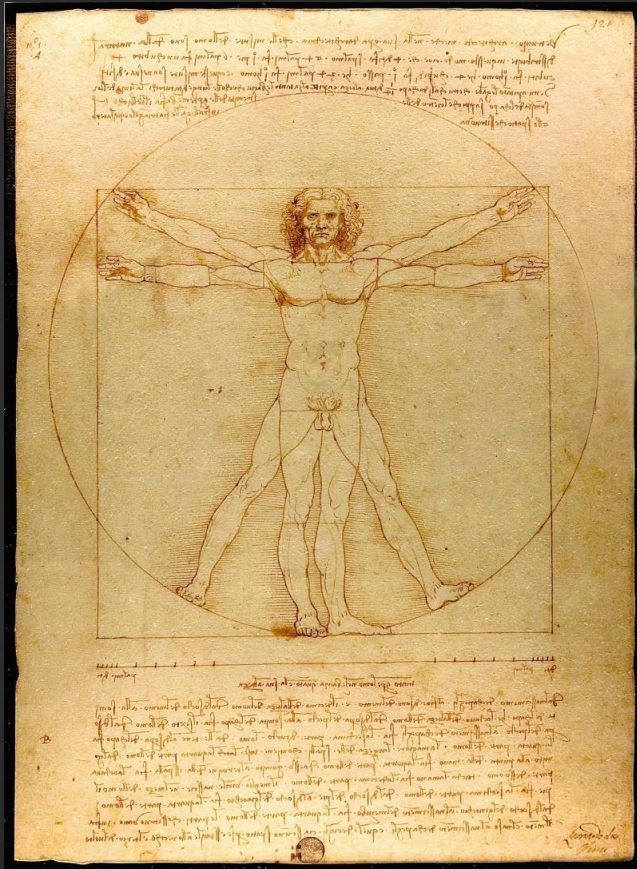


“The da Vinci Code: How to Create an Innovative Mind” by Monica Lynn James



“All religions, arts and sciences are branches of the same tree. All these aspirations are directed toward ennobling man's life, lifting it from the sphere of mere physical existence and leading the individual towards freedom.”

Albert Einstein

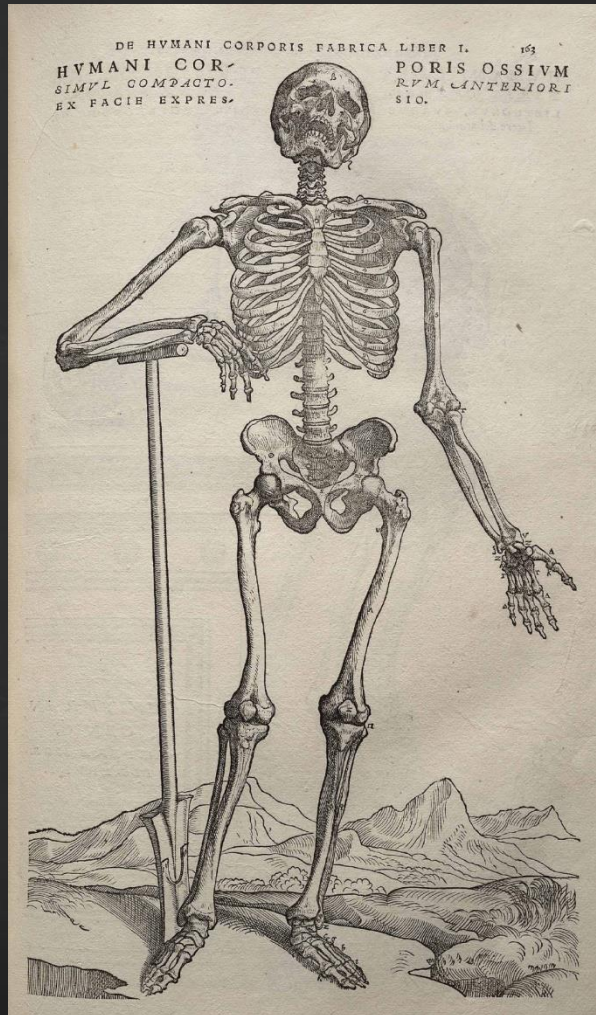


Drawing is Seeing



“A draughtsman drawing a portrait”
Albrecht Dürer, 1532. E.44-1894.
© Victoria and Albert Museum, London.

