

City Academy's S.T.E.A.M. Initiative:

Edits by ASH 11/9/11

EXPLANATION:

Educators at every level of the profession are beginning to recognize and adopt an initiative known as S.T.E.M.

This initiative is an intentional, collaborative effort on the part of teachers and administrators responsible for instructing and supporting the subjects of science, technology, engineering and math in the formal classroom. The importance of allowing and supporting educators in these fields to collaborate with one another is being recognized throughout the country.

The connections across and between these fields are obvious to many, and yet these subjects are often housed in silos of learning at the elementary, middle and secondary levels of instruction. These silos are often present due to a lack of time, communication, understanding and training on the part of educators. The S.T.E.M. initiative is an opportunity to change the face of how these subjects are instructed so that students and teachers recognize the connections and use them to their advantage in the classroom.

City Academy has adopted this initiative and extended it to incorporate art in the collaborative process. Art is a valued subject in the school by both teachers and students. Many of the skills and principles taught in art are applicable to and enhance what is accomplished in S.T.E.M. classrooms. Thus, City Academy is moving forward on an alternative initiative known as S.T.E.A.M. Those administrators, staff and specialists involved in this effort are known as the STEAM Team.

S.T.E.A.M. MISSION:

The mission of the STEAM initiative is to meaningfully impact the students of City Academy through a curriculum that bridges science, technology, engineering, art and math. This curriculum will be intentionally designed by the educators to harness and implement the essential questions, understandings, concepts, skills, and resources that connect these fields of learning.

S.T.E.A.M. OBJECTIVES:

1. To provide STEAM instructors the time and resources necessary to effectively collaborate and learn from their colleagues

GOAL 1: Set meeting times that allow STEAM instructors to meet regularly

GOAL 2: Research and provide STEM / STEAM-related professional development opportunities

GOAL 3: Work with the Development Office to procure funding that supports necessary resources and professional development

GOAL 4: Allow fellow STEAM Team members to conduct classroom observations of their colleagues

2. To develop and implement a curriculum that is intentional in its bridging of the five STEAM fields

GOAL 1: Develop standardized curriculum documents that allow fellow members to research one another's subjects as taught at City Academy

GOAL 2: Identify essential questions and understandings that bridge the STEAM fields for the purpose of creating the STEAM curriculum

GOAL 3: Use the curriculum documents, research and essential questions to identify and/or create interdisciplinary efforts between STEAM subjects

GOAL 4: Implement interdisciplinary efforts that then become part of the curriculum and are reflected in the curriculum documents

3. To investigate the resources available to and the efforts of other STEM / STEAM schools to influence best practices in the classroom

GOAL 1: Research and discuss the efforts and practices of other schools taking part in STEM initiatives

GOAL 2: Communicate with other educators and professionals who support STEM initiatives

GOAL 3: Observe programs at other STEM schools and institutions

4. To create an environment in the classroom, and the school, where students understand and appreciate a multi-subject approach to learning and problem-solving

GOAL 1: Implement a level of intentionality when instructing so that students are aware of a multi-subject approach

GOAL 2: Develop, organize and implement activities and projects that draw on all five STEAM subjects to be used in the formal classroom

GOAL 3: Develop, organize, and implement after-school events that allow students and their families to participate in STEAM-related activities

GOAL 4: Collaborate on the creation of a STEAM summer homework packet

5. To effectively communicate the efforts of the STEAM Team to the City Academy Community

GOAL 1: Develop a STEAM Parents Night to explain the initiative's importance in the development of students

GOAL 2: Communicate the mission, objectives and goals of the STEAM initiative on the school website

GOAL 3: Present updates and share the documents and efforts of the STEAM team at faculty meetings

GOAL 4: Discuss with other faculty the potential for collaborative efforts with the STEAM Team

5. To provide technological resources and assistance to faculty and students in order to support learning that requires the use of technology

GOAL 1: Establish a set of technological benchmarks for students focused on basic proficiency and safety

GOAL 2: Provide necessary training for faculty who wish to use technology in the classroom

GOAL 3: Develop a list of classroom projects, research and activities that currently employ technology, in order to better understand how technology is being used

GOAL 4: Work with the Development Office to plan for future funding of the school's technological needs

S.T.E.A.M. TIMELINE:

Quarters	Goals
1st Quarter 2011-2012	<ul style="list-style-type: none"> • Set meeting times that allow STEAM instructors to meet regularly • Work with the Development Office to procure funding that supports necessary resources and professional development • Research and provide STEM / STEAM related professional development opportunities • Communicate with other educators and professionals who support the STEM initiative • Provide necessary training for faculty who wish to use technology in the classroom
2nd Quarter 2011-2012	<ul style="list-style-type: none"> • Communicate the mission, objectives and goals of the STEAM initiative on the school website • Develop standardized curriculum documents that allow fellow members to research one another's subjects as taught at City Academy • Present updates and share the documents and efforts of the STEAM team at faculty meetings
3rd Quarter 2011-2012	<ul style="list-style-type: none"> • Identify essential questions and understandings that bridge the STEAM fields for the purpose of creating a STEAM curriculum • Allow fellow STEAM Team members to conduct classroom observations of their colleagues • Research and discuss the efforts and practices of other schools taking part in STEM initiatives • Establish a set of technological benchmarks for students focused on basic proficiency and safety • Develop a list of classroom projects, research, and activities that currently employ technology to better understand how it is being used
4th Quarter 2011-2012	<ul style="list-style-type: none"> • Collaborate on the creation of a STEAM summer homework packet • Use the curriculum documents, research and essential questions to identify and/or create interdisciplinary efforts between STEAM subjects • Discuss with other faculty potential for collaborative efforts with the STEAM Team
1st Quarter 2012-2013	<ul style="list-style-type: none"> • Implement interdisciplinary efforts that then become part of the curriculum and are reflected in the curriculum documents • Implement a level of intentionality when instructing so that students are aware of a multi-subject approach • Develop, organize and implement activities and projects that draw on all five STEAM subjects to be used in the formal classroom • Develop a STEAM Parents Night to explain the initiative's importance in the development of students • Work with the Development Office to plan for future funding of City Academy's technological needs
2nd Quarter 2012-2013	<ul style="list-style-type: none"> • Develop, organize, and implement after-school events that allow students and their families to participate in STEAM related activities • Observe STEM programs at other schools and institutions