

# Science, Technology, Engineering Arts, Math

## STEAM Information

- ★ STEAM represents a paradigm shift from traditional education philosophy, based on standardized test scores, to a modern ideal which focuses on valuing the learning process as much as the results.
- ★ STEAM is an integrated approach to learning which requires an intentional connection between standards, assessments, and lesson design/implementation.
- ★ STEAM focuses on designing, building, creating and innovation.
- ★ STEAM makes real-life connections so that school is not a place where you go to learn but instead becomes the entire experience of learning itself.
- ★ Research shows that students who study the arts have stronger social skills, improved motivation to learn, and more esteem for themselves and their peers.
- ★ STEAM allows students the freedom to think critically, creatively, and innovatively, as well as opportunities to fail and try again in safe environments.
- ★ 85% of business leaders say they can't find enough job applicants with creativity and innovation skills
- ★ U.S. employers rate creativity/innovation among the top five skills that will increase in importance over the next five years.
- ★ Over the past 10 years, STEAM jobs grew three times faster than non-STEAM jobs.
- ★ By 2018, the U.S. will have more than 1.2 million new job openings in STEAM-related fields.
- ★ At all levels of educational attainment, careers in STEAM earn 11 percent higher wages compared with their same-degree counterparts in other jobs, and of the top twenty highest paying jobs, fifteen are STEAM related.
- ★ The average annual wage for all STEAM occupations was \$77,880 in May 2009, significantly above the U.S. average of \$43,460 for non-STEAM occupations.
- ★ The top ten bachelor-degree majors with the highest median earnings are all in STEAM fields.
- ★ Women in STEAM jobs earn 33 percent more than those in non-STEAM occupations and the wage gap between men and women in STEAM jobs is smaller than in other fields.
- ★ In 2010, the unemployment rate for STEAM workers was 5.3 percent; for all other occupations, it was 10 percent.
- ★ STEAM approach to learning focuses on:
  - students have a caring, sustained relationship
  - students have reachable goals
  - students have realistic pathways (with guardrails)
  - students have an engaging school setting