Formal Art Observation Training Improves Medical Students' Visual Diagnostic Skills

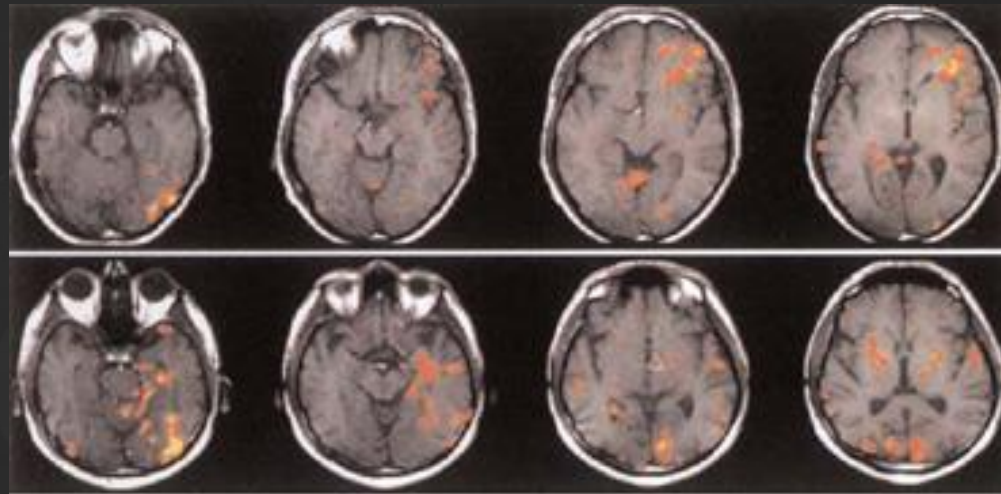


The study discovered that students examination scores improved by as much as 38% after studying visual literacy through art history, art appreciation, and studio art.

“Formal Art Observation Training Improves Medical Students’ Visual Diagnostic Skills”

Image from Andreas Vesalius' De humani corporis fabrica (1543), page 163.

About Faces, in Art and in the Brain



Scans of Humphrey Ocean's brain (top) show more activity in the right prefrontal cortex and less in the FFA (lower right of brain) while he draws a portrait than comparable scans of a non-artist. Courtesy of Robert L. Solso.

[Link to About Faces, in Art and in the Brain](#)

Arts education, the brain, and language.

Dunbar, K. N. (2008).

- ⌘ Performing arts students evidenced more divergent thinking.
- ⌘ Students studying music also exhibited an increased working memory.
- ⌘ Performing art students showed increased activation in linguistic areas associated with conceptual thinking
- ⌘ [Link to Dunbar Study](#)

SIMPHONY Study

Studying the Influence Music Practice Has On Neurodevelopment in Youth (SIMPHONY)



⌘ How does musical training influence the child's brain and the development of skills like language and attention? The Neurosciences Institute, UC San Diego, and the San Diego Youth Symphony have formed a new partnership to address these questions.

⌘ [Link to Symphony Study](#)

Neuroeducation: Learning, Arts and the Brain”

- ⌘ Johns Hopkins researchers shared findings showing that arts education can help rewire the brain in positive ways.
- ⌘ Students who practiced a specific art form, and spent time with focused attention increased the efficiency of their attention network as a whole
- ⌘ Students improved their fluid IQ scores
- ⌘ Sustained arts education is an essential part of social and intellectual development
- ⌘ [Link to Neuroeducation Learning Arts and the Brain](#)



Arts + Life + Science & Technology

Published: Oct. 23, 2013

A YOUNG PICASSO OR BEETHOVEN COULD BE **THE NEXT EDISON**

Contact(s): [Kristen Parker](#), [Eileen Roraback](#), [Rex LaMore](#)

Good news for parents: Those piano lessons or random toy parts littering your floors may one day lead to the next scientific breakthrough.

That's according to new Michigan State University research linking childhood participation in arts and crafts activities to patents generated and businesses launched as adults.



