wonder workshop

ESSER Funds Proposal Guide

How can ESSER funds be used to fund a STEM initiative in your district?

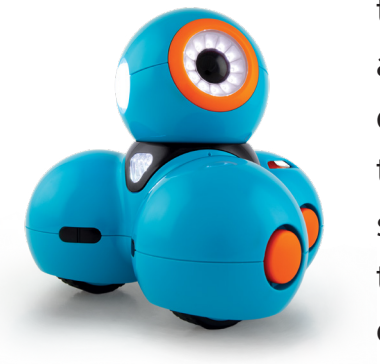
The ESSER III (Elementary and Secondary School Emergency Relief Fund) under the American Rescue Plan Act of 2021 provides a wide range of allowable uses for the funding, aimed at helping schools address the impacts of COVID-19 including students' academic needs.

Specific categories for the use of ESSER III funds that are related to implementing a new STEM Initiative include:

- **Educational Technology:** Purchasing educational technology (including hardware, software, and connectivity) for students that aids in regular and substantive educational interaction between students and their classroom instructors.

- **Addressing Learning Loss:** Implementing evidence-based interventions, such as summer learning or summer enrichment, extended day, comprehensive afterschool programs, or extended school year programs.

ESSER III funds, provided through the American Rescue Plan Act of 2021, come with several key requirements and considerations for schools to ensure the effective and equitable use of these resources. Use this guide to develop a comprehensive proposal and plan for developing a coding and robotics solution for your district that meets the dual focus of the ESSER III funding: addressing the immediate impacts of the COVID-19 pandemic on students and schools, and making strategic investments that can lead to long-term improvements in the education system, particularly in terms of equity and access to quality education.



Creating a comprehensive program to address learning loss and support the purchase of technology using ESSER funds requires careful planning, implementation, and evaluation. Below is a step-by-step guide that outlines how to conceive, plan, and evaluate such a program, ensuring compliance with government requirements for evidence of fund utilization.

Step 1: Conceiving the Program

Identify Needs: Conduct a needs assessment to understand the areas of greatest learning loss and technology needs within your district.

Define Objectives: Clearly define the objectives of your program. Objectives should be SMART (Specific, Measurable, Achievable, Relevant, Time-bound) and directly address identified needs, such as improving STEM skills, or increasing access to digital learning tools.

Identify Evidence-Based Strategies: Teaching students to code with Wonder Workshop Dash robots, Make Wonder curriculum, and Teach Wonder professional development effectively addresses learning loss and empower teachers to utilize new technology in an innovatively way.

Step 2: Planning the Program

Develop a Detailed Plan: Create a comprehensive plan that outlines the program's activities, timeline, budget, and personnel involved. Ensure the plan includes:

- Specific interventions to address learning loss.
- Technology purchases needed to support learning.
- Professional development for teachers and staff.
- Metrics for measuring progress towards objectives.

Budgeting: Allocate ESSER funds to different components of the program, ensuring at least 20% of the funds are used specifically to address learning loss. Include costs for technology purchases, training, and any additional resources needed for implementation.

Approval and Application: Submit your program plan for approval as required by your state or local education agency. Ensure your application clearly outlines how the program meets ESSER fund usage requirements, including addressing learning loss and technology needs.

Step 3: Implementing the Program

Launch the Program: Implement the program according to the plan. Purchase technology, start programs, and conduct professional development sessions.

Monitor Progress: Regularly monitor the program's progress towards its objectives. Collect data on student learning outcomes, technology usage, and participation in the program.

Adjust as Needed: Be prepared to make adjustments to the program based on monitoring data and feedback from stakeholders.

Step 4: Evaluating and Reporting the Program

Evaluate Outcomes: Conduct a formal evaluation of the program's impact on learning loss and technology integration. See pages 4 and 5 for recommended models of evaluation.

Document Use of Funds: Keep detailed records of how ESSER funds were spent, including receipts, contracts, and documentation of activities. This documentation will be critical for demonstrating compliance with funding requirements.

Prepare and Submit Reports: Compile a comprehensive report that includes the program's objectives, activities, outcomes, and evidence of fund utilization. Submit this report to the relevant agency as required.

Share Lessons Learned: Share the results and lessons learned from the program with stakeholders and other educational institutions. This can help inform future efforts to address learning loss and integrate technology in education.

Sample Program

Sample Goal:
Incorporate STEM (Science, Technology, Engineering, and Mathematics) education into every K-8 classroom to **enhance students' abilities in teamwork, effective communication, and problem-solving.** This can be achieved by establishing makerspaces, granting access to STEM laboratories, adding after-school opportunities, equipping libraries and classrooms with the latest technology, and investing in professional development for teachers.

