STEAM School Program Objectives
Based on 2012 STEAM Program Portfolio

PROGRAM

1. All classes are related to **STEAM framework**, each other, and to the chosen theme for the school, based on grade level and subject standards, (national, state and, when aligned, Common Core)

2. The curriculum is multidisciplinary where subject-integrated **problem-based-reality** lessons with hands-on projects are the norm. The **STEAM design circle** used as a component of developing lesson plans and projects.

3. Socio-economic global cultures are recognized in accepting ways, representing the local and global culture for relevance, inclusion and a **global view** for broader understanding.

4. All students participate in core plus **extension courses**. Courses must be offered that include access to in-depth coverage of the arts, technology & engineering, music and physical education that is aligned with the core subjects.

5. Students must have access to courses that offer them the opportunity to advance up through **rigorous** pathways like AP or Dual Enrollment courses in Language Arts, Math & Science.

6. **Assessments** are designed for what students should know and be able to do. Students are assessed in a variety of ways including portfolios, project/problem-based assessments, backwards design, authentic assessments, or other student-centered approaches.

7. There is evidence that STEAM students are making progress on **standardized assessments**.

8. Required: A **Certified STEAM Coordinator*** whose primary functions are as a curriculum specialist, grant writer and community liaison. They should be well versed in Career Pathways, PBL and Technology Integration, both in relation to educational and engineering technologies.

9. Required: A **STEAM Certified curriculum writer** per grade level*.

10. Recommended: **Themes** related to divisions of Technology Education National Standards

11. Recommended: **Sustainability** component evident in curriculum and purchasing.

12. Recommended: **Instructional Technology Integration** & Flipping the Classroom Strategies
### FACILITY

1. The whole school is the **STEAM lab**. It “grows” throughout the year with the lessons.
2. STEAM Education’s specific program-affiliated items, such as icons and posters, will be regularly visible in the school and in the district’s corresponding hand-outs, newsletters, yearbooks, public reports and general media such as: websites, social media and press releases and/or interviews and documentaries. STEAM Education will, in kind, recognize the program as being a STEAM Education affiliate.
3. 4-6 times a year there should be **thematic displays** that rotate in a common area like the Media Center and/or main entrance, cafeteria, hallways, etc.
4. There is a pervasive use of **technology** throughout the STEAM program as tools to facilitate research, investigation and design, **not just Instructional Technology**.
5. **3D printer and Greenhouse** recommended at all school levels, Technology/Engineering Lab at the middle and high school levels.

### EDUCATORS

1. For **ALL** educators. Minimum of 90% of core teachers, guidance officers and administrators are **STEAM trained and endorsed** in their area of teaching expertise.*
2. All **extension teachers** are **STEAM trained** including Art, Music, Technology and Engineering and P.E.*
3. Staff is regularly **professionally developed** in their own field of expertise and in STEAM/PBL/integrated learning and learning styles
4. Time is allocated for STEAM teachers to **collaborate** and plan together as core teachers with extension teachers weekly.
5. Various teaching styles, **differentiated instruction** are used including co-teaching when related to cross-curricular projects.
6. Promote multi-cultural members of society in spectrum of careers. ALL classes and projects highlight related S-T-E-A-M + SS + LA **careers and pathways** in lesson plans. Professional, service and extension careers and jobs related to the topic being covered. *All classes responsible for T&E careers unless all students have a designated teacher in that field.
7. Be part of the STEAM educator’s network for **professional and research-based** purposes.
8. Encouraged: **Educational teams** balanced with learning styles, abilities and demographics represented for more natural co-educating and to promote modeling of teamwork skills.
### STUDENTS

1. For ALL students. Students taught what **STEAM** is, definitions (S-T-E-A-M, expectations, WELCOME PIE) and discovery, evaluation and problem-solving techniques, career opportunities and pathways.

2. Put on learning teams to create a balance of **learning styles**, with many abilities & demographics represented to promote all students to have a role pertaining to their strengths and work with people of other strengths to allow for more natural co-learning and teamwork skill development. This process, and placement reasoning, is understood by the students.

3. Advanced and challenged-learner **inclusion**. Intellectually appropriate rigor and challenges and intervention for all types of students.

4. Students participate in **co-teaching** each other.

5. Dedicated **STEAM time** for projects where skills and knowledge from all subjects are used.

6. Students are involved with **developing innovative designs** on a regular basis scheduled into the school day and supported by educators from across the curriculum offered.

7. Students have own **portfolio** (digital or tangible) of year’s work and STEAM projects.

8. Recommended **competitions**: TSA-STEM, WPBD, robotics, SKILLS, Makers.

### COMMUNITY

1. Pertains to everyone in the community. Can help with revitalization or **community building** efforts.

2. Each class and/or grade level MUST have a **business/industry partner** that actively relates to and supports the theme.

3. **STEAM Career Fair** open to the public held annually with business partners and class projects represented.

4. Sustainability efforts to **fill needs** in the local or global community through service and fund-raising projects.

* Updates for 2017