I. Introduction

Without light we are unable to see colors and details in this world. With too much light details become obscured and features flattened. Looking at paintings with students helps them combine firsthand knowledge about light with emerging information about the tools and techniques of artists.

II. Objectives

♦ Students will make refined observations about light in their environment
♦ Students will identify techniques used by painters in portraying light to give emphasis and establish mood and emotion
♦ Students will produce original artwork that explores light both as a tool for emphasis and as media

III. Standards Assessed

Visual Arts Standards
California Department of Education

Standard 1.0
Artistic Perception: Processing, analyzing, and responding to sensory information through the language and skills unique to the visual arts.

Standard 2.0
Creative Expression: Creating, performing, and participating in the arts.
Standard 5.0
Connections, Relations, Applications: Connecting and applying what is learned in each art form to learning in other art forms, subject areas, and careers.

IV. Background

Light is what makes colors and shapes visible to the human eye. Artists closely observe nature and can use their knowledge about the way light behaves to create realistic art. Light comes mostly from the sun, but other natural and made—made things can also glow and radiate light. Objects that don’t produce their own light can be illuminated by reflecting light from another source.

What kinds of things reflect the most light? Shiny things like metal, pearls, and lustrous fabrics bounce back so much light to the eye that they appear white on their most reflective surfaces. These are the highlights that artists layer onto their paintings to indicate shine. Painting is a layered process and these highlights of white are often added as the last step in the layered painting.

Draped fabrics that have luster and sheen are difficult to reproduce in painting. Careful observation of these draperies will help students understand the artist’s toolbox of materials and techniques.

V. Preparation Activities

Before visiting the Huntington, use the paintings and the discussion questions that follow to prepare students for the visit. Choose from the images on the following pages. Color images also can be accessed from the Huntington education page at <http://www.huntington.org/education/teachers.html>.
Discussion Questions

1. Does this fabric look real to you? Do you think it would have a certain feel if you touched it? Would it feel rough or smooth? What makes you say that? Would it feel warm or cold?

2. Look at the fabric in the painting. Is the fabric one solid color or a pattern like a flowered print, stripes, or plaid? How many colors of paint did the artist use to paint this solid color of fabric?

3. Do you think the artist put the different colors down all at once or did he do it in layers? Do you think he waited for one layer of paint to dry before he put on another layer? How many layers of paint did the artist use? How can we tell?—There is a scientific way to see through the opaque paint. You can use x-rays or infrared light. Or you can look at the painting under a microscope and examine places where the paint has chipped or holes and bubbles have appeared in the paint.

4. How much time do you think it took the artist to make this fabric look real? If the fabric wasn’t a solid color, do you think it would have taken the artist a longer time to paint the fabric? Why do you think this?

5. What kind of light is making the fabric shine? Do you think it is sunlight? Can you tell where in the painting the light is coming from? How did you make that guess?

6. Would it matter if the model moved while the artist was painting? Why?

7. At the time this painting was made do you think everyone dressed this way? Why? What kinds of people would dress like this in those days? Would anyone dress like this today?
Next we will look at light in a landscape painting.

**The Grand Canal**
Scene—A Street in Venice
Turner
(Huntington Gallery)

**In a Quandary or**
Mississippi Raftmen at Cards
Bingham
(Scott Gallery)

**Discussion Questions**

1. Do you see any shiny surfaces in the painting? What are they? Do they use white highlights to show the shine?
2. What is difference between the light in the last picture you studied and this one? Is the time of day the same? How can you tell?
3. Sometimes there is a quality of light called haze. Does this painting look like it has fog or mist mixed with bright sun? What does that do to the edges of things? Why would brighter light obscure details of the people more than light that is not so bright?
4. What kind of feelings does the light make you feel towards the place/the people?
5. Where in the painting do you think the artist wants you to look? Does white show up in that part of the picture?

The artists who painted these pictures used white to make us look at shiny surfaces and the parts of the painting that they wanted us to look at. They used sophisticated layering techniques to make their work almost glow with light. They used paint to show light that tells a story and makes us feel.
VI. Lesson Activities

1. **Make Your Own Paint by Numbers for Shiny Satin Drapery.** Each group of students has a piece of shiny satin fabric that they arrange in interesting folds. Using a digital camera they take a picture of the cloth. They print a color copy of the image. Tracing paper goes over the color printed image of the draped satin and the student outlines the various blocks of light and dark colors lightly with a pencil. The tracing paper comes off. The different tonal areas are marked with 1, 2, 3, 4, 5, and 6. The student makes a color key to follow by drawing 6 small boxes at the bottom of the paper and matching the numbered boxes to the colors in the tonal areas of the digital photo. Following the pattern of marked color areas, the student uses crayons, pastels, colored pencils or watercolors to fill in the tonal areas working with the darkest color first and filling in the white highlights last.

