



From STEM to STEAM: Using Brain-Compatible Strategies to Integrate the Arts

By David A. Sousa, Thomas J. Pilecki



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Build the skills mathematicians and scientists need!

A is for arts—and for the advantage students gain when you integrate arts into STEM instruction. As research in neuroscience shows, arts activities enhance creativity, problem solving, memory systems, and analytical skills—all critical for achieving STEM success. Now best-selling author David Sousa teams up with veteran arts educator Tom Pilecki to bring you:

- Teacher-tested techniques for fitting the arts into STEM classrooms
- Sample lesson plans across K-12
- A worksheet template for designing your own integrated lessons
- Tips for managing time and collaborating

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Editorial Review

Review

"This book should be a required reading for all teachers! This book is completely informative with a practical and authentic approach to changing STEM to STEAM as Arts Integration. The authors, David A. Sousa and Tomas J. Pilecki were brilliant in their analyses of why, what, and how Arts Integrations works without a doubt. I would highly recommend this book to my peers and administration because I found deep connections of arts integration which fostered interdisciplinary connections throughout the curriculum. Students would learn and remember what they learned because critical thinking rounded the learning experience for the whole child in a holistic direction." (Melanie Sitzer Hedges, Art Teacher 2012-10-18)

"David Sousa's new book is more than hot; it is STEAMing! It is crammed full of suggestions to integrate arts into every STEM curricula at all grade levels to increase student learning. The research-based suggestions for strategies to engage students and deepen the level of thinking are abundantly supported with ideas for PLCs and a plethora of resources. Every teacher who is ready to update their pedagogy and make their teaching red hot needs this is the book!" (Renee Peoples, Teacher and Math Coach 2012-10-18)

"STEM without creativity in application is stagnant. Brain research shows that we must rethink methodology in STEM education if we are to produce not only talented professionals, but also enriched members of society. From STEM to STEAM is a start in that direction." (Debra K. Las, Science Teacher 2012-10-18)

"From STEM to STEAM is a game changer for educators who are serious about bringing excellence back into the classroom. It crosses ages, stages and curriculum development through research and practical application." (Darleen Horton, Environmental Magnet School Coordinator 2012-10-18)

"Imagine classrooms of children imitating the "ways of knowing" experienced by DaVinci or Michelangelo. In From STEM to STEAM, authors Sousa and Pilecki not only persuade us to integrate ARTS into the K-12 curriculum, they also remind us of the value of a classical education- an education that reveals how all knowledge is interrelated. In this timely book, the authors entice K-12 educators to transform their classrooms into centers of arts and science inquiry; and, in a rather credible manner, provide step-by-step guidelines for engaging K-12 learners in a rich interdisciplinary curriculum of Science, Technology, Engineering, Arts, and Mathematics." (Susan Lee Pasquarelli, Professor of Literacy Education)

"If STEAM is something you are not familiar with, this book is a must-read. This book has given me information on the research and proved why STEAM was important; it is also something I can now add to grant applications for supporting documentation. I gave the activities to our staff of Science Educators and they loved not only how each activity was explained, but the breakdown of all the objectives for the activity. In my 15 years in Education, I have never read a book that made sense of why STEAM is so critical to our society.

I truly believe that this book will help my Education staff make stronger more substantial programming throughout our museum. I am recommending this book to every Science Center I know. This book provides an innovative approach to a crucial subject that our country needs to buy into for a prosperous future." (Kate Arrizza, Chief Operating Officer)

"I found Sousa's and Pilecki's book to be a practical how-to on integrating the arts, both visual and

performance, into the current trend in education to accentuate the teaching of science, technology and mathematics. All in all, this practical book melds the arts with the sciences and that might just make more educators look at the teaching and implementing of arts programs with a more favorable eye." (Sister Carol Cimino, SSJ)

"David Sousa and Tom Pilecki paint a compelling picture of how integration of the arts into education not only improves academic performance by our students, but also strengthens the nation's workforce and better positions the U.S. in the global economy. Built on a rich foundation of research, the authors link the big ideas of education reform to classroom-tested teaching strategies. As America grapples with how to educate young people in the third millennium, From STEM to STEAM is a must read for educators, policy makers, and community leaders alike." (Randy Cohen, Vice President of Research and Policy)

