Tennessee STEM School Action & Sustainability Plan Guide

Infrastructure: A TN Designation STEM school requires a developed STEM strategic plan and a leadership team who collaborates frequently about the program's design and effectiveness. Teachers are highly collaborative and community members are included in decision-making.		
Essential Question	**Considerations**	**Strategies**
Who needs to be involved in leading and implementing the STEM action & sustainability plan?	How will you incorporate teacher, postsecondary institution, and business partner input?	
Describe how the professional development for the leadership team promotes STEM education.	Does the PD address current STEM education issues? Who will participate in the PD and how often?	
Describe how the classroom & building layout promotes 21st century skills?	How will classrooms be designed for collaborative work & virtual learning? How will you develop a culture of inquiry school wide?	
Explain how your school schedule will provide collaboration time for teachers & students.	Are there areas where you can innovate the school schedule to allow cross-curricular collaboration within the school day?	
How will key stakeholders and partners assist in facilitating the programmatic sustainability of your STEM program plan?	What supports will be put in place if there are changes in positions or leadership? What process will be in place to allow for open input and candid feedback?	

Curriculum and Instruction: The STEM curriculum framework contains the Tennessee State Standards and has articulated interconnectedness between science, technology, engineering, mathematics, and other content areas. Project and problem based learning activities form a substantial part of the curriculum.		
Essential Question	**Considerations**	**Strategies**
How will your plan promote college and career readiness skills?	Are teachers and administrators familiar with the TDOE Employability Skills Checklist?	
How will PBLs be used within the school curriculum?	Will all content areas incorporate PBL units in their instruction?	
How will the engineering design process/design thinking be utilized? Which courses will use this process?	Will design thinking and related processes be commonplace? How will you help students internalize these process skills?	
Explain how technology will be embedded within the lessons?	What does quality technology integration look like in the classroom?	
What is the plan for building awareness of STEM career opportunities?	Which stakeholders and community partnerships can be leveraged to bolster STEM career experiences for students?	
How will the curriculum provide challenging academic content?	Which instructional strategies are best suited to help students acquire deep understanding of content?	
What extended learning opportunities will be provided for students?	How will we maximize the offerings of extracurricular activities? How do we ensure underrepresented groups are provided equal access to these opportunities?	

Professional Development: A Tennessee Designated STEM School ensures a systemic professional development model that provides continuous learning based on student results, teacher development, and the short- and long-term goals of the school. The PD model, including school-level and personalized plans, creates an environment that allows educators to continue to learn and pursue opportunities that build the capacity to provide better STEM learning opportunities for students. Each of the following attributes creates an environment of continued learning for all that is conducive to sustaining a well-rounded STEM program.		
Essential Question	**Considerations**	**Strategies**
Describe your plan for providing STEM-related PD for your teachers, including the design of PBL units.	Who seeks out and participates in PD? When will these PD opportunities take place throughout the year? How can we innovate traditional PD offerings?	
What short-term and long-term goals do you have for your teachers in PBL implementation?	Will industry partners contribute to PBL design? How does PBL implementation support TDOE content standards?	

Achievement: Assessments are incorporated to measure student outcomes and teacher instruction to ensure a strong, innovative, and cohesive STEM program. Each of the following attributes uses innovative assessment to sustain a well-rounded STEM program.		
Essential Question	**Considerations**	**Strategies**
What forms of assessments will be incorporated into your plan? Identify the purpose of each type.	What innovative assessment types be incorporated? How can we engage students in the goal setting process?	
List the sources of data that will be available to drive instructional decisions.	How can leadership and/or school schedules support teacher use of data conferences?	

Community and Postsecondary Partnerships: Community and postsecondary STEM partnerships are established and provide connections between curriculum taught in the classroom and practical applications outside of school. These partnerships have created an environment in which students develop high-level STEM skills and knowledge inside and outside of the classroom and increase their readiness for college and careers.		
Essential Question	**Considerations**	**Strategies**
How do you plan to obtain partners from industry, technical centers, higher education, arts community etc, to support instruction?	Are there businesses or higher education institutions that have programs we can incorporate (ex: STEM Ambassadors, mentors, etc.)?	
List the opportunities for STEM work-based learning experiences provided by your school?	How might students and/or parents engage in this process?	
What service learning opportunities will be available for students?	How might students and/or parents engage in this process?	
HS* List the courses that provide college credit for your students.	What EPSO opportunities are available?	
HS*List the online opportunities that prepare students for college and career.	How might our existing partnerships with higher education and industry be utilized to enhance these opportunities?	