

EYE SPY

PLAYING WITH PERCEPTION

STUDENT GUIDE | Ready to Explore!

FUN FACTS

- Horses, zebras and other related animals have fantastic peripheral vision because their eyes are on the sides of their heads. This placement helps alert them if they are approached by a predator, but it also means they have a blind spot right in front of them!
- Many kinds of birds see a much wider range of color than humans do, including colors visible under ultraviolet light. On the other hand, sharks see no color at all!

THINGS TO REMEMBER WHEN YOU VISIT

- For your safety and the safety of your friends and the art, please keep your hands to yourself.
- Walk, do not run, in the museum.
- Please do not touch unless you are told you may.
- Use your indoor voice.
- Stay with your group.
- Follow any extra rules the docent gives you.



OPEN EYES AND OPEN BRAINS

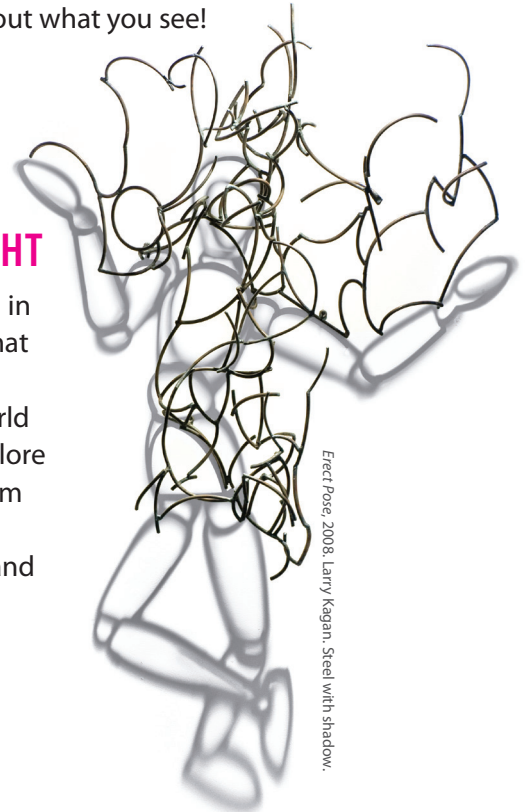
Have you ever been to a museum before? **Museums** are places that protect special objects that remind us about what is important. They tell us stories about who we are, how we think and where we come from.

When you visit the Peabody Essex Museum with your class, you will be exploring with a museum teacher who has many good stories to tell! He or she will help you look at the artworks carefully, and you will get to be artists, too. Looking at art from other places and times can be an **inspiration** — it gives you ideas for your own art! **Sketching** or drawing the most important parts of an artwork can help us notice and remember things. It also helps us talk about what makes us curious regarding this piece of art.

We look forward to seeing you at the museum! We love hearing your questions and your ideas, so bring your eyes and brains along, ready to make great **observations** about what you see!

SEE THE WORLD IN A NEW LIGHT

You and your class will be participating in an exploration of the tricks and tools that artists use to play with the way we see art, and the way we experience the world around us. You will get a chance to explore connections between art in the museum and your everyday life, study artworks from several time periods, and sketch and discuss your discoveries.



Erect Pose, 2008. Larry Kagan. Steel with shadow.

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TEACHER GUIDE | Pre-Visit Materials

ACTIVITY

Have students read the poem below to talk about perspective and point of view. Who is speaking in this poem? What are they describing? Ask students to pick something familiar in their lives, and then describe it from the point of view of someone or something else: a stuffed animal, a pet, an alien, a younger sibling. What are the characteristics which this new viewer will notice? Make a list and use it to write a riddle or creative poem; then illustrate it! Do this individually or as a class collaboration.

SOUTHBOUND ON THE FREEWAY

By May Swenson

A tourist came in from Orbitville,
parked in the air, and said:
The creatures of this star
are made of metal and glass.
Through the transparent parts
you can see their guts.
Their feet are round and roll
on diagrams of long
measuring tapes, dark
with white lines.
They have four eyes.
The two in back are red.
Sometimes you can see a five-eyed
one, with a red eye turning
on the top of his head.
He must be special —
the others respect him
and go slow
when he passes, winding
among them from behind.
They all hiss as they glide,
like inches, down the marked
tapes. Those soft shapes,
shadowy inside
the hard bodies — are they
their guts or their brains?

READY FOR ART EXPLORATION

Talk about your upcoming visit.

Have any of the students been to a museum before? Have they been to this one? What are the right ways to behave in a museum, and why do we have those rules? (Hands to yourself, no running, stay with your group, use indoor voices, etc.) If you are participating in one of the guided school programs, your students will have the opportunity to sketch in the galleries. We recommend sketching on self-guided visits too, to encourage close looking at objects and to serve as a memory aid for reflection after your visit.