"The book discusses one of the most critical issues in education today – using creativity and inquiry to inspire and engage students. STEAM is by its nature collaborative and creative – blending the arts and sciences – which is exactly what 21st century students are being expected to do. The authors present a thoughtful, real-life approach to concepts, lessons and activities that can be used in and out of the formal classroom environment. A must-read for any educator or youth development professional." (Judy Nee, Executive Vice President/General Manager 2012-12-14)

"This book is a must read for educators, policy makers, and industry leaders addressing how to develop an innovative workforce for the future. Sousa and Pilecki have successfully outlined a pragmatic approach to empower teachers with the ability to integrate the arts into science, technology, engineering, and math (STEM) discipline areas. This sets the stage for a national conversation to move from STEM to STEAM." (Edward L. Abeyta, Director of K-16 Programs 2013-01-09)

About the Author

David A. Sousa, EdD, an international consultant in educational neuroscience, has written 16 books for educators and parents on ways of using brain research to improve teaching and learning. He has conducted workshops for more than two hundred thousand educators in hundreds of school districts on brain research and science education at the pre-K to Grade 12 and university levels. He has presented at national conventions of educational organizations and to regional and local school districts across the United States, Canada, Europe, Australia, New Zealand, and Asia.

Dr. Sousa has a bachelor of science degree in chemistry from Bridgewater (Massachusetts) State University, a master of arts degree in teaching science from Harvard University, and a doctorate from Rutgers University. His teaching experience covers all levels. He has taught high school science and has served as a K–12 director of science, a supervisor of instruction, and a district superintendent in New Jersey schools. He has been an adjunct professor of education at Seton Hall University and at Rutgers University. A past president of the National Staff Development Council (now called Learning Forward), Dr. Sousa has edited science books and published numerous articles in leading educational journals on staff development, science education, and brain research. He has received awards from professional associations, school districts, and Bridgewater State University (Distinguished Alumni Award), and several honorary doctorates for his commitment and contributions to research, staff development, and science education. He has been interviewed on the NBC Today show and on National Public Radio about his work with schools using brain research. He makes his home in south Florida.

Tom Pilecki, MA, is the former executive director of the Center for Creative Education (CCE) in West Palm Beach, Florida, where, for twelve years, he provided professional development to over one hundred teaching artists, preparing them to teach collaboratively with elementary and middle school teachers in all curriculum content areas. With an MA in educational administration, Tom is a former elementary school teacher as well as a choral and instrumental music teacher. His forty-plus years in education include being founder and principal of St. Augustine School of the Arts in the South Bronx, New York, the subject of the Sundance Film Festival Award-Winning documentary *Something Within Me* as well as feature segments on 60 Minutes, World News Tonight, and The McNeil-Lehrer Report. His expertise in curriculum writing, implementation, and arts integration brought him to Chicago as curriculum director for six West Side schools before going to Florida. He continues to consult with schools and communities on a national basis.

Users Review

From reader reviews:

Jesse Reid:

What do you regarding book? It is not important to you? Or just adding material if you want something to explain what yours problem? How about your spare time? Or are you busy man? If you don't have spare time to do others business, it is make you feel bored faster. And you have extra time? What did you do? Every individual has many questions above. They must answer that question because just their can do that. It said that about publication. Book is familiar on every person. Yes, it is correct. Because start from on jardín de infancia until university need this particular From STEM to STEAM: Using Brain-Compatible Strategies to Integrate the Arts to read.

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From STEM to STEAM: Using Brain-Compatible Strategies to Integrate the Arts can be one of your beginner books that are good idea. All of us recommend that straight away because this book has good vocabulary that may increase your knowledge in words, easy to understand, bit entertaining however delivering the information. The article writer giving his/her effort to get every word into delight arrangement in writing From STEM to STEAM: Using Brain-Compatible Strategies to Integrate the Arts yet doesn't forget the main position, giving the reader the hottest and also based confirm resource details that maybe you can be one among it. This great information could drawn you into brand-new stage of crucial considering.

Myrtle Brown:

On this era which is the greater particular person or who has ability to do something more are more special than other. Do you want to become certainly one of it? It is just simple solution to have that. What you have to do is just spending your time not much but quite enough to have a look at some books. One of several books in the top list in your reading list is From STEM to STEAM: Using Brain-Compatible Strategies to Integrate the Arts. This book and that is qualified as The Hungry Hillsides can get you closer in getting precious person. By looking upwards and review this book you can get many advantages.

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