

Out of Sight: New Acquisitions



Harold Edgerton
Milkdrop Coronet, 1957, dye transfer print
Collection of the Vancouver Art Gallery
Gift of Angela and David Feldman, the Menkes Family, Marc and Alex Muzzo,
Tory Ross, the Rose Baum-Sommerman Family, Shabin and Nadir Mohamed

TEACHER'S STUDY GUIDE
Spring 2014

Vancouver
Artgallery

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Vancouver Art Gallery

Teacher's Guide for School Programs

Out of Sight: New Acquisitions consists entirely of artworks that have become part of the Vancouver Art Gallery's collection over the last two years; many of them are being exhibited for the first time. Front and foremost are 81 photographs by the brilliant scientist, inventor and photographer Harold Edgerton, whose images still astonish viewers half a century on, with their breakneck precision and speed in the form of stop-motion photography. His work is complemented by both historical and contemporary artists exploring time, motion and perception, challenging us to reexamine everyday objects, ideas and occurrences we usually take for granted.

DEAR TEACHER:

This guide will assist you in preparing for your tour of the exhibition *Out of Sight: New Acquisitions* and provides follow-up activities to facilitate discussion after your Gallery visit. Engaging in the suggested activities before and after your visit will reinforce ideas generated by the tour and build continuity between the Gallery experience and your ongoing work in the classroom. Most activities require few materials and can be adapted easily to the age, grade level and needs of your students. Underlined words in this guide are defined in the Vocabulary section.

The tour of *Out of Sight: New Acquisitions* has three main goals:

- to consider the addition of new works to the Vancouver Art Gallery's collection,
- to explore the historical and contemporary works with attention to ideas of time, motion and perception,
- to examine individual works in terms of ideas, materials, techniques, inventions and inspiration.

THE EXHIBITION: *Out of Sight: New Acquisitions*

The works in *Out of Sight: New Acquisitions* have all been added to the Gallery's collection in the past two years. The recent donation of 81 of Harold Edgerton's photographs is the central point around which the exhibition is organized. Edgerton was credited with inventing ultra-high-speed, stroboscopic and stop-action photography to take pictures of events that occurred too quickly, or too slowly, to be comprehended by the human eye. In his photographs of a drop of milk splashing on a hard surface, the exact moment a bullet strikes an object or the trajectory of a golf club as it is swung, Edgerton extends the possibilities of human perception by making time stand still. Prior to Edgerton, Eadweard Muybridge was using the camera to explore objects in motion with new precision and clarity.

These two artists depict slices of time—frozen moments—to approach the problem of representing that which cannot be seen. In their scientific experiments, Muybridge and Edgerton exploited the potential of the relatively new medium of photography to portray the decisive moment in an action or event, stopping time to depict the mechanical truth of movement.

Work by contemporary artists continues with the idea of exploring that which is not obvious or cannot easily be seen. Using inventive processes and varied approaches, the artists present unusual views that expose the fractured nature of seeing. Angela Grossmann creates multilayered images of collage and paint, exploring the ways society constructs identity, especially in relation to girls and women. Gathie Falk's playful ceramic sculpture highlights the extraordinary in the ordinary, provoking multiple associations that are simultaneously strange and familiar. In his large, glowing installation, or "light painting"—created out of materials from the everyday world—Robert Youds encourages the viewer to enter into the space occupied by his artwork.

Out of Sight: New Acquisitions is organized by the Vancouver Art Gallery and curated by Stephanie Rebick, Assistant Curator.



Harold Edgerton
Pete Desjardin Diving, 1940
silver gelatin print
Collection of the Vancouver Art Gallery,
Gift of Angela and David Feldman, the Menkes Family,
Marc and Alex Muzzo, Tory Ross,
the Rose Baum-Sommerman Family,
Shabin and Nadir Mohamed

ARTISTS' BACKGROUND

Harold Edgerton (1903–1990)

"Don't make me out to be an artist. I am an engineer. I am after the facts, only the facts."

"In many ways, unexpected results are what have most inspired my photography."

"The trick to education is to teach people in such a way that they don't realize they're learning until it's too late."

Much of Harold Edgerton's long career was based on a single idea: making the invisible visible. He devoted himself to finding ways to see what the naked eye cannot. His determination to solve problems and the limitations of the photographic technology of the time turned him into an inventor.

