STEAM by Region

Northeast

Selected Examples of STEAM in Action

IBM

$6B

Annual R&D investment

20 yrs

As top US patent recipient

1,500

CEOs who identified creativity as the number one leadership competency of the future (2010 IBM Global CEO Study)

Crayola

P21

Partnership for 21st Century Skills

Creativity, Critical Thinking, Communication, Collaboration

Rhode Island School of Design

4Cs

Champion Creatively Alive Children, a program designed to empower school leaders, teachers and communities with inspiration, knowledge and tools that can unleash the imagination and develop the originality in every child.

Blue School

Blue School’s educational model integrates a progressive approach to education that balances academic rigor and academic enchantment. Students approach learning through a project-based curriculum that puts inquiry, play, art and creative thinking at its core.

“The promise of Blue School is to face the changing global landscape with a vision for education, ... to launch our next generation’s change-makers, innovators, artists, thinkers and inventors.” – Allison Gaines Pell, Head of School

United Technologies Corporation

16th Largest U.S. manufacturer

$66.7B

Gross income

1,500

“we are a company founded on innovation and believe the arts, like science and engineering, both inspire us and challenge our notions of impossibility.”

– George David, CEO (psychologytoday.com)

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STEAM by Region

Selected Examples of STEAM in Action

## West

### Adobe Systems Incorporated
- **Survey participants who wish they had more exposure to creative thinking as students**: 82%
- **Funds to invest in companies that leverage Adobe technologies**: $100M
- "Around the world, educators are already fostering creative thinking with their students. Creativity is a critical competency that should be taught within all disciplines. This will drive the global economy and the career success of the next generation." – Jon Perera, VP of Education, Adobe

### California College of the Arts
- **Students**: 2,000
- CCA is at the institutional forefront of integrating Art + Design into environmental sustainability issues.
- "Designers can create objects, machines, and aesthetics that make a difference in people's lives and in our environment." – Christine Metzger, faculty (stemtosteam.org)

### High-Tech High
- **Students**: 4,500
- **Graduate and attend higher education**: 100%
- The High Tech High Media Arts school implements the High-Tech High design principles supported through a strong science foundation.

### Apple Inc.
- **Years dedicated to developing products that engage all students**: 25+
- **Sales/revenue (2012)**: $156B
- Business leaders recognize that the new competitive frontier in the world of work is place-based innovation—the ability to innovate again and again within one environment. What this means for education is that learning, creativity and innovation skills are critical to future success in life and work and should be an integral part of a 21st century curriculum.

### Intel
- **Employees**: 82,500
- **Net revenue**: $54B
- Host of the SciArt Series, a collection of art that celebrates the scientific breakthroughs at the Intel International Science and Engineering Fair.

STEAM represents the economic progress and breakthrough innovation that comes from adding art and design to STEM (Science, Technology, Engineering and Math) education and research: STEM + Art = STEAM. The tools and methods of design offer new models for creative problem-solving and interdisciplinary partnership, introducing innovative practices of design thinking into STEM education and research. To realize this potential, scientists, artists and designers must develop new ways of working together and new modes of research and education. This will keep America at the forefront of innovation, ensuring our sustained global leadership and cultural prosperity in the 21st century.


www.stemtosteam.org
STEAM by Region

**Midwest**

Selected Examples of STEAM in Action

**3M**
- U.S. researchers: 3,800
- Time that employees are encouraged to spend working on their own projects: 15%
- "Design brings innovation to life with arresting beauty, captivating stories, and exceptional attention to detail. We search for unexpected solutions that create passion: stepping beyond function towards the iconic." – Kevin Gilboe, Head of 3M Global Design

**Kohler Co.**
- Americans for the Arts Best Companies Supporting Arts in America top 10 winner: 2011
- Artists-in-residence at Kohler Arts/Industry Program since 1974: 400+
- "We try in each of our businesses to live on the leading edge in the design and technology of product and process."

