Tennessee STEM Designation Rubric Administrator & Educator Crosswalk

Infrastructure Attributes	"Accomplished" Level of Implementation Tennessee STEM Designation Rubric	TEAMTN Administrator Evaluation Rubric	TEAM General Educator Professionalism Rubric
1.1 STEM Action & Sustainability Plan	Program leaders have implemented the STEM plan, provided support to prepare teachers in the transformation of STEM teaching methods, and have developed partnerships with postsecondary institutions and businesses to identify solutions for executing a quality STEM program. The school plan includes plans for sustainability and improvement regardless of changes in leadership or staff with LEA support.	**A4: Progress Monitoring** Systematically monitors and adjusts progress and facilitates procedures and practices leading to continuous improvement	**3. School & Community Involvement** Regularly works with peers to contribute to a safe and orderly learning environment and actively facilitates improvement in school-wide culture. **4. Leadership** Actively leading in a PLC Collaborative Planning
1.2 Leadership Teams	The school leadership engages all staff members in strategic planning. The school leadership has an articulated process for staff members to give input and feedback and responds to feedback in an open setting. The faculty members make decisions regarding the STEM action plan.	**B1: Leveraging Educator Strengths** Leverages educator strengths to engage all students in meaningful, relevant learning opportunities **C4: Teacher Leaders** Identifies and supports potential teacher-leaders and provides growth opportunities in alignment with the Tennessee Teacher Leadership Standards	**4. Leadership** Actively leading in a PLC Collaborative Planning
1.3 Leadership Professional Development	The school leadership team participates quarterly in face-to-face, active, online professional development sessions, and	**C2: Differentiated Professional Learning** Engages faculty and self in data-informed, differentiated professional learning opportunities	**1. Professional Growth and Learning** Is consistently prepared and highly engaged in professional learning opportunities.

	networks with other STEM school leaders to address current STEM education issues.	for educators, aligned with the Tennessee Standards for Professional Learning	
Infrastructure Attributes	**"Accomplished" Level of Implementation** [Tennessee STEM Designation Rubric](#)	**TEAMTN** [Administrator Evaluation Rubric](#)	**TEAM** [General Educator Professionalism Rubric](#)
1.4 School Environment	Classrooms are designed for collaborative work. Additional spaces are identified for students to use for collaboration or work areas. Virtual learning is used a way to connect students and teachers, to bring in outside STEM expertise, or to exhibit student work. Classroom locations facilitate the integration of STEM content and teacher collaboration. A culture of inquiry and creativity exists among all students, teachers, and administrators through implementation of 21st Century skills in every class.	**B2: Environment** Fosters a safe, respectful, and orderly learning environment	**3. School & Community Involvement** Regularly organizes and leads school activities and events that positively impact school results and culture. Regularly works with peers to contribute to a safe and orderly learning environment and actively facilitates improvement in school-wide culture.

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1.5 School Schedules	Schedules allow for consistent teacher collaboration, co-teaching and integration of subjects. Schedules allow ample time for projects, teacher planning, and non-traditional courses.	**C3: Induction, Support, Retention, and Growth** Collaborates with others to induct, support, retain, and grow/extend effective educators based on evidence of students and educator outcomes	**4. Leadership** Collaborative planning with subject and/or grade level teams Leading data driven professional learning opportunities
Curriculum & Instruction Attributes	**"Accomplished" Level of Implementation** Tennessee STEM Designation Rubric	**TEAMTN** Administrator Evaluation Rubric	**TEAM** General Educator Rubric: Instruction
2.1 Project & Problem Based Learning	Units of PBL/Inquiry/ STEM instruction is aligned to current Tennessee state standards and include integrated STEM within science and mathematics and other content areas throughout the academic year.	**A1: Capacity Building** Developing an accurate understanding of Tennessee-adopted standards and instructional practices.	**Standards and Objectives** Learning objectives are clearly and explicitly communicated**, connected to state standards**, and referenced throughout lesson. Learning objectives are: (a) consistently connected to what students have previously learned, (b) know from life experiences, **(c) integrated with other disciplines.**
2.2 Engineering Design Process & Design Thinking	The learning experience, in addition to explicitly referencing engineering design, requires students to demonstrate thinking skills in employing all steps in the engineering design process, including opportunities to experience the recursive nature of the process.	**A1: Capacity Building** Maintaining a system for monitoring student work for rigor and curriculum alignment.	**Problem Solving** All problem-solving types listed can be addressed. **Activities and Materials** In addition, sometimes activities are *game-like, involve simulations, require creating products, and demand self-direction and self-monitoring*. The preponderance of activities *demand complex thinking and analysis.* **Thinking**

