**Rationale for Project-Based Learning (PBL)**

1. Project-based Learning (PBL) develops the seven student proficiencies essential to the NGSS, the College and Career Readiness Standards, and the Common Core: 1) critical thinking, 2) creative thinking, 3) complex thinking, 4) comprehensive thinking, 5) collaborative thinking, 6) communicative thinking, and 7) cognitive transfer.
2. Real life context is important for learners to be convinced that academic learning is not just a meaningless exercise but is worthwhile and relevant. PBL is apprenticeship for real life problem- solving and promotes problem-solving skills in learners (Stepien and Gallagher 1998).
3. Students’ motivation level significantly increases due to the students taking ownership in the direction and content of learning and in forming their own conclusions.
4. Meaningful, problem-oriented approaches to learning (rather than fact oriented approaches) are more likely to overcome inert knowledge problems (Cognition and Technology Group at Vanderbilt, 1990). The students are more likely to retain their knowledge for a longer period of time through PBL as opposed to rote learning.
5. Higher-ordered thinking is required in this instructional model, which is a welcoming change from traditional way of learning, as this will equip them with higher order cognitive abilities and prepare the learners for higher education.
6. The students actually learn much more in a group (Miller, M. P., 1996) and have deeper understanding of the learning issue.

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