Practice looking at and asking questions about art.

Use images from pem.org, books (Caldecott winners are a great option), or posters in your classroom! What is the subject of the artwork? How does it make them feel? What details do they notice about the main subject? The background? Other characters/elements in the piece? What colors are used? What mood does it create? What else does it remind them of? Remember, there are no wrong answers when you're interpreting art!

What is perception?

Discuss the meaning of **perception** with your students. Perception means the ability to understand, recognize, identify, or be aware of something through using one's senses. What senses do we use to understand art? What senses do we use to make sense of the world around us? Have your students ever come across something which fooled their senses?



Self-Centered Mirror, 2003. Daniel Rozin. 32 mirror panes.

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USEFUL VOCABULARY

Use these words in class discussion, on bulletin boards and in activities!

ANIMATION — Giving movement to something; the process of making moving cartoons or films that use cartoon imagery.

BALANCE — The ways in which the elements (lines, shapes, colors, textures, etc.) of a piece are arranged. This may or may not be symmetrical, but all the pieces work together to create a whole.

CONTEMPORARY ART — Art made after 1970 or works of art made by living artists.

ILLUSION — A visually misleading or perceptually altered space or object.

KINETIC — Having mechanical or moving parts that can be set in motion; art that moves.

ORGANIC VS. GEOMETRIC — Organic forms, shapes and patterns are inspired by ones found in nature (tree branches, waves, feathers). Geometric forms, shapes and patterns are based in mathematical shapes (triangles, squares, pentagons, etc.).

PARALLEL LINES — Two straight lines which run beside each other and will never meet, like train tracks.

PERCEPTION — The ability to understand, recognize/identify, or be aware of something using one's senses. Perception can also include the ideas or expectations we have about a particular subject or object.

PERSPECTIVE — A visual formula that creates the illusion of depth and volume on a two-dimensional surface. Perspective also means a particular vantage point or view.

PICTURE-PLANE — The surface of a painting or drawing.

POSITIVE VS. NEGATIVE SPACE — Positive space is what is actually there in a piece of artwork: a line, a statue's arm, etc. Negative space is the shape or space left by what is not there — the "empty" parts of a composition, which can be just as important to the overall design.

REPETITION — The effect created when objects, shapes, space, light, direction, lines, etc. occur more than once in the artwork.

SCALE — The comparative size of a thing in relation to another like thing or its normal or expected size. Scale can refer to an entire work of art or to elements within it.

SYMMETRY — Natural or manmade forms or images that are balanced (or mirrored) around a line or a point: bilateral symmetry (faces, butterflies) and radial symmetry (starfish, snowflakes, many flowers).

VANTAGE POINT — A point of view or a place from which subject matter is viewed.

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RECOMMENDED READ-ALOUDS AND RESOURCES

Don't feel confined to this list. These are just a few suggestions to get you started on your *Eye Spy Playing with Perception* exploration! Some books may be more or less appropriate depending on the age of your students.

READ-ALOUDS

Palazzo Inverso by D.B. Johnson

Duck! Rabbit! by Amy Krouse Rosenthal

Sector 7 by David Wiesner

Hello, Red Fox by Eric Carle

An Eye for Color: The Story of Josef Albers by Natasha WIng

Meanwhile: Pick Any Path by Jason Shiga

Experiment with your own reversible-color drawings after reading *Hello, Red Fox*. Create a reverse-color garden or menagerie of plants and animals painted in their complementary colors. It is also possible to do this with a digital image and photo-manipulation software, using the invert colors tool.

POETRY

Behind the Museum Door, poems selected by Lee Bennett Hopkins

Ubiquitous: Celebrating Nature's Survivors by Joyce Sidman

Mirror Mirror: A Book of Reversible Verse by Marilyn Singer

BOOKS ON ART, CAMOUFLAGE AND OPTICAL ILLUSIONS FOR KIDS AND TEACHERS

The Rainbow and You by E.C. Krupp

Nature's Paintbrush by Susan Stockdale

Where in the Wild? Camouflaged Creatures

Concealed ... and Revealed by David Schwartz

The Black Book of Colors by Menena Cottin

Trick of the Eye: Art and Illusion by Silke Vry

Optical Illusion Experiments and Optical Illusion Magic:

Visual Tricks and Amusements by Michael A. DiSpezio

Masters of Deception: Escher, Dali & the Artists of Optical Illusion by Al Seckel

