

**Standard:** Professional learning in STEM education is adult learning that ensures a STEM curriculum is implemented with fidelity by educators who have deep content understanding and pedagogical content knowledge in the subjects they teach. This approach includes engagement in ongoing professional development and participation in STEM-related professional learning communities (PLCs).

Total Instructional Focus – Professional Learning				
Sustaining	Fully Implementing	Refining and Expanding	Progressing	Getting Started
<b>Desired Outcome 8.1:</b> An Educator with deep subject specific and pedagogical content understanding and knowledge, implements with fidelity, the STEM curriculum.				
<p>Holds degrees and achieve certification in their relevant subject areas</p> <p>Sustains continuous and ongoing formal and informal STEM learning to enhance all instruction</p> <p>Sustains a network of support in their STEM learning and continuously grows their ability to deeply engage students</p> <p>Maintains appropriate instructional materials with purpose and intentionality</p> <p>Sustains an environment for student literacy in STEM</p>	<p>Uses STEM knowledge and experience to enhance non-traditional instruction</p> <p>Engages in continuous STEM learning and has the capacity to engage students with purpose and intentionality</p> <p>Selects and uses appropriate instructional materials with purpose and intentionality</p> <p>Creates an environment for student literacy in STEM</p>	<p>Possesses STEM subject specific instructional knowledge and experience</p> <p>Engages in continuous STEM learning and has the capacity to engage students</p> <p>Selects and uses appropriate instructional materials</p> <p>Plans an environment for student literacy in STEM</p>	<p>Plans purposeful experiences for personal growth in STEM specific instructional knowledge and experience</p> <p>Enlists in STEM learning opportunities provided by the school or district with purpose and intentionality</p> <p>Recognizes the need for using appropriate instructional materials</p> <p>Defines the elements conducive for a STEM literate environment</p>	<p>Recognizes the need to hold degrees and achieve certification in the subjects they teach</p> <p>Recognizes STEM specific knowledge and experience is important</p> <p>Engages in STEM learning opportunities provided by the school or district</p> <p>Uses instructional materials</p> <p>Recognizes a need for a STEM literate environment</p>
<b>Desired Outcome 8.2:</b> A teacher is highly competent in their discipline and possess pedagogical content knowledge. <i>NOTE: Unless denoted in parenthesis, these actions refer to all STEM school stakeholders.</i>				
<p>Uses multiple ways of representing and formulating topics to increase comprehension for others (All instructors including non-traditional)</p> <p>Aligns and uses instructional strategies and technology tools with curriculum concepts at optimum points in a learning cycle (All instructors including non-traditional)</p>	<p>Uses multiple ways of representing and formulating topics to increase comprehension for others (All teachers)</p> <p>Aligns and uses instructional strategies and technology tools with curriculum concepts at optimum points in a learning cycle (All teachers)</p>	<p>Uses multiple ways of representing and formulating topics to increase comprehension for others (widening group of teachers)</p> <p>Aligns and uses instructional strategies and technology tools with curriculum concepts at optimum points in a learning cycle (widening group of teachers)</p>	<p>Uses multiple ways of representing and formulating topics to increase comprehension for others (core group of teachers)</p> <p>Aligns and uses instructional strategies and technology tools with curriculum concepts at optimum points in a learning cycle (core group of teachers)</p>	<p>Identifies strategies for representing and formulating topics to increase comprehension for others (core group of teachers)</p>

Total Instructional Focus – Professional Learning				
Sustaining	Fully Implementing	Refining and Expanding	Progressing	Getting Started
<b>Desired Outcome 8.3:</b> The schools STEM professional development prepares teachers to implement the STEM curriculum with fidelity and in varied formats. <i>NOTE: The implementation levels below are cumulative and progressive and involve all stakeholders, recipients and facilitators.</i>				
Aligns with intention and purpose assessments and instructional strategies with the standards based STEM curriculum  Revisits and Revises units based on feedback from STEM community  Incorporates 21st Century practices and technology into the STEM curriculum with automaticity  Promotes civic responsibility  Partners with stakeholder to ensure the unique learning needs of those underrepresented in STEM fields are met	Aligns assessments and instructional strategies with the standards based STEM curriculum  Integrates real-world challenges, projects and units  Incorporates 21st Century practices and technology into the STEM curriculum with purposeful intention  Recognizes the need to promote civic responsibility  Addresses the unique learning needs of those underrepresented in STEM fields	Recognizes the need for aligning assessments and instructional strategies with the standards based STEM curriculum  Recognizes the need for real-world challenges, projects and units  Incorporates 21st Century practices and technology into the STEM curriculum  Recognizes the need to address the unique learning needs of those underrepresented in STEM fields	Develops assessments and instructional strategies for the standards based STEM curriculum    Recognizes that 21st Century practices and technology should be incorporated into the STEM curriculum	Recognizes the need for assessments and instructional strategies for the standards based STEM curriculum    Recognizes that technology should be incorporated into the STEM curriculum
<b>Desired Outcome 8.4</b> The STEM professional learning community (PLC) continuously develops knowledge and skills through collaborative practice.				
Embeds collaborative practice in everything (live it, breathe it, own it)  Shares their expertise with each other as needed both formally and informally	Learns from instructional data and student work  Meets regularly, consistently and with specific expectation Shares values, goals and collective responsibility for learning that impacts student achievement	Incorporates student leaders  Implements strategies to achieve values and goals	Incorporates parents and strategic partners  Plans for implementation of strategies to achieve values and goals	Incorporates school-based personnel  Examines school data to identify values and goals

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