

## Attributes of a Middle School STEM Centric Learning Environment

The attributes of a Middle School STEM Centric Learning Environment identifies key components of a STEM focused classroom.

Teachers.....	Students.....
collaborate with educators in other disciplines to develop integrated STEM Units.	learn and apply rigorous content within Science, Technology, Engineering, and Mathematics disciplines.
facilitate student engagement and questioning during STEM activities – this includes asking question that promote higher order thinking and guiding students through the problem solving process.	integrate content from Science, Technology, Engineering and Mathematics disciplines.
involve students in the STEM related real world applications of content through problem/project based pedagogy.	integrate and communicate information from Science, Technology, Engineering, and Mathematics.
provide support to students in their use of technology for exploration of STEM related real world applications.	are actively engaged in questioning, problem solving, and hands-on activities.
Incorporate Universal Design for Learning, WIDA <sup>1</sup> Performance Definitions and CAND DO Descriptors, and accelerations or enhancements to accommodate diverse learners for STEM learning experiences.	employ critical thinking and systematic approaches (e.g.: engineering design process) to answer complex questions, investigate global issues, and to develop solutions for challenges and real world problems.
conduct ongoing assessments of students' performance, both formally and informally, to guide STEM related instruction and raise the quality of teaching.	collaborate as a STEM Team to perform in subject matter expert roles, share ideas, and work effectively to reach the team's goal.
provide opportunities for students to reflect on their STEM applications.	reflect on STEM activities and analyze connections to possible STEM careers.

<sup>1</sup>**WIDA** - WIDA advances academic language development and academic achievement for linguistically diverse students through high quality standards, assessments, research, and professional development for educators. [http://www.wida.us/standards/CAN\\_DOs/](http://www.wida.us/standards/CAN_DOs/)