Do You See What I See? The Art of Illusion by Angela Wenzel

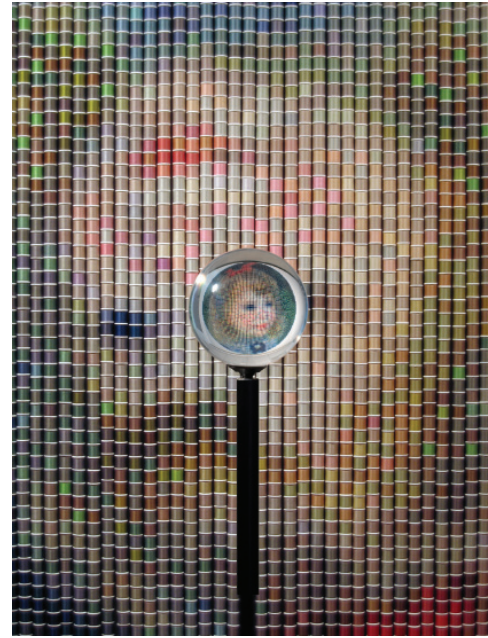
Optical Illusions in Art by Alexandra Sturgis

Sports Illustrated Kids in Your Face 3-D:

The Best 3-D Book Ever by David Klutho

Draw 3-D (Learn to Draw) by Doug Dubosque

Drawing in 3-D by Mark Kistler



After Renoir (detail), 2006. Devorah Sperber. 5,024 spoons of thread.

ONLINE RESOURCES

Leonardo's Perspective at the Museum of Science, Boston

<http://www.mos.org/sln/leonardo/LeonardosPerspective.html>

Art of Anamorphosis <http://www.anamorphosis.com>

Discovering Linear Perspective at The Renaissance Connection

http://www.renaissanceconnection.org/lesson_art_perspective.html

Just for Fun Facts about Eyes and Vision

<http://www.eyes-and-vision.com/just-for-fun.html>

Science Snacks about Perception from The Exploratorium

<http://www.exploratorium.edu/snacks/iconperception.html>

ISPY books Teachers' Page

<http://www.scholastic.com/ispy/parentsteachers/index.htm>

EYE SPY FEATURED ARTISTS

Betsy Connors, Somerville, MA www.betsyconnors.com

Sarah Kabot, Cleveland, OH www.sarahkabot.com

Larry Kagan, Troy, NY www.larrykagansculpture.com

ron labbe, Maynard, MA www.studio3d.com

Yanick Lapuh, Brookline, MA www.yanicklapuh.com

Robert Lazzarini, Brooklyn, NY www.robertlazzarini.com

Christopher Ries, Tunkhannock, PA www.christopherries.com

Daniel Rozin, New York, NY www.smoothware.com

Rufus Butler Seder, Waltham, MA www.eyethinkinc.com

Devorah Sperber, Shokan, NY www.devorahsperber.com

Mary Temple, Brooklyn, NY www.marytemple.com

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TEACHER GUIDE | Post-Visit Materials

REFLECTING ON YOUR VISIT

What do your students remember? What inspired them?

LETTER WRITING

Have students practice language arts skills and write a letter to the museum or a story about their favorite part of the visit. Let students share their stories with the class, then send stories to us!

POINT OF VIEW

Ask students to draw an object such as their house, the school yard, a car, etc. from three different points of view: their own, a mouse's, and a soaring eagle's. How would they be different? You may find it useful to tie this in with a book discussion of stories such as *Thumbelina*, *Stuart Little*, *The Borrowers*, *The Spiderwick Chronicles*, or *The BFG*.

FOCUS ON ARTISTS

Have your students work individually or in small groups to research one of the artists featured in *Eye Spy* (see the list of participating artists' websites on the resources page). Have them explore the artists' statements, photo galleries and biographies, and also find at least two reviews of other exhibitions featuring their chosen artist. What inspires this artist? What materials does he or she use, and does the artist concentrate in one form or dabble in many? How does this artist's work tie in with *Eye Spy* and what do the students like best or wonder most about this artist? Students may then submit a written report or present their findings to the class.

INTERDISCIPLINARY CONNECTIONS

LITERATURE

What You See Is Where You Stand — Use one or more of these possible titles for a book discussion or assignment. How is the main character's viewpoint different from those of the students? How is it different from other characters in the story? What happens in the book to change the characters' perceptions?

The Indian in the Cupboard (and series) by Lynne Reid Banks

The Borrowers (and series) by Mary Norton

The Doll People (and series) by Ann M. Martin

Summer of My German Soldier (and series) by Bette Greene

The Giants and the Joneses by Julia Donaldson

MUSIC

What Do You Hear, What Do You See? — Students should be familiar with music that tells stories: *Peter and the Wolf*, ballad-style pop songs or storybook ballets like *The Nutcracker* or *Swan Lake*. Sometimes what we hear in a piece of music can produce a very different image than what the composer may have had in mind. In class or at home, have students watch the movie *Fantasia 2000* (or select clips); then ask them to pick any piece of music they like (preferably wordless) and illustrate three moments from it based on what they "saw" when they heard their piece. This can also be used as a descriptive writing prompt.