2. **Shining Words.** Have students write a descriptive paragraph about a place that is filled with light and shining surfaces. Have the students underline all the words that describe light or shiny, glowing things. Make a master list of all the different words used in the student writing and give extra credit to students who can add three new words to the list. Keep the contest going for a week and then have students write another paragraph about a different shining, light-filled place with a copy of all the light words in front of them. See if they increase the number of “light” words they include in their writing.

*Variation:* Have students work in groups to find artwork in magazines or on the Internet or take photographs that can be placed in a visual glossary of light words.

*Extension:* Have students choose one image from their descriptive paragraph and make an original piece of art inspired by it. Students could use permanent markers on clear transparency sheets, use pastels on paper, and take digital or conventional photos.

3. **Changing Light and Changing Moods.** Using art prints from books and the Internet have students work in groups to find light that tells different emotional stories. Have students identify five different moods suggested by the light in paintings and have the students make a label to describe the mood. The group should select one picture to present to the class in poster, written summary and image, or oral presentation.

*Art Production:* Have students do water color washes of skies to illustrate four of the moods identified in the student research. Make a silhouette of a city skyline, mountains, and a figure on hill to place in front of the washes. Does the mood change when the background changes? Does the mood stay the same when the foregrounds are different?
4. **Modern Artists of Light.** Have students do research on artists working today who use light as an inspiration or subject. Have them select one work by a modern artist and compare it to a work studied at the Huntington in regards to light. (Suggestions: David Hockney’s swimming pool series, Robert Irwin, Bill Viola, Tamar Frank, Joos Van Santen, and Dan Flavin)
Vocabulary

**Backlighting**: when the source of light on a person or thing comes from the rear causing the edges to glow and the front to be less detailed and in shadow

**Contrast**: the amount of difference between opposites like light and dark or warm and cool colors in a painting or photograph

**Chiaroscuro**: using light and dark as in a shaded drawing to show that an object has 3 dimensions. It comes from the Italian words Chiaro which means light and Oscuro meaning dark. Sometimes it is used to describe very dramatic lighting as if a spotlight is illuminating a portion of a painting or drawing.

**Dappled**: when light is broken up into patches and spots as it filters through leaves. The grass, people, animals in this light can look as though they have large dots of light on them.

**Facets**: flat surfaces of a jewel, crystal, or piece of cut glass that are at angles to each other causing light to sparkle off its surface when it is moved in the light or light moves across its surfaces.

**Focal point**: the place where the artist wants to bring your eye in a painting

**Diffuse**: when light is scattered widely instead of being sharply focused, causing softer edges on things in the picture

**Filter**: when light enters as if through the openings of a screen, or between leaves, causing the light to be more spread out

**Gesso**: a primer or precoating for a surface that will be painted upon—traditionally a runny, plaster-like coating made of white powdered mineral, often chalk, and glue that has been cooked

**Glaze**: in painting, a very thin layer of paint you can see through, sometimes used in layers over opaque paints to create subtle effects of shine and shadow

**Gloss**: a shiny finish that reflects light

**Gold leaf**: gold that has been pounded into very thin sheets, applied on a thin layer of glue to picture frames and in details on paintings and books

**Ground**: the coating on a canvas, paper, or board before it is painted. It can be white or a thin wash of color

**Halo**: glowing circle or oval of yellow, white or gold around a figure's head that shows the person is a saint or angel
**Highlights:** where white is used to show the highest areas of an object or person

**Iridescent:** surface that reflects rich rainbow hues when viewed at different angles. Gas or oil on a puddle, hummingbird’s throats and raku pottery all show this effect

**Luminous:** when a painting or drawing appears to have an inner glow

**Matte:** a non-shiny or flat finish

**Modeling:** using the contrast of light and shadow in a drawing or painting to make a flat surface look 3 dimensional

**Mood:** the emotional feelings that a painting produces often achieved through use of light in the composition

**Opalescent:** surface that is a milky white or pastel with undertones of flashing rainbow light when seen at different angles. Opal gemstones show this type of color play.

**Opaque:** no light can pass through

**Perpendicular:** angled at 90 degrees from something. The part of an object most perpendicular to the light will appear lightest

**PleinAire:** term that comes from the French for outdoors, describing painters who like to work in natural settings. These painters, many of the impressionists of the late 19th century included, like observing the changing light in nature and cities

**Reflection:** when a surface bounces back light instead of absorbing it

**Silhouette:** outline of a person showing their shape in black with no other details or color.

**Shade:** black added to a color—used in areas of shadow.

**Tint:** white added to a color—used in areas of sunshine, or light.

**Translucent:** anything that lets some light pass through it.

**Transparent:** something you can see through, details, colors and all.

**Value:** range of light to dark in a painting

**Wash:** very thinly applied paint that has been mixed with water