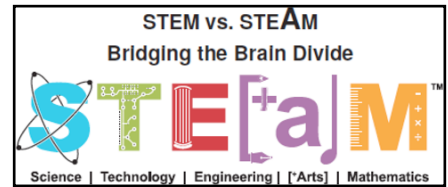


STEM TO STEAM: **Teaching Creativity & Critical Thinking**

By: Anna Reyner, MA www.CreativePlayLA.com

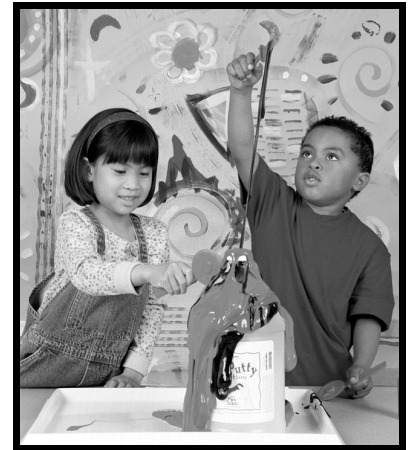


The **STEAM MOVEMENT** is gaining traction in American education today. Why add Art & Design to the study of science, technology, engineering and math? The arts engage children’s senses in open-ended play and develop important cognitive and social/emotional skills.

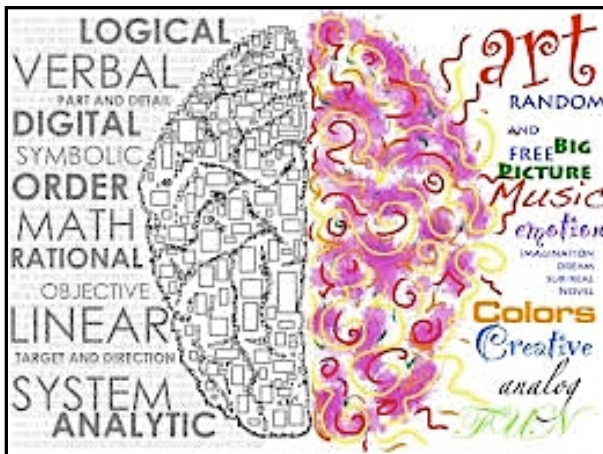
Art offers children the ability to think critically and solve problems in a systematic and organized way.

Art materials provide INQUIRY OPPORTUNITIES.

Through sensory play with material objects they can manipulate and change, children learn complex thinking skills and learn to respond, adapt and discover new ways to operate. Children (and adults, too) learn best when their five senses are actively and physically engaged. Art materials provide exciting physical contacts and new ways to solve problems.



Critical thinking = The ability to apply reasoning and logic to new or unfamiliar ideas and situations.



Creativity - The act of making something new or combining things in a new way.

Steam combines left & right brain thinking. Innovation happens when convergent thinkers, those who march straight ahead toward their goals, combine forces with divergent thinkers, those who professionally wander, who are comfortable being uncomfortable.

Why is STEAM So Important? Our FUTURE depends on it!

America is turning to innovation as the way to ensure that jobs are available for all adults and to insure a prosperous future economy. Yet innovation remains tightly coupled with Science, Technology, Engineering and Math – the STEM subjects. Art + Design are poised to transform our economy in the 21st century just as science and technology did in the last century. We need to add Art + Design to the equation — to transform STEM into STEAM.

STEAM is a movement championed by Rhode Island School of Design and widely adopted by institutions & individuals. The objectives of the STEAM movement are to:

1. transform research policy to place Art + Design at the center of STEM
2. encourage integration of Art + Design in K–12 education
3. Begin STEAM Education in early childhood!



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