By creating learning environments that reflect the demands of the 21st century, we are equipping our students with the skills and knowledge they need for the future workforce, like collaboration, communication, and problem-solving abilities.

Sample Plan
Implement a multi-year, comprehensive coding and robotics program that takes students on a journey to coding literacy.

Wonder Workshop's Make Wonder platform includes standards-aligned, student-facing coding lessons, coding challenges completed with an onscreen virtual robot, Math activities that bolster math fluency while testing coding skills, and dozens of puzzles and cross-curricular coding lessons to keep students engaged.

Combine that with Wonder Workshop's physical robots and accessories, and the Wonder League Robotics competition, and students will find themselves engaged in a series of collaborative, creativity-demanding challenges that foster 21st-century skills in addition to reinforcing computer science concepts.

Maximize the longetivity of the impact of your ESSER funds by purchasing a 3-year subscription to the Make Wonder platform that includes access for all students and all teachers in one school in your district.

Sample Implementation Considerations
To successfully implement a new STEM technology program, it's crucial to prioritize both professional development and the measurement of the program's effectiveness. **Educators must receive ongoing training and support** to integrate new concepts and technology effectively into their teaching practices. This ensures they can confidently use new tools and methodologies to enhance student learning.

Wonder Workshop provides both **onsite and virtual professional development programs** that ensure that educators get hands-on experience learning and teaching coding and computer science with Dash using both Block code and JavaScript.

To enhance a school's ability to track and report on the efficacy of the new STEM program, the Make Wonder platform provides teacher dashboards that track student progress and include information for how to best support students who might be struggling. **Assessments inside of the platform test for understanding,** and standards-alignment information ensures teachers know that students are achieving what's required.

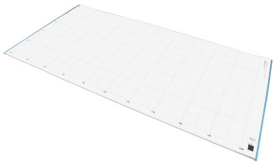
Make Wonder School with Wonder Packs

Hardware Included:
12 - Dash robots
6 - Sketch Kits
6 - Launchers
6 - Gripper Building Kits
24 - Building Brick Connectors

Software Included:
Make Wonder license for all students and all teachers at one school for up to 3 Years.

Wonder Pack

Included:
12 - Dash robots
6 - Sketch Kits
6 - Launchers
6 - Gripper Building Kits
24 - Building Brick Connectors



Whiteboard Mat

For use w/Sketch Kit

Professional Development

Full-day, In-Person Training for 30 teachers
Additional days available

PROPOSAL CALCULATOR

How many schools?	
How many class-rooms?	

	Unit Price	Units	Total Cost
Make Wonder School with Wonder Packs 3 -Year Subscription (1 Per School)	**$9,925**		
Wonder Packs (6 Per Classroom)	**$269.99**		
Whiteboard Mats (6 Per Classroom)	**$179.99**		
In-Person Professional Development (For 30 Teachers) (Recommended 2X Per Year for 3 Years)	**$5,000**		

Tracking Evidence of Impact:

In our fast-paced world, where technology plays a pivotal role in shaping learning experiences, frameworks like the **SAMR** model and the **Technology Integration Matrix (TIM)** provide essential guidance for educators and administrators. These models offer structured approaches to incorporating technology into teaching and learning, ensuring that its integration promotes deeper engagement, enhances student learning, and prepares learners for the future.

Below, we provide more detail for how these models can assist in both the drafting and implementation of an ESSER-funded, technology-forward program.

The SAMR model, developed by Dr. Ruben Puentedura, offers a framework for evaluating and designing technology integration in educational settings. It stands for **S**ubstitution, **A**ugmentation, **M**odification, and **R**edefinition, representing different levels of technology integration and the impact it is having on teaching and learning.

Learning to code with Robots, takes STEM learning to the next level and the Make Wonder platform gives teachers the tools they need to transform how they approach teaching about coding and computer science in the classroom.

