine success in meeting aggressive goals for improving the math achievement of all <grade level> students.
<District Name> and <Name of external evaluator> will conduct the final evaluation of <Project Name>. The Project Director will collect information, gather the data, and provide the progress reports throughout the project period to <Name of funding agency> as per the grant requirements.

The evaluation design includes both process and product evaluation. The <*Project Name*> Executive Committee will use the information gathered during the planning, implementation, and evaluation processes to interpret, report findings, and recommend modifications for improving the project.

Questions to be answered in this evaluation include the following:

- To what extent were the activities of the project implemented as planned? If not, what barriers or obstacles prevented parts or all of the activities from being executed?
- How effective were the activities of the project in achieving the goals of the project?
- What is the impact of the activities of the project on the participants?

### Product Evaluation

Product evaluation will focus on measuring final outcomes against project goals, objectives, and benchmarks. Changes that have occurred will be identified and analyzed to determine whether the program is effective for students and teachers. Like the process evaluation, the product evaluation will be collected both formatively and summatively. The product performance measures will focus on:

- Improvement in outcomes for students' math skills
- Improvement in teacher knowledge and abilities to integrate technology into the curriculum
- Improvement in students' and teachers' use of technology

The following product evaluative data will be collected:

### Benchmark Tests to measure student achievement

- Specify the methods and instruments the proposed project will use to evaluate the achievement of each of the proposed project goals.
- Include assessments that measure students' math achievement and technology skills, as applicable to your specific goals and objectives.



### **Student Work Samples**

Specify how and when these samples will be collected.

### **Evaluation of Professional Development**

In addition to teachers' evaluation of the professional development, applicants are encouraged to use lesson plans or administrative walk-though forms as a means to evaluate the effectiveness of professional development.

### **End-of-Project Survey**

An end-of-project survey distributed to all parents of targeted students can be used to provide the opportunity for parents to evaluate the effectiveness of the program for their children.

### **Process Evaluation**

Process evaluation will gather information about how successfully the strategies of the project were implemented as planned, and assess their impact on the target populations. Process evaluation data is both quantitative and qualitative in nature, and is intended to assess the outcome of the project. This data, collected formatively and summatively, will describe how students and teachers are affected by the project. The process evaluative data will focus on:

- Improvement in student academic achievement
- Improvement in teacher instruction and planning

The following process evaluative data will be collected:

### School/District Records

The Project Evaluator can track project objectives through quantitative data such as purchase orders, numbers of students/teachers served, and inventory records.

### **Project Meetings**

Specify how often the Project Executive Committee will meet and on what the meetings will focus.

### **Classroom Observations**

Administrators can visit classrooms randomly to acquire information on how teachers have adapted the program to student needs. Evaluative information can be drawn from observations of classroom applications, in the form of administrative walk-through forms.



### **Anecdotal Records**

- To address the "So what?" question, anecdotal records from students and teachers can be collected. The following questions should be addressed:
  - How has the program advanced the technology literacy of the targeted population?
  - How has the project improved the instructional program for teaching math?

### **Final Evaluative Report**

The Project Director and External Evaluator will use the data gathered in the product and process evaluation activities to prepare and present an annual Project Summary Report, to be shared with the local Board of Trustees and *Funding Agency*. The product and process evaluative data will be analyzed in the final report to answer the following questions:

- What improvements has the project made in student achievement in math?
- To what extent, by <Date>, do all teachers have increased knowledge, skills, and instructional methodologies in the literacy and technology development of students?



### **About Tom Snyder Productions**

Tom Snyder Productions, a Scholastic company, is a leading developer and publisher of educational software for K-12 classrooms. The company, which was founded more than 20 years ago by a former science and music teacher, carries over 125 award-winning software titles that cover each curriculum area. Products incorporate best practices and scientifically proven methods. They are used in over 400,000 classrooms to improve student performance and understanding. Tom Snyder Productions has also developed a broad range of on-site and online professional development services for teachers, schools, and districts.

We look forward to partnering with you to improve academic achievement and teacher effectiveness, and we would like the opportunity to talk with you about how we can best support your efforts to meet curriculum goals.