CLICK TO ENLARGE

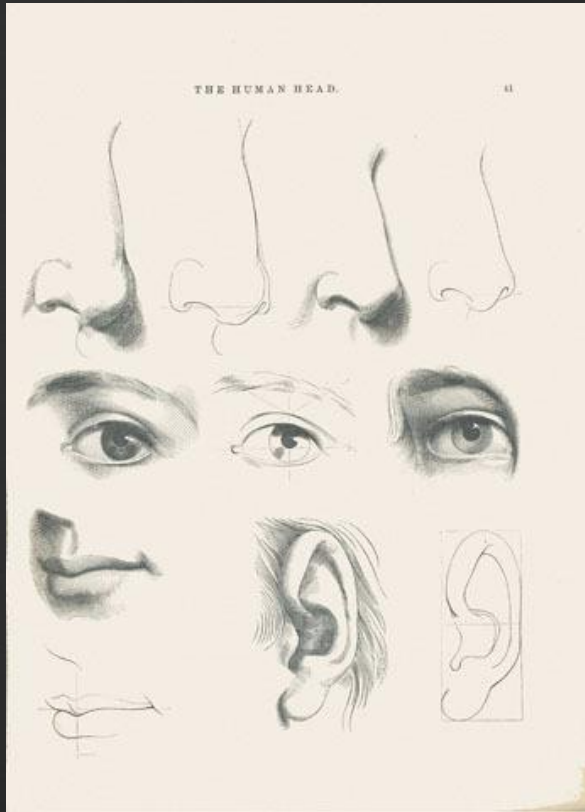


MSU researchers have found a link between childhood participation in arts and crafts activities to patents and businesses owned in adulthood. Back row: James Lawton (left) and John Schweitzer. Front row: Rex LaMore and Eileen Roraback. Photo by G.L. Kohuth



[Link to Michigan State STEM study](#)

Drawing is Seeing

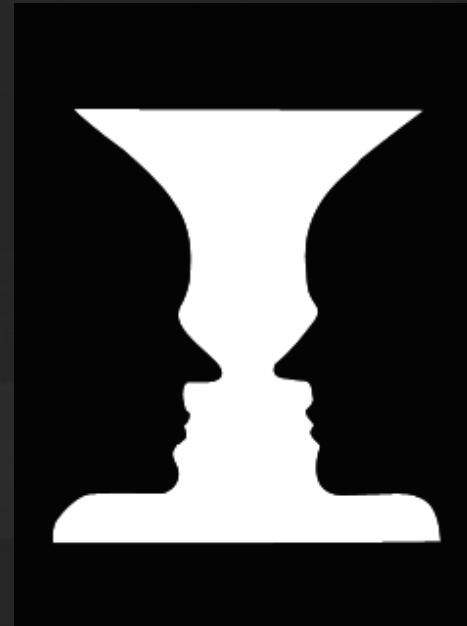
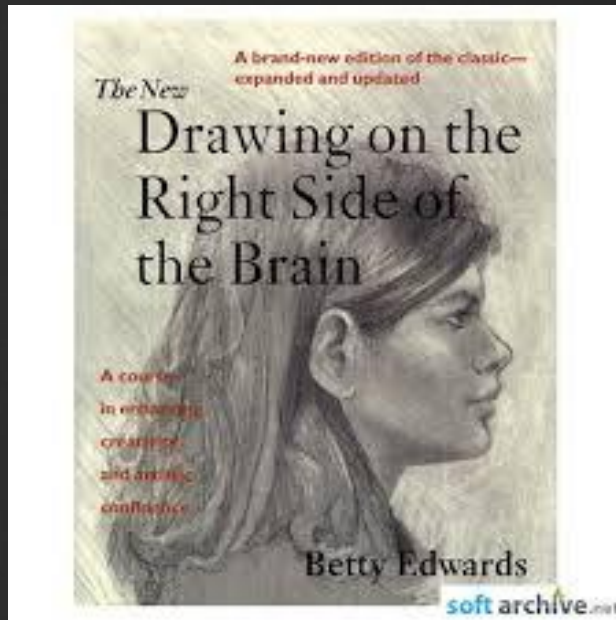


“If you can learn to write you can learn to draw,” extols Chapman on the title page of his 1847 *American Drawing Book*.

Art crusaders such as Chapman and Rembrandt Peale advocated universal drawing instruction. Peale taught drawing at Central High School in Philadelphia as a fundamental skill, like handwriting.