"Doc" Edgerton was born and raised in Nebraska, where he obtained a degree in engineering. He furthered his studies at the Massachusetts Institute of Technology (MIT) and remained there to become a much-loved professor of electrical engineering. In his doctoral thesis he developed and used the stroboscope to study electric motors and the motion of everyday events, beginning lifelong explorations into high-speed stop-action photography. In his multiframe photographs, his stroboscope could flash up to 120 times a second, which revolutionized flash photography, motion pictures and underwater photography, and which had far-reaching consequences in industry, the military, medicine and commerce. His work was instrumental in the development of side-scan sonar technology, used to scan the sea floor for wrecks. Edgerton worked with the undersea explorer Jacques Cousteau, acquiring the nickname "Papa Flash."

Almost by the way, he produced strikingly beautiful photographs. Many of his remarkable images illuminating phenomena that occurred too fast to be seen by the naked eye are in art museums worldwide. In 1940, his high-speed stroboscopic short film *Quicker'n a Wink* won an Oscar. Edgerton received recognition and prestigious awards for his technical and aesthetic accomplishments, including the National Medal of Science and the Royal Photographic Society's Bronze Medal. In 1987, *National Geographic* magazine ran an article, "Doc Edgerton: the man who made time stand still."

Eadweard Muybridge (1830–1904)

"I am going to make a name for myself. If I fail, you will never hear of me again."

Eadweard Muybridge, born in Kingston upon Thames, London, was one of the world's most innovative and influential photographic pioneers. His extensive studies of humans and animals in motion played a major role in the history of photography and development of the moving image. His sequences made it possible to see movement in a completely different way by visually dividing time and space into manageable chunks, capturing one moment at a time.

Eadweard Muybridge was born Edward Muggeridge. As a young man he emigrated to America, and he changed his name three times over the course of his lifetime. He worked as a bookseller and then a professional photographer, becoming well known for landscapes and architecture before moving on to motion-sequence photography. At the age of thirty he had a terrible carriage accident, suffering brain damage as a result. His behaviour, often described as erratic and eccentric, as well as his inventiveness, are thought to be results of this injury.

In 1872, Leland Stanford, a businessman and former governor of California, hired Muybridge to take some photographic studies to prove that all four feet of a horse were off the ground at the same time for moments while the horse was trotting—something that was impossible for the human eye to perceive. His images were a scientific breakthrough. Later, in order to capture horses galloping, he placed twelve large cameras in a line along the edge of the track; the shutter of each was triggered by a thread as the horse passed. He copied the images onto a disc to be viewed on a zoopraxiscope—a machine he invented that is considered to be an early movie projector. Muybridge lectured across Europe and America, using the device to show his animated sequences.

Robert Youds (b. 1954)

"I think of all my work as having a second component...another level, which is the experiential."

"I wanted a more aggressive or active relationship with the viewer."

"I don't preplan the outcome of the work and I don't have a mantra. I do require my work to suggest its relationship to the day-to-day world of real things/objects/images with which we all surround ourselves."

Over the last twenty years, Robert Youds has worked with non-traditional materials such as aluminum, Plexiglas, LED and fluorescent lights and digital scans to create works in artificial light that he refers to as "light paintings."

Born in Burnaby, British Columbia, Youds attended the University of Victoria and York University in Ontario, and is a professor in the Visual Arts Department, Faculty of Fine Arts, at the University of Victoria. His work has been exhibited in major public galleries across Canada. His large three-dimensional works glow with colour in the form of layers of light that invite the viewer into the space created by the installation. Youds thinks of his work as occupying a space between painting and sculpture, existing between architecture and design.

turn on your electric is a large-scale grid of stainless steel inlaid with coloured glass, behind which a surfboard is installed. For Youds, the work is a reflection on transparency and perception, light and matter, and its meaning arises from the viewer's personal and sensory experience of it.

Gathie Falk (b. 1928)

"I feel that unless you know your own sidewalk really intimately, you're never going to look at the pyramids and find out what they're about. You're never going to be able to see things in detail unless you can look at your kitchen table, see it and find significance in it... Seeing the detail around you makes you able to see large things better."

