

# 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.