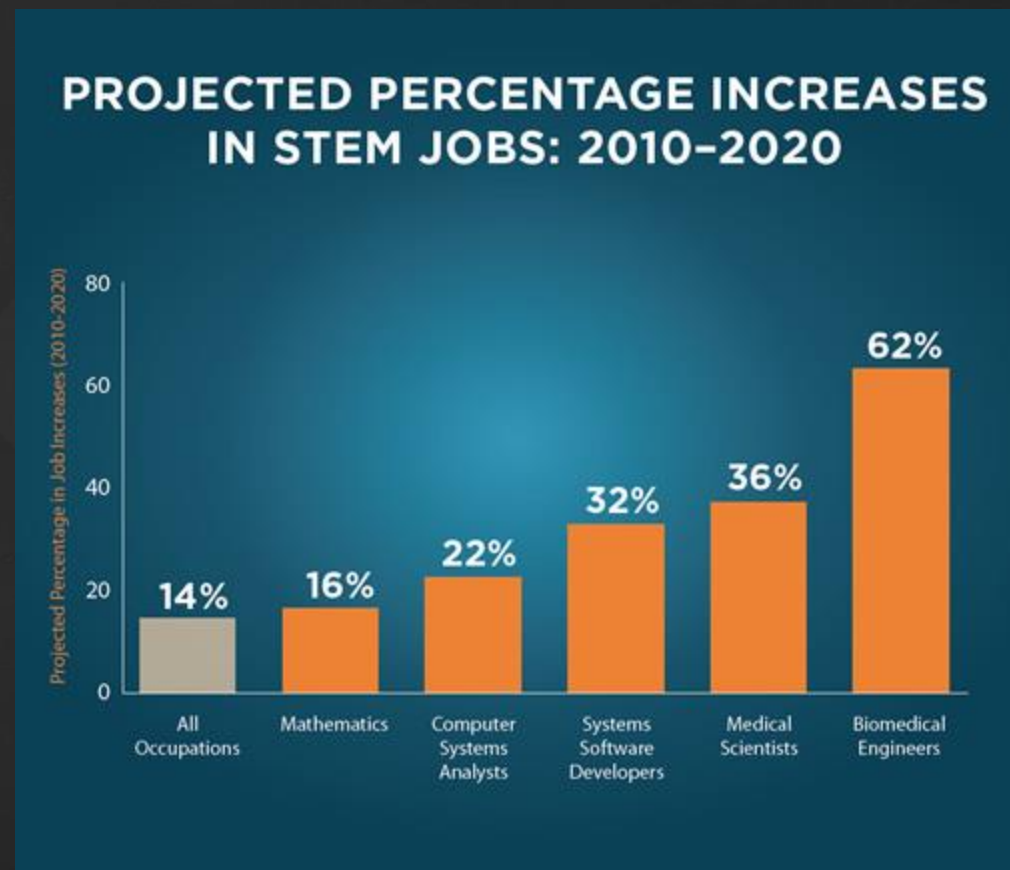
Visual literacy was widely recognized as a necessity in a free society, whose citizens daily consumed larger helpings of visual data.

Drawing on the Right Side of the Brain



With the right training anyone can learn to draw.