			Creative thinking, where students *create, design, imagine, and suppose.* Research-based thinking—*solutions to problems.*
2.3 Technology Integration	Teachers embed a variety of technology in the instructional process, including using technology as a facilitation of student learning in a transformative instructional manner. Students use a variety of technology in the investigative process including: virtual, computer-based, mobile and data collection devices, web-based lessons, computer applications, researching, reporting, communicating, and collaborating in ways not possible without the technology.	**B4: Ownership** Enacts procedures that reflect a school-wide commitment to the possibility of success for all students. Recognize educator and student performance and growth through a variety of communication methods and activities.	**Teacher Content Knowledge** Regularly implements a variety of instructional strategies to *enhance student content knowledge*. **Teacher Knowledge of Students** Teacher practices *regularly incorporate student interests* and cultural heritage. **Activities and Materials** Incorporate *multimedia and technology*.
2.4 Exploring STEM Careers	Monthly, students explore careers, including STEM careers, professional activities, and skills, as a part of their coursework (e.g., online activities, guidance from teachers, guidance from business partners, career fair, etc.).	**D1: Community Resources** Assesses potential community partners and secures additional resources that support teaching and learning. Highlights usage of resources and shares school accomplishments with community partners.	**Motivating Students** Content is personally *meaningful and relevant* to students. Develops learning experiences where *inquiry, curiosity, and exploration are valued.*
2.5 College and Career Readiness	Lessons/activities require students to employability skills	**A1: Capacity Building**	**Activities and Materials**

	(Tennessee Department of Education Employability Skills Checklist). Lessons/activities require students to ask questions, define problems, analyze, and interpret data. Lessons/activities require students to effectively communicate and collaborate with their peers.	Maintains a system for monitoring students work for rigor and curriculum alignment.	Provide opportunities for **student-to-student interaction.** **Questioning** Questions require students to **regularly cite evidence** throughout the lesson.
2.6 Integrity of Academic Content	The academic content for the learning experience is accurately portrayed, tied to multiple content standards, and focused on helping students acquire deep understanding of a "big idea" or "foundational skill" critical to their future learning in the targeted discipline(s).	**A4: Progress Monitoring** Incorporates collaborative school-wide planning that addresses students' academic growth goals.	**Thinking** Monitor their thinking to ensure that **they understand what they are learning and are attending to critical information.**
2.7 Enrichment Learning Activities	The school offers extracurricular activities that are engaged in by most of the students. Most of the students participate in STEM competitions on- site/online STEM exhibits, and/or in state and national STEM forums.	**B4: Ownership** Enacts procedures that reflect a school-wide commitment to the possibility of success for all students.	Professionalism Rubric: **3. School & Community Involvement** Regularly organizes and leads school activities and events that positively impact school results and culture.

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Professional Development	"Accomplished" Level of Implementation Tennessee STEM Designation Rubric	TEAMTN Administrator Evaluation Rubric	TEAM General Educator Rubric: Instruction
3.1 Quality STEM Professional Learning	PD is ongoing, personalized, and includes support across the school year. Teachers observe colleagues and engage in formal reflection and discourse regarding practice. PD is often embedded within the working day and aligns with the needs of the program/school and student learning needs.	**A1: Capacity Building** Implementing ongoing strategies and feedback for peers. **A4: Progress Monitoring** Supports educators to lead monitoring and adjusting planned and implemented school, grade, and classroom level strategies. **B1: Leveraging Educator Strengths** Develops and/or sustains a collegial environment where learning communities use their collective strengths, skills, and experience to improve classroom practice. **C1: Evaluation** Builds and sustains a culture focused on continuous improvement, such that educators view the evaluation process as an opportunity for professional learning and growth.	**Professionalism Rubric** **1.Professional Growth and Learning** Engages in evaluation process with eagerness by *seeking out feedback from both supervisors and colleagues.* *Consistently self-reflects* on evidence of instruction, accurately matching evidence to the rubric in both areas of strength and areas of growth.
3.2 Designing PBLs	Teachers collaborate to custom design PBL STEM modules/units. Higher education and industry partners contribute to the PBL design. The STEM modules/units include the department's learning standards and integrate content areas and 21st Century Learning Skills.	**C2: Differentiated Professional Learning** Differentiates professional learning opportunities based on educator needs and preferences **D1: Community Resources** Assesses potential community partners and secures additional resources that support teaching and learning. **D2: Diversity** Develops capacity of educators to implement structures for engaging diverse stakeholders.	**Professionalism Rubric** **1.Professional Learning and Growth** *Plan, implement, and assess instructional strategies* to increase student achievement and decrease achievement gaps between subgroups of students. **Instructional Rubric** **Assessment Plans:** measure student performance in more than 3 ways *(project, experiment, presentation, short answer, essay, or test).*

