EXPLORATION

WHAT IS STEAM?

STEAM is an educational approach that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue and critical thinking.

HALLMARKS TO STEAM:

- STEAM is an integrated approach to learning which requires an intentional connection between standards, assessments and lesson design/implementation.

- True STEAM experiences involve two or more standards from Science, Technology, Engineering Math and the Arts to be taught AND assessed in and through each other.

- Inquiry, collaboration, and an emphasis on process-based learning are at the heart of the STEAM approach.

- Utilizing and leveraging the integrity of the arts themselves is essential to an authentic STEAM approach.

STEAM INTEGRATION PROCESS:

1. Investigate a broad range of topics, ideas or problems in a content area.

2. Discover other areas which connect to your topic through schema maps.

3. Connect your content and an arts area based on your schema map through chosen standards.

4. Create a lesson that facilitates process-driven learning in and through the arts and the other content area.

5. Reflect and critique the lesson using peer feedback and self-reflections.

FACTORS TO CONSIDER WHEN USING STEAM:

PLANNING

Collaborative planning time must be provided, which includes cross-sections of teachers on each team.

SCHEDULING

Adjust scheduling to accommodate a new way of teaching and learning.

PROFESSIONAL DEVELOPMENT

PD for all staff in STEAM practices, processes, strategies and principles is paramount.

STEAM SCHEMA-MAPPING

Schema mapping for the curriculum and assessment design process ensures integrity to all content areas is maintained.

ALIGNMENT

The alignment and unpacking of standards and assessments allows for seamless lesson implementation.