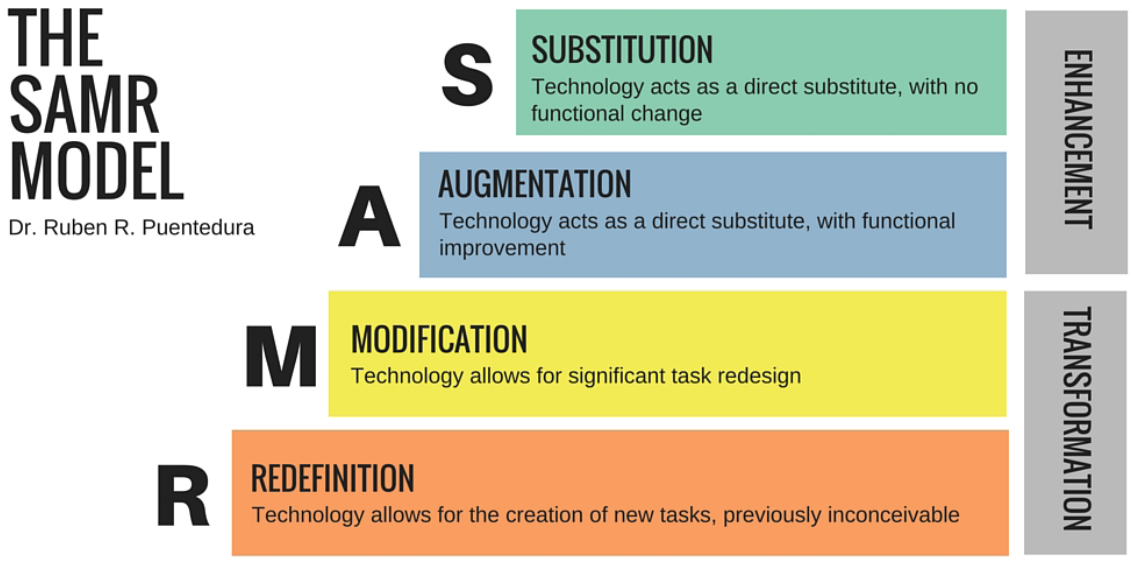
Schools leap up the SAMR ladder when implementing our comprehensive solution.

Modification

Examine Transformation of Learning Tasks: At this level, technology allows for significant task redesign. For example, students program a Dash robot to perform a set of tasks that solve a problem, demonstrating their understanding of coding concepts as well as problem-solving strategies. Teachers will be able to document how these experiences contributed to **deeper learning, enhanced critical thinking skills, and created more personalized learning experiences.**

Redefinition

Analyze Creation of New Learning Experiences: Technology integration at the redefinition level allows for the creation of new tasks that were previously inconceivable. An example could be **students collaborating with peers across the district or even globally on a Wonder League Robotics Competition Mission** using Dash Robots, Blockly, and digital collaboration tools. Evaluate how these new learning experiences have expanded students' perspectives, fostered innovation and creativity, and prepared them for a digital world.



Applying SAMR to Program Evaluation

Set Evaluation Goals: Define what success looks like at each level of the SAMR model in the context of your program. This could include specific learning outcomes, engagement metrics, or digital literacy skills.

Collect Data: Gather quantitative and qualitative data on technology use and its impact on learning. This could involve surveys, interviews, analytics from learning management systems, and academic performance indicators.

Analyze and Reflect: For each level of the SAMR model, analyze the data to understand how technology integration has transformed teaching and learning. Reflect on the following questions:

- How has technology substituted or augmented traditional learning tools and practices?
- In what ways has technology modified or redefined learning tasks and experiences?
- What evidence shows improvements in student engagement, learning outcomes, or teacher practices?

Identify Improvements: Based on the analysis, identify areas where technology integration could be improved or scaled. This might involve investing in more advanced technologies, providing additional professional development for teachers, or redesigning learning activities to move from augmentation to modification or redefinition.

Report Findings: Compile findings into a comprehensive report that outlines how the SAMR model was used to evaluate the program, what was learned at each level of technology integration, and recommendations for future improvements. This report can be used to demonstrate the program's efficacy to stakeholders and guide decision-making for continued investment in technology-enhanced learning.

The Technology Integration Matrix
Table of Summary Descriptors

The Technology Integration Matrix (TIM) provides a framework for describing and targeting the use of technology to enhance learning. The TIM incorporates five interdependent characteristics of meaningful learning environments: active, collaborative, constructive, authentic, and goal-directed. These characteristics are associated with five levels of technology integration: entry, adoption, adaptation, infusion, and transformation. Together, the five characteristics of meaningful learning environments and five levels of technology integration create a matrix of 25 cells, as illustrated below.