Gathie Falk has become known internationally for her imaginative and whimsical treatment of everyday objects, including fruit, eggs, men's shoes and women's clothing. Repetition, strong colour and architectural form are the hallmarks of her ceramic works.

Born in Manitoba into a Mennonite family, Gathie (short for Agatha) Falk moved to Vancouver in 1947 and taught elementary school. She studied art in her spare time and became a full-time artist in 1965. In the 1970s, she gained recognition for her ceramic sculpture and performance art. Falk works with a variety of media including painting, installation and papier mâché.

Falk's "veneration of the ordinary" is evident in the materials and processes of everyday life. She has stated that although her work is removed from reality, it does have roots in her daily living. Her neighbourhood, friends, pets, furniture, garden, the night sky and rituals relating to food and drink have all provided and continue to provide sources for her imagery.

In 1990, Falk was awarded the prestigious Gershon Iskowitz Prize for "the extraordinary range of her work and the substantial contribution she has made" through her artistic achievements. In 1997 she was appointed to the Order of Canada in recognition of her contribution to the history of contemporary Canadian art.

Saddle with Cups and Saucers and Bees, 1974–75, made of ceramic and paint, places everyday items in an unexpected and surprising arrangement.

Angela Grossmann (b. 1955)

"From a very young age, girls are looked at, scrutinized, captured on film, judged by cultural standards... How do we form identity with all these codes of behaviour expected from us?"

"I hunt and collect these images. I'm drawn to things that have been lost in a box full of crap. I guess you could say I find them and bring them back to life."

"The act of digging for these materials and then ripping and tearing them apart and gluing them back together then scraping, painting and drawing on them to make something that's mine."

Angela Grossmann is known for her expressive collages, drawings and paintings that deal with issues of identity and displacement. She often works with discarded and repurposed materials so that the history of these objects and the passage of time become part of the new image.

Born in London, England, Grossmann moved to Canada in the 1970s. After obtaining a degree in journalism in Toronto in 1978, she moved to Vancouver and attended the Emily Carr Institute of Art + Design. She then earned an MFA at Concordia University and taught at Ottawa University, before returning to Vancouver in 1997 to paint and to teach at the Emily Carr University and the University of British Columbia. Her work has been exhibited widely across Canada, the United States and Europe and is in numerous public and private collections.

Grossmann was one of eight young painters featured in 1985 in the *Young Romantics* exhibition at the Vancouver Art Gallery. The artists' influences and styles were varied, but they were unified by the energy and edge that they brought to their work. The enthusiastic response to the show launched the individuals into successful careers as artists. Grossmann's large-scale collaged canvases, thick brushwork and evocative images brought her immediate attention.

Broken Mirror includes collaged and painted elements on a section of vintage awning that has been cut and repurposed as a canvas of sorts. Grossmann combines several photographs of sections of the female body, suggesting the multiple ways in which identity is constructed as well as the fractured manner in which women are viewed in society.



Angela Grossmann
Wish You Were Here, 1985
oil, tar, collage elements on plywood
Collection of the Vancouver Art Gallery, Gift of Pamela S. Boles

PRE-VISIT ACTIVITY: The Artists (intermediate/senior grades)

Objective:

Students explore the lives of some of the artists: their work, influences, interests and points of connection.

Materials:

- Internet; suggested websites for each artist are listed on the following page. Also useful: www.wikipedia.com
- Artist Information Sheet and Student Worksheet (following pages)
- writing materials

Process:

1. Divide the class into five groups. Give each group the information on one of the artists (see Artist Information Sheet, next page).
2. In their groups, have the students read and make sure they understand the information.
3. Either at school or at home, have students use the Internet to research the artists further.
4. Have students share the collected information with their group and organize it on the Student Worksheet (page 10).
5. Have each group talk about their artist, while the rest of the class fills in the Student Worksheet (page 10).

Conclusion:

- Discuss similarities and differences between the artists and their artwork.
- What do the artists have in common?—materials, techniques, ideas, styles, etc.
- Which artists or kinds of artwork made the students curious about seeing the work in the exhibition?
- Are there any artists, ways of working or ideas that the students would like to find out more about?
- What were some of the most interesting things that students learned or discovered?