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Achievement	"Accomplished" Level of Implementation [Tennessee STEM Designation Rubric](#)	TEAMTN [Administrator Evaluation Rubric](#)	TEAM [General Educator Rubric: Instruction](#)
4.1 Performance Assessments	Teachers use performance based assessments (PBA) to determine student learning. Pre/post assessments show student growth. Teachers use observation to monitor student dialogue to assess student processes in problem solving. Students participate in self-evaluation and goal setting. School uses data from state-wide and school assessments to drive instructional decisions.	**A2: Data Analysis and Use** Builds capacity among nearly all educators for analyzing and using multiple sources of student, educator, and school-wide data. **A3: Interventions** Using multiple sources of data to develop and implement differentiated interventions within and outside the normal class structures. Setting and meetings goals and targets for individual students and sub-groups. **A4: Progress Monitoring** Supports educators to lead monitoring and adjusting planned and implemented school, grade, and classroom level strategies. Regularly leads processes for educators to assess and provide input on practices that present evidence of improvement.	**Professionalism Rubric** **2.Use of Data** Analyzes the strengths and weaknesses of *all his/her students.* *Reflect on use of instructional strategies* that led or impeded student learning. **Instructional Rubric** **Student Work:** Assignments require students to -*organize, synthesize, interpret, analyze, and evaluate information rather than reproduce it* -*draw conclusions, make generalizations, and produce arguments that are supported through extended writing* **Assessment:** Assessment plans -have clear *measurement criteria* -*are portfolio based* -measure student performance in *more than 3 ways*
4.2 Accountability (Data)	Teachers/staff uses state test data in addition to other assessments. Teachers collect formative data. All student data is tracked down to the individual student. Data walls and a variety of data tracking systems are used. Student data conferences are provided to help students understand their performance.	**A2: Data Analysis and Use** Establishes data-specific growth and achievement targets that result in gains **A3: Interventions** Using multiple sources of data to develop and implement differentiated interventions within and outside the normal class structures. Setting and meetings goals and targets for individual students and sub-groups.	**Professionalism Rubric** **2.Use of Data** Analyzes the strengths and weaknesses *of all his/her students.* *Reflect on use of instructional strategies* that led or impeded student learning. **Instructional Rubric** **Assessment:** Assessment plans -include descriptions of how *assessment results will be used to inform future instruction*

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Community and Postsecondary Partnerships	"Accomplished" Level of Implementation [Tennessee STEM Designation Rubric](#)	TEAMTN [Administrator Evaluation Rubric](#)	TEAM [General Educator Rubric: Instruction](#)
Attribute 5.1 Partners Support Instruction	Students have direct experiences with STEM professionals in authentic environments. Field experiences involving industry partners are embedded within the design process and implementation of PBLs to provide real-world STEM content. Industry partners are a part of the decision-making process.	**B3: Family Involvement** Facilitates family and community partnerships that are visible and sustainable. **D1: Community Resources** Highlights usage of resources and shares school accomplishments by regular communication with community partners. **D2: Diversity** Develops the capacity of educators to implement structures for engaging diverse stakeholders to provide input and feedback in school improvement decisions.	**Professionalism Rubric** **School and Community Involvement:** Regularly organizes and leads school activities and events that positively impact school results and culture. **Instructional Rubric** **Motivating Students:** Teacher consistently organizes the content so that it is ***personally meaningful and relevant*** to students. **Teacher Knowledge of Students:** Teacher practices regularly ***incorporate student interest*** and heritage.
Attribute 5.2 Work Based Learning	Students have an on-going, active, WBL experience annually with an external STEM industry partner, either during or outside of the school day. The WBL experiences promote industry awareness and exploration, and experience in career preparation and training.	**B4: Ownership** Frequently assesses shared ownership by seeking feedback and input from members of the school community. **D1: Community Resources** Highlights usage of resources and shares school accomplishments by regular communication with community partners. **D2: Diversity** Develops the capacity of educators to implement structures for engaging diverse stakeholders to provide input and feedback in school improvement decisions.	**Professionalism Rubric** **School and Community Involvement:** Regularly organizes and leads school activities and events that positively impact school results and culture. **Instructional Rubric** **Student Work:** Assignments require students to: -***connect what they are learning*** to experiences, observations, feelings, or situation significant in their daily lives both inside and outside of school.

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Attribute 5.3 Postsecondary Opportunities *High School Only	An EPSO plan is in place and offers at least 15 college credits (AP, IB, certifications, dual enrollment). Partners with industry and higher education collaborate with the high school staff to continually evaluate and improve offerings. High school courses are enhanced by technology based teaching methods (flipped classroom model, blended learning, MOOCs).	**B3: Family Involvement** Facilitates family and community partnerships that are visible and sustainable. **D1: Community Resources** Highlights usage of resources and shares school accomplishments by regular communication with community partners. **D2: Diversity** Develops the capacity of educators to implement structures for engaging diverse stakeholders to provide input and feedback in school improvement decisions.	**Professionalism Rubric** **Leadership:** Actively and consistently contributes to the school/community by assisting and/or mentoring others including: -*Supervising Clinical Experiences* **Instructional Rubric** **Activities and Materials:** -incorporate *multi-media and technology* -require creating products and *demand self-direction and self-monitoring* -demand *complex thinking and analysis*