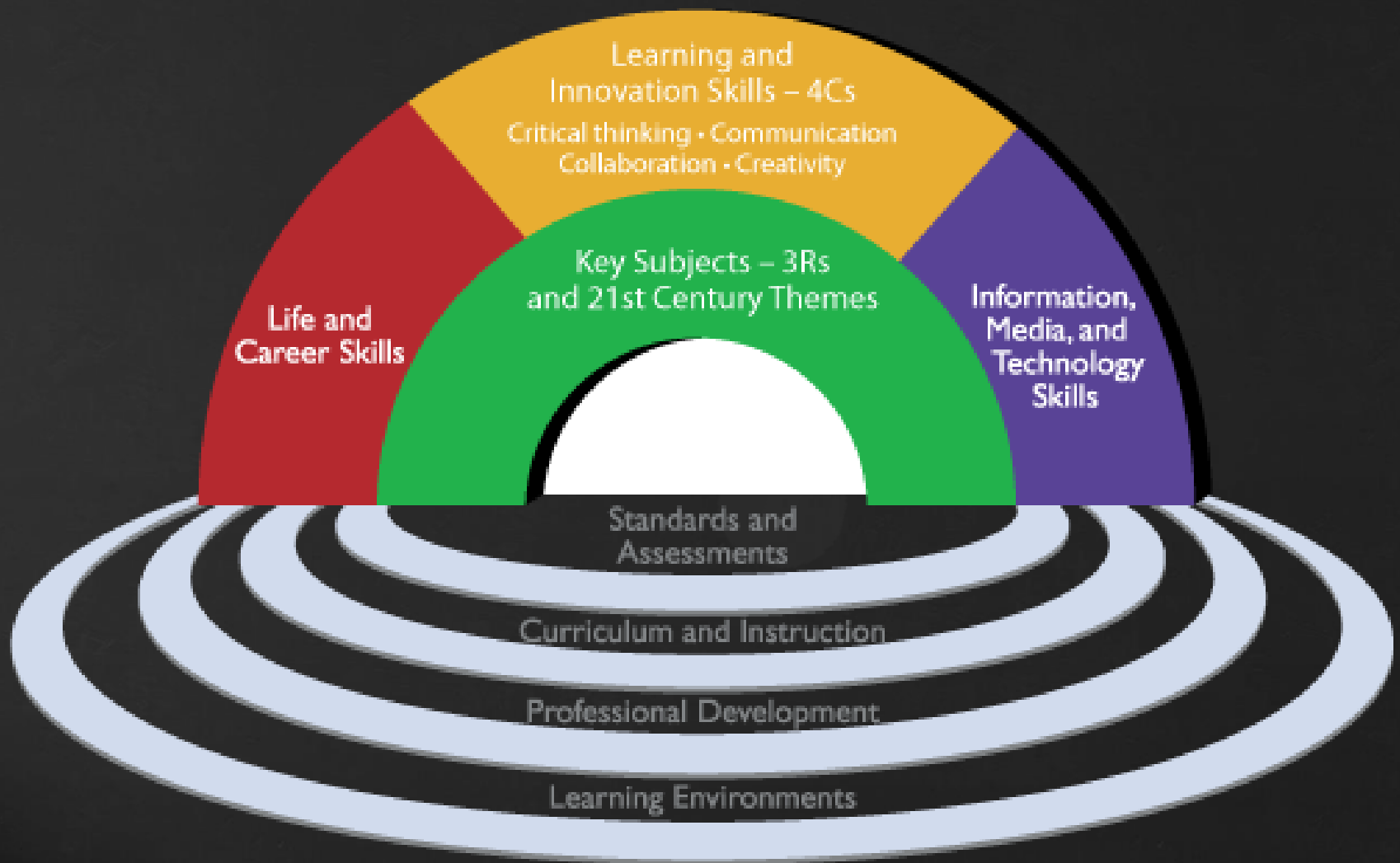
STEM: Science, Technology, Engineering, Math



[Link to STEM](#)

P21 Framework for 21st Century Learning

21st Century Student Outcomes and Support Systems



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STEM TO STEAM

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The Power of Experimentation

Students connect with the playfulness Dutch artist Theo Jansen brings to his complex kinetic sculpture.

RISD + Arts Advocacy

Since its founding in 1877, RISD has consistently upheld its mission to educate the public about the vital role of art and design in society. Today, the RISD community remains committed to the belief that the arts and design, in concert with fields like science and technology, will bring about the global innovation needed in the 21st century.


STEM to STEAM is a RISD-led initiative to add Art and Design to the national agenda of STEM (Science,

STEM to STEAM on Twitter

 STEMtoSTEAM.ORG
Retweeted

 **STEM Stories**
@steam_stories

Learn from #nature at @risd Nature Lab's huge #STEAM collection of natural specimens bit.ly/20rsmVE

  10 Feb

Global network



add your name to the STEAM map and connect with others in your area »

Related sites

STEAM

- ⌘ STEM to STEAM is a RISD-led initiative to add Art and Design to the national agenda of STEM (Science, Technology, Engineering, Math) education and research in America.
- ⌘ STEM + Art = STEAM. The goal is to foster the true innovation that comes with combining the mind of a scientist or technologist with that of an artist or designer.
- ⌘ [Link to RISD STEAM](#)

Art and Science Together



At Puerto Cancun by Mike Gerzevitz, copyright 2011

⌘ **Aquatic Biorock® art, fostering communities of living organisms above and below the surface.**

⌘ **[Link to Living Sea Sculpture](#)**



STEAM Resources

⌘ <http://www.p21.org/>

⌘ <http://www.pbslearningmedia.org/collection/risd-steam/>

⌘ <http://www.risd.edu/about/STEM-to-STEAM/News/STEM-to-STEAM-news/>

⌘ <http://stemtosteam.org/resources/>

⌘ <http://www.edutopia.org/stem-to-steam-resources>

⌘ <http://steamedu.com/>