SAM Collections: STEAM Tours
School Tours

**BOOKS FOR STUDENTS**


Presents for children the elements of art and principles of design in a format that is easily understood.


Over five hundred city and town illustrations drawn on location from artists from around the world, includes tips on drawing urban environments with various perspectives.


Shows how artists from prehistoric people to Moore, Modigliani, and Picasso have used shape in their work.

**An Introduction to Perspective** by Smith, Ray. New York: Dorling Kindersley in association with the Royal Academy of Arts; Boston: Distributed by Houghton Mifflin, 1995.  NC 750 S65

Teaches you everything you need to know about using this fundamental concept in your work.

**Math at the Museum** by Kim, Yun-ju and Group Majoongmul. Los Angeles, CA: TanTan Publishing; 2015.  QA 19 M35

Elementary math concepts that relate to perspective, composition, symmetry, and other principles turn a stroll through the art museum into an eye-opening adventure.


Offers a simple and practical approach to perspective.


Introduction to the concepts of art including color, shape, and composition using the classic fairy tale “Little Red Riding Hood.”


Illustrates how Renaissance artists use perspective.

**RESOURCES FOR EDUCATORS**

**Books & Educator Guides**

**100 Essential Things You Didn’t Know You Didn’t Know About Math and the Arts** by Barrow, John D. London: The Bodley Head, 2014.  NX 180 M33 B37 2014

Outlines 100 thought-provoking and often whimsical intersections between math and many arts.


A comprehensive art curriculum that can be integrated into any teacher’s existing instruction.


This resource for secondary teachers includes more than thirty art studio experiences.


Includes teacher-tested techniques for fitting the arts into STEM classrooms, as well as sample lesson plans across K-12.


Reproducible activities and handouts designed to teach math concepts through art projects.


Creative activities that introduce children to modern art masters by exploring math concepts.


Authors use everyday objects to create rigorous, hands-on activities that address key mathematics standards and concepts.
Discusses how to find two–dimensional shapes and lines of symmetry in art, such as sculpture, mosaics, architecture, and stained glass, with photographs, illustrations, and instructions for making works of art with paper and straws.

A guide for leveraging STEAM to close the achievement gap for all students.

50+ ways to have fun with STEAM, perfect for ages 4 to 10.

Media (CDs/Videos/Posters)
Composition, Realism by Dwyer, Ruth. Glenview, IL: Crystal Productions, 2006. VIDEO ND 1142 D89 Vol. 2
Explains how certain effects can be achieved by arranging lines and shapes. For grades 3–8. 20 min. DVD format.

Getting to Know Shape and Form in Art: An Instructional Program for Grades K–4. Getting To Know, Inc., 2006. VIDEO N 362 G47
Covers basic information about shape and form in art for early elementary students. Topics include: geometric and organic shapes, shape and form in the world around us, shape in painting, form in sculpture, shape and pattern, negative and positive shapes, and shape as a tool for drawing. ca. 24 min. DVD format.

Outreach Activities
The Elements of Art Outreach Suitcase is a resource for investigating how the elements of art are applied to the creation and understanding of visual art. Drawn from the SAM's collection and featuring many Pacific Northwest artists, a wide range of media and cultures demonstrates the individual elements of art. The suitcase includes artists’ color and value tools, a ceramic plate and vase, native carving, texture and 2–D and 3–D shape items, and prints of supporting images.

Online Resources
Collections by the Seattle Art Museum. www.seattleartmuseum.org/collections
Learn more about the works of art in SAM’s collections.

Geometric Design in Islamic Art by the Metropolitan Museum of Art. www.metmuseum.org/learn/educators/lesson-plans/geometric-design-in-islamic-art
Lesson plan for middle and high school students on geometric design and symmetry.

Rich resource of educator lessons combining art and Common Core Mathematics Standards.

New Angles on Art by the National Gallery of Art. www.nga.gov/content/ngaweb/education/teachers/lessons-activities/new-angles.html
Three mathematics– and geometry–based lessons for middle and high school students.

Short activity introducing one–point perspective.

STEM to STEAM by the STEM to STEAM Initiative. http://stemtosteam.org
Website for the group out of the Rhode Island School of Design that works to promote the arts in science, technology, engineering, and math education.