



Shiva as the King of Dance (Nataraja)
India, 19th century
Bronze
Gift of William C. Luban

Museum of Fine Arts St. Petersburg

This sculpture depicts the Hindu god Shiva the Destroyer.

In Hinduism, Shiva is one of three gods who is responsible for the creation, upkeep and destruction of the world. Brahma created the universe, while Vishnu preserves it. Shiva's role is to destroy the universe in order to re-create it. Shiva can be represented in a variety of forms, each of which expresses a different aspect of the god. Here, he is Nataraja, or Lord of the Dance. Dance is an important art form in India, and the gestures of Shiva's dance represent the process of destruction and creation.

A *mudra* is a symbolic gesture of the hands and fingers used in Hindu and Buddhist art, dance and ceremony. A Hindu classical dancer can express about 500 different meanings with the positions of not only her hands and fingers but also her wrists, elbows and shoulders. *Mudras* can also be combined in "phrases", or sequences of individual gestures.

In the sculpture *Shiva As The King Of Dance (Nataraja)*, the Hindu god Shiva is depicted performing two mudras. With his front right hand, Shiva offers protection by holding his palm outward with fingers pointing up in the "fear not" *mudra*. He also holds his front left hand across his chest with wrist limp and fingers pointed downward toward his uplifted left foot in the "elephant-trunk" *mudra*, symbolizing the promise of salvation.

Sign language can be defined as "any means of communication through bodily movements, especially of the hands and arms", and sign languages in different forms have been used in Africa, Australia and North America.

Native Americans of the Plains developed a system of sign language to allow communication between members of tribes with dissimilar languages, including the Kiowas, Comanches, Cheyennes and Arapahos. Plains Sign Language (PSL) is a "direct signaling system" with no relation to any spoken language, believed to have already been in use before the arrival of European explorers in the sixteenth century.

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In the mid-18th century, a French educator named Charles-Michel, abbé de l'Épée, developed a system for communicating with the deaf by spelling out French words with a manual alphabet and expressing whole concepts with simple signs. His system eventually developed into French Sign Language (FSL), still in use in France today, and led to American Sign Language (ASL) and many other national sign languages for the deaf.

The Aboriginal Warlpiri people of Australia have developed Warlpiri Sign Language, a complete system of communication that functions alongside spoken Warlpiri. Warlpiri Sign Language possibly originated in the tradition that widows not speak during an extended mourning period that can last for months or years, but all members of the community understand and use it alone or as an accompaniment to speech.

Sources: Museum of Fine Arts – St. Petersburg; Encyclopedia Britannica; British Broadcasting Corporation (BBC); Encyclopedia of the Great Plains; Reference.com

Close reading activities:

- What is a *mudra*?
- Why are the positions of the hands and feet important to a Hindu classical dancer?
- The information presented explains various forms of sign language. In your own words, explain what some of the types of sign language are that are presented in the text.

Research activity: Research other non-spoken modes of communication (Braille, flag semaphore, etc.). Be sure to use reliable sources for your research. What do they have in common? What are some other ways that we communicate an idea? Present an argument explaining why these forms of communication are effective or not effective. Write a report based on the information you find. Be sure to use specific evidence to support your ideas. Also, be sure to document all of your sources. Share what you have learned, as well as your argument, to your class.

Common Core Standards

Reading/Literacy: RL.6-12.1; RL.6-12.3; RL.6-12.4 RL.6-12.7; RL.6-12.8 **Writing** W.6-12.1; W.6-12.2; W.6-12.4; W.6-12.5; W.6-12.7; W.12.8; W.6-12.9 **Speaking & Listening:** SL.6-12.1; SL.6-12.4; SL.6-12.6 **Reading History:** RH.6-12.1; RH.6-12.2; RH.6-12.4; RH.6-12.7; RH.6-12.9 **Writing History:** WHST.6-12.1; WHST.6-12.4; WHST.6-12.5; WHST.6-12.7; WHST.6-12.8; WHST.6-12.9

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Claude Monet (French, 1840-1926)
Houses of Parliament: Effect of Fog, London, 1904
Oil on canvas
Partial gift of Charles and Margaret Stevenson Henderson and museum purchase

Museum of Fine Arts St. Petersburg

experiment conducted by Newton at this time led to a revolutionary theory that completely transformed our understanding of the spectrum and the refraction of light.

By using two prisms – one to split up white light into the colours of the rainbow, and a second to merge the colors back together – Newton proved that “white” light is actually composed of the seven different colors of the rainbow.

“In the beginning of the Year 1666...I procured me a Triangular glass-Prisme, to try therewith the celebrated Phænomena of Colours. And in order thereto having darkened my chamber, and made a small hole in my window-shuts, to let in a convenient quantity of the Suns light, I placed my Prisme at his entrance, that it might be thereby refracted to the opposite wall.”

– *A Letter of Mr. Isaac Newton, Professor of the Mathematicks in the University of Cambridge; containing his New Theory about Light and Colors, 1672*

Sources: Museum of Fine Arts – St. Petersburg; How Stuff Works; Merriam-Webster; Public Broadcasting System (PBS); British Broadcasting Company (BBC); The Newton Project, University of Sussex; the History Teaching Institute; Planet Science

Claude Monet and his fellow Impressionists were fascinated by the properties of light.

Monet painted 19 versions of *Houses of Parliament* to capture the light at different times of day. The Impressionists painted *en plein air* (outdoors) to depict the light and colors of nature as truly as possible.