**Art Institute of Chicago**
- Science, Art, and Technology began as a year-long course offered by The Art Institute of Chicago to Chicago Public School science teachers interested in exploring the relationship between science and art within a museum setting.
- "Science and art naturally overlap. Both are a means of investigation. Both involve ideas, theories, and hypotheses that are tested in places where mind and hand come together—the laboratory and studio." – Robert Eskridge

**Boeing**
- Employees: 200,000
- Gross income: $17B
- "At Boeing, innovation is our lifeblood. The arts inspire innovation by leading us to open our minds and think in new ways about our lives - including the work we do, the way we work, and the customers we serve." – W. James McNerney, President & CEO
- The Boeing Company has supported 32 grants through the Boeing/Arts and Education Council Collaborative Grant program since 2008, giving approximately $12 million each year.

**Procter & Gamble**
- #25: World’s Most Innovative Companies, ranking by Bloomberg Businessweek
- People in the world using P&G products: 4.6B
- "I want P&G to become the number-one consumer-design company in the world, so we need to be able to make it part of our strategy. We need to make it part of our innovation process." – A.G. Lafley, P&G CEO (fastcompany.com)

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RISD Office of Government Relations
Babette Allina, Director
Carly Ayres (BFA ID ‘13)
Sarah Pease (BFA FRN ‘13)
Ryan Murphy (BFA ID ‘15)

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Selected Examples of STEAM in Action

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**South**

**Sesame Street**

Children influenced by programming: 80M

Season dedicated to STEAM: 43rd Season

“As STEM topics continue to be a critical area of a preschooler’s early education, it is important to allow children to explore these concepts through various channels, especially the arts. Incorporating the arts into our STEM curriculum was an exciting and natural addition, as Sesame Street has always used music, visual and performing arts as tools to educate and entertain children.” – Dr. Rosemarie Truglio, SVP of Education and Research at Sesame Workshop

**Reading Is Fundamental**

Books distributed since 1966: 400M

Children impacted by RIF since 1966: 35M

“This initiative is about inspiring the innovators of tomorrow early with engaging books and resources that connect the dots between science, technology and the arts from broad-ranging cultural perspectives. From DaVinci to Madame C.J. Walker to Steve Jobs, our greatest innovators are those who are as creative as they are precise, as imaginative as they are methodical. STEAM-based learning aims to nurture every facet of innovation.” – Carol H. Rasco, president and CEO of RIF

**Texas Instruments**

Committed to launch STEAM academy in Plano, TX (pisd.edu): $5M

Invested to support education in the past five years: $150M

In the U.S., TI actively advocates at the local, state and national levels for legislation to improve STEM education, assessment and accountability, and to support a range of initiatives at all points in the education pipeline.

**Drew Charter School**

Georgia Charter School of the Year: 880+ K-8 students

2012: The STEAM model challenges students to excel through a rigorous academic curriculum based on the five core focus areas – Science, Technology, Engineering, Arts and Mathematics – balanced by enrichment opportunities that support classroom learning.

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**Northwest**

**Wieden + Kennedy**
- Collaborator/sponsor of the Portland Incubator Experiment
- Creativity’s Agency of the Year
- 2012

At the launch of W+K Garage, Partner and Global Coexecutive Creative Director John C Jay described the intersection of technology, culture, arts, science and business in our everyday lives, and noted the importance of being able to think, communicate and act globally.

**Nike**
- Gross income: $10.5B
- Collaborators with Oregon College of Art and Craft
- Number of Nike designers to work with OCAC as of June 2012 (oregonlive.com)

“At NIKE, Inc. we run a complete offense, and it’s based on a core commitment to innovation.” – Mark Parker, CEO

**Right Brain Initiative**
- 11,000 Students affected by RBI programming
- 44 Schools are expressing, exploring, imagining, creating, and using the full measure of their minds

The RBI program doesn’t replace existing arts education. Instead, the arts are woven into core curriculum, giving teachers new tools to engage students in a creative process that connects back to other subjects.

**Quatama Elementary**
- 1 of 4 Hillsboro District STEM schools

“...We’re trying to reach all different kinds of learners, trying to engage students in stuff that matters so that they will be excited about learning, reading and math.” – Janis Hill, Principal (portlandtribune.com)

**OCAC**
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