Mood Music — Movie soundtracks can be instrumental to a movie's story line. Different kinds of music can influence our emotions and our perceptions of the action on screen. Does the music sound foreboding, make you feel tense? Is it silly sounding; does it help you to laugh and relax? Is it impressive, heroic sounding music that makes you think of victories and happy endings? Use silent film clips (available online on sites such as YouTube) and give students musical instruments or other sound-makers to create their own soundtracks. If your school media or computer lab has the ability to record using an application like GarageBand or Soundbooth, students may choose to record and play back their soundtracks with accompanying images.

HISTORY

A Shifting Sense of Scale (for older students) — How has human perceptions of the world changed through history? What social and technical innovations have changed how societies think and interact? As a class, talk about some of these innovations, or have students research and present their findings to the class: lenses, microscopes, telescopes, telegraphs, cameras, steam engines, telephones, automobiles, planes, satellites, the internet. What did these innovations teach us about size, distance or the organization of the universe? Were these innovations universally popular, or even accepted at the time? What changes happened in society because of these shifts in human perception?

SCIENCE

Exploring Camouflage — In a discussion of habitats and animal adaptations, talk about camouflage as a means by which insects and animals enhance their chances of survival: to find prey or to avoid becoming prey! Demonstrate the way camouflage helps population survival (www.sciencenetlinks.com/interactives/evolution.html) or try a more advanced approach to adaptations with the BBC's *Walking with Beasts* (www.abc.net.au/beasts/playground/camouflage.htm).

For younger students: Have students create frogs, insects or other animals to be camouflaged in the classroom and hung on the walls. Invite another class to your Camouflage Zoo and challenge them to find as many animals as they can in less than a minute.

For older students: Assign each student a habitat (tundra, jungle, plains, etc.) and ask them to design an animal that would be well camouflaged in that habitat. What does it eat? (Or what eats it?) How does it move? Is it active in the day, at dusk or at night? What other adaptations might it have?

Play with Light and Color — Tie in your *Eye Spy* visit with a unit on the physical properties of light and color. Holographic artist Betsy Connors uses mirrors to bounce laser light around her holography photo table. Try this out in a darkened classroom with a bright flashlight and a set of reflectors such as hand mirrors, CDs or tinfoil to explore the ways light travels and is redirected. For other in-class activities on the science of vision and perception, check out the Exploratorium's educator page (www.exploratorium.edu/explore/seeing).

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For Chaperones

THANK YOU for agreeing to be a chaperone on this field trip to the Peabody Essex Museum! We are glad you will have the opportunity to explore with your group and share your own enthusiasm with the students. When you are in the museum, here are a few guidelines to help make the visit more pleasant for everyone.

- Please stay with students who have been assigned to you. The museum requires that students stay with their adult chaperones, regardless of the age of the student. This rule also includes our restrooms and the Museum Shop **(Please note: Only one group of students is allowed in the Shop at a time.)**
- Chaperones are responsible for the proper behavior of their group and for keeping track of each student in their group.
- Learn the names and faces of the students in your group; make sure they know your name.
- If your school group is splitting up, make sure you know the time and place that you will be rejoining the other groups.
- The theme of this visit is Eye Spy, Playing with Perception. Students will tour the interactive Art & Nature Center and the Maritime art galleries, engage in looking closely at specific art objects under the leadership of a museum docent and sketch those objects. They will also work collaboratively to identify artworks relating to specific themes. The program will end with a discussion in the final gallery or with a studio art component, depending on the teachers' selection.
- The process of inquiry and discovery is very important to develop students' skills of observation and critical thinking. Please take the opportunity to draw out students' thoughts through questions such as the ones we have provided below, rather than providing answers.

AT THE MUSEUM

Here are some questions to ask your group to help them observe and reflect on their museum visit.

What is the subject of this artwork? How can you tell?

What materials did the artist use?

How does it make you feel? Can you describe why it makes you feel that way?

What colors, shapes and patterns did the artist use?

What else does this remind you of?

What words would you use to describe this artwork?

Most of all, remember to have fun!

Thank you again, and we look forward to seeing you at the museum!

A BRIEF REMINDER OF MUSEUM BEHAVIOR FOR STUDENTS

- For your safety and the safety of your friends and the art, please keep your hands to yourself.
- Walk, do not run, in the museum.
- Please do not touch unless you are told you may.
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- Stay with your group.
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