Before Isaac Newton, nobody knew that visible, or white, light was made up of different colors.

In the mid-1660s, Isaac Newton’s scientific curiosity was focused on the nature of light and vision. He was so consumed with curiosity, in fact, that he risked blindness by conducting dangerous experiments on himself, such as staring into the sun and poking at his own eyes with a knife. However, another

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Activities:

- What did Newton prove by using a prism?
- Research the concept of white or visible light. Write a fully developed paragraph explaining this concept. Be sure to document your sources.
- After you conduct the “Make a rainbow disappear” experiment, write a blog posting or journal entry about the results of this experiment and what you learned. Share what you have learned with your classmates.

Activity – Make a Rainbow disappear:

Supplies:

- Color wheel cutout
 - Glue
 - Cardboard
 - Scissors
 - Pencil
1. Cut out the colour wheel below.
 2. Glue the colour wheel to a sheet of cardboard.
 3. Once the glue is dry, pierce the middle of the colour wheel with scissors and insert a pencil through the hole until the colour wheel is about a third of the way along the pencil.
 4. Spin the disc and watch what happens. Did you see the colours merge into white?

Activity source: Planet Science

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The God of Death, Mictlantecuhtli
Mexico, Veracruz, Xantile style,
c. 1100-1500
Buff terracotta with traces of paint
Gift of Wayne and Frances Knight Parrish

Museum of Fine Arts St. Petersburg

This sculpture represents the Aztec god of death and lord of the underworld, Mictlantecuhtli.

The statue shows the effects of time and environment on objects. The statue's head, which was probably covered with a removable headdress, retains much of its original color, but limestone deposits obscure most of the decoration below the neck, where the piece was exposed to the air.

As soon as a work of art is produced, it begins to deteriorate. Some deterioration is due to the materials used by the artist. For example, pigments used in paintings and fabric dyes react to various elements present in the air and even to light, causing fading, yellowing, flaking or cracking. Exposure to light also weakens and yellows paper and textiles. (This is why most museums prohibit flash photography.) Paper, ceramics and even stone can be severely damaged by high humidity. Other dangers to objects come from factors such as pollution, vandalism, mold and fungi, insects, and accidental damage. Hard as it is to believe, even dust can damage some objects.

What is art conservation?

Art conservation includes actions taken to preserve cultural objects for the future. Conservation activities include examination, scientific analysis and research, documentation, treatment, and preventative care.

What is art restoration?

Art restoration is actually a type of conservation treatment that attempts to bring an object closer to its original appearance. The other type of conservation treatment is stabilization, which simply attempts to minimize deterioration of an object.

What do conservators do?

Conservators work in museums, research labs and in private practice. Because of the increasingly technical nature of modern conservation, conservators usually specialize in a particular type of object, such as paintings, works of art on paper, photographs, electronic media, textiles, furniture, archaeological and ethnographic materials, sculpture or architecture.

Techniques of conservation and restoration

Conservators use a variety of scientific tools to examine and analyse objects, such as:

- An artefact can be examined with a **microscope** to evaluate its overall condition.
- Observation under **ultraviolet light** can reveal areas that were previously broken and restored.
- **X-rays** can be used to look under the surface of paintings to see if another image is hidden beneath the painting we can see. X-rays can also be used establish the age of pigments and other materials to determine whether an object is authentic or a forgery.
- Observation under **infrared light** can be used to look beneath the layers of paint to see the artist's original sketch or read an illegible signature.
- Samples of pigments, fibres or other materials taken from an object can be subjected to **chemical analysis** to confirm their composition to detect forgeries or assist in choosing the correct materials or pigments for restoration.

Restoration techniques can include surface or deep cleaning, removal of one or multiple layers of varnish, repair of damaged areas, and repainting or overpainting.

The degree to which objects should be restored is the subject of much controversy in the worlds of art and archaeology. For example, the restoration of the Sistine Chapel in the Vatican caused controversy because the colors of the post-restoration frescos were far brighter than before; while the most recent restoration of Leonardo da Vinci's fresco *The Last Supper* resulted in the removal of the majority of the original paint.



This badly done amateur restoration of a fresco of Christ in Spain called the *Ecce Homo* ("Behold the Man") resulted in a dilemma for the fresco's owner, who must decide whether to attempt a second restoration, possibly causing further damage.

Shown at left are the *Ecce Homo* ("Behold the Man") fresco of Christ, left, and artist Cecilia Gimenez's botched attempt at restoring it.

Associated Press

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Sources: Museum of Fine Arts – St. Petersburg; Encyclopedia Britannica; Yale-New Haven Teachers Institute; American Institute for Conservation of Historic and Artistic Works; Kabbani, Raifah, “Conservation: a collaboration between art and science”, *The Chemical Educator*, 1997; British Broadcasting Company (BBC); *Tampa Bay Times*.

Close reading activities:

- What is the difference between art restoration and art conservation?
- Why do you think art restoration and conservation are important?
- Look at the before and after images of *Ecce Homo*. In a small group discuss why you think this restoration caused controversy. If you were the owner of the paintings would you risk another restoration? Why or why not?

Research Activity: In your school media center or local library research art restoration and its techniques. Be sure to use reliable sources for your research. Look for an archived newspaper article about a restoration controversy. Write an argument paper for or against the idea of restoration. Use specific examples from the research and newspaper articles to support your ideas and be sure to document all of your sources.

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