AGGIE STEM
TEXAS A&M UNIVERSITY

Peer Evaluation of STEM PBL Project

PROJECT CRITERIA	EVIDENCE
The project is focused on questions that engage students in the central concepts and principles of a discipline.	• The project is centered on curriculum and aligned with national, state, or district standards. • The project demands depth and breadth of understanding of central concepts and "Big Ideas". • The project is organized around an open-ended driving question, problem, or question that inspires higher-level thinking.
The project involves students in investigation of authentic issues.	• The driving question or problem has meaning to students and may be generated by them. • The questions or problems are like those faced by people in the world outside of school. • Students are required to do extensive exploration and research, including field-based activities. • Students are required to have contact with adults aside from the classroom teacher and have the opportunity to work with adults in the community or online. • Students are encouraged to direct their own inquiry process and investigate their own questions.
The project incorporates the use of authentic tools, including technology.	• Students develop and use habits of mind (e.g. concern for evidence, viewpoint, cause and effect; precision of thought and language; persistence). • Project work provides opportunities to develop workplace competencies (e.g. work in teams, use technology appropriately, communicate ideas, collect, organize and analyze information). • Students work in groups and use formal self-management skills (e.g. develop a workplan, prioritize pieces of work, set deadlines). • Students and teachers are involved in a wide range of communication patterns, roles, and activities. • Technology is used to extend and enrich learning. Students have opportunities to use computers and other technologies as tools for creating, analyzing, and presenting new knowledge.
The project requires products that solve problems, explain dilemmas, or present information.	• Knowledge and skills are applied to solving a complex problem. • Information comes from a variety of sources, many of which are discovered by the student (e.g. readings, interviews, observations, libraries, websites, etc.). • Final product(s) and performances show that all students have the opportunity to understand the subject matter in depth, acquire new skills, and demonstrate their knowledge.
The project uses performance-based assessments that describe high expectations and rigorous challenges.	• Criteria and standards by which student work will be judged are clearly explained to students, who may also help establish the criteria. • Students are taught how to self-assess and are required to use structured methods such as journals, conferences, rubrics, reviews of progress, etc. • Students receive timely feedback on their work in progress. • Products and performances are closely aligned to standards and are rich and varied enough to make credible judgments about their learning. • Students complete a culminating exhibition, presentation, or product that demonstrates their knowledge and skill, and their ability to apply it. • Student work is reviewed by a "real" audience. • Students understand what is required of them, and are given exemplars (models of high quality work) and tools (rubrics, checklists) for monitoring their own performance. • The project helps all students develop and apply skills in writing, reading, or mathematics.