LEVELS OF TECHNOLOGY INTEGRATION → / CHARACTERISTICS OF THE LEARNING ENVIRONMENT ↓	ENTRY LEVEL The teacher begins to use technology tools to deliver curriculum content to students.	ADOPTION LEVEL The teacher directs students in the conventional and procedural use of technology tools.	ADAPTATION LEVEL The teacher facilitates the students' exploration and independent use of technology tools.	INFUSION LEVEL The teacher provides the learning context and the students choose the technology tools.	TRANSFORMATION LEVEL The teacher encourages the innovative use of technology tools to facilitate higher-order learning activities that may not be possible without the use of technology.
ACTIVE LEARNING Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.	**Active Entry** Information passively received	**Active Adoption** Conventional, procedural use of tools	**Active Adaptation** Conventional independent use of tools; some student choice and exploration	**Active Infusion** Choice of tools and regular, self-directed use	**Active Transformation** Extensive and unconventional use of tools
COLLABORATIVE LEARNING Students use technology tools to collaborate with others rather than working individually at all times.	**Collaborative Entry** Individual student use of technology tools	**Collaborative Adoption** Collaborative use of tools in conventional ways	**Collaborative Adaptation** Collaborative use of tools; some student choice and exploration	**Collaborative Infusion** Choice of tools and regular use for collaboration	**Collaborative Transformation** Collaboration with peers, outside experts, and others in ways that may not be possible without technology
CONSTRUCTIVE LEARNING Students use technology tools to connect new information to their prior knowledge rather than to passively receive information.	**Constructive Entry** Information delivered to students	**Constructive Adoption** Guided, conventional use for building knowledge	**Constructive Adaptation** Independent use for building knowledge; some student choice and exploration	**Constructive Infusion** Choice and regular use for building knowledge	**Constructive Transformation** Extensive and unconventional use of technology tools to build knowledge
AUTHENTIC LEARNING Students use technology tools to link learning activities to the world beyond the instructional setting rather than working on decontextualized assignments.	**Authentic Entry** Technology use unrelated to the world outside of the instructional setting	**Authentic Adoption** Guided use in activities with some meaningful context	**Authentic Adaptation** Independent use in activities connected to students' lives; some student choice and exploration	**Authentic Infusion** Choice of tools and regular use in meaningful activities	**Authentic Transformation** Innovative use for higher-order learning activities connected to the world beyond the instructional setting
GOAL-DIRECTED LEARNING Students use technology tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.	**Goal-Directed Entry** Directions given; step-by-step task monitoring	**Goal-Directed Adoption** Conventional and procedural use of tools to plan or monitor	**Goal-Directed Adaptation** Purposeful use of tools to plan and monitor; some student choice and exploration	**Goal-Directed Infusion** Flexible and seamless use of tools to plan and monitor	**Goal-Directed Transformation** Extensive and higher-order use of tools to plan and monitor

The Technology Integration Matrix was developed by the Florida Center for Instructional Technology at the University of South Florida, College of Education. For more information, example videos, and related professional development resources, visit **http://mytechmatrix.org**. This page may be reproduced by schools and districts for professional development and pre-service instruction. All other use requires written permission from FCIT.

The Technology Integration Matrix (TIM) provides a comprehensive framework for evaluating the integration of technology in education, focusing on five levels of technology integration (Entry, Adoption, Adaptation, Infusion, and Transformation) across five characteristics of the learning environment (Active, Collaborative, Constructive, Authentic, and Goal-Directed).

The TIM was developed by the Florida Center for Instructional Technology (FCIT) in 2005, the TIM is now in its third edition (2019).

Understanding the TIM Levels and Characteristics

Entry Level: Technology is used by instructors to deliver content to students, with students passively receiving information.

Adoption Level: Technology use is directed by the teacher, with some student engagement in using tools as directed.

Adaptation Level: Students start to use technology tools more independently, adapting them to their learning needs.

Infusion Level: Technology is integrated seamlessly into teaching and learning, with students regularly using technology to help meet their learning goals.

Transformation Level: Technology allows for the creation of new, previously inconceivable tasks, significantly transforming teaching and learning.

Evaluating Program Efficacy with TIM

Set Evaluation Criteria: Define specific criteria for success at each level of the TIM, considering the characteristics of the learning environment. Criteria should be aligned with program objectives, such as addressing learning loss and enhancing technology use.

Collect and Analyze Data: Gather data on technology use within the program, focusing on how it aligns with the TIM levels and characteristics. Data collection methods could include observations, surveys, interviews, and analysis of student work. Wonder Workshop's Make Wonder platform includes tracking and reporting functionality.

Evaluate Technology Integration: Assess the level of technology integration within the program based on the TIM. Evaluate how technology use has evolved from entry-level to transformational practices and the impact on the learning environment's characteristics.

Assess Impact on Learning: Analyze the impact of technology integration on addressing learning loss and achieving program goals. Consider changes in student engagement, collaboration, critical thinking, real-world application of knowledge, and achievement of learning objectives.

Identify Areas for Improvement: Consider moving from lower to higher levels of integration, focusing on developing more active, collaborative, constructive, authentic, and goal-directed learning environments.