Artist Information Sheet

Harold Edgerton <http://edgerton-digital-collections.org/>

- born (1903) and raised in Nebraska, USA, died in 1990
- much-loved professor of electrical engineering at MIT for 63 years
- wanted to find ways to make the invisible visible—to see what the naked eye cannot
- invented the stroboscope, and a high-speed camera capable of 10-nanosecond exposure time
- works include *Milk Drop Coronet*, *Moving Skip Rope* and *Pete Desjardin Diving*

Eadweard Muybridge <http://www.eadweardmuybridge.co.uk/>

- born in England in 1830, died in America in 1904
- changed his name three times during his life
- invented the zoopraxiscope (an early movie projector) and the first high-speed camera
- made over 100,000 images, studies of humans and animals in motion in split-second detail
- works on display include many from his *Animal Motion Series*

Gathie Falk

- born in Manitoba in 1928, lives in Vancouver.
- had a difficult childhood, had to leave school at the age of sixteen to work
- her work includes paintings, sculpture, installations and performance art
- is inspired in her art by the everyday, the ordinary, her community
- *Saddle with Cups and Saucers and Bees* (1974) is a sculpture made of ceramic and paint

Angela Grossmann <http://www.angelagrossmann.com/press.htm>

- born in England in 1955, moved to Canada in the 1970s
- in 1985 her work was shown in the *Young Romantics* exhibition at the Vancouver Art Gallery
- works with found images, objects and postcards, which she collages and paints over
- re-uses images, layering them to create new meanings
- *Broken Mirror* includes collaged and painted parts on an old piece of awning

Robert Youds <http://www.robertyouds.ca/>

- born in Burnaby, British Columbia, in 1954, lives in Victoria and teaches at UVic
- works with non-traditional materials such as aluminum, Plexiglas, LED and fluorescent lights and digital scans
- refers to his works as “structures” and “light paintings”
- *turn on your electric* is a large steel grid containing coloured glass with a surfboard behind it

Student Worksheet

	Background & Personal details	Type of art & Description of one work	Influences and interests	Connections between artists' works
Robert Youds				
Angela Grossman				
Eadweard Muybridge				
Gathie Falk				
Harold Edgerton				

PRE- or POST-VISIT ACTIVITY: Time and Motion (primary/intermediate grades)

Objective:

Students explore ways of stopping and showing time and motion and create their own sequences.

Discussion:

Both Eadweard Muybridge and Harold Edgerton worked with stop-motion photography, exposing that which is invisible to the human eye.

- Muybridge designed a high-speed electronic shutter and electro-timer, to be used alongside a lineup of up to 24 cameras. He was able to capture the movement of humans and animals in split-second detail, something that had never been seen before.
- Edgerton built on Muybridge's work, developing a strobe light effect that could flash up to 120 times a second, making it possible to capture images that allowed viewers to see motion in minuscule increments of time.
- The human eye cannot time-resolve events shorter than a fraction of a second, which is why movies appear to be continuous, rather than the sequence of still images that they really are. Using this knowledge, Edgerton created his spectacular stop-motion photographic images by opening a camera's shutter in a darkened space, generating flash(es) of light to expose the film in short spurts during a continuous action, and then closing the shutter.

Materials:

- 5 or more cameras (phones are fine)
- photographic sequences by Muybridge and Edgerton (see pages 4 & 12)

Process:

1. Discuss Muybridge's and Edgerton's discoveries, based on the information above.
 - Display and discuss one of Muybridge's motion sequences (see next page).
 - Display and discuss one of Edgerton's strobe-flashed still images (see next page).
 - Talk about how and why we measure time. How can we tell by looking at a sequence of images how much time has passed between the scenes depicted?
 - What changes would we notice if we photographed a classmate over the course of a day? Over the course of a year? Could we tell in what order the images were made? How?
2. Ask for, or choose, six volunteers. Five cameras will be needed.
3. Five students stand in a straight line, holding cameras looking straight in front of them. The sixth student will slowly walk in a straight line past all five camera holders, about 5–8 feet ahead (preferably in front of a blank, uncluttered wall). As the walker passes directly in front of each camera, the student takes a photo. The end result should be five images of the walker, each at a slightly different stage of motion.
The students might need to practise this a few times before actually taking the photographs. The rest of the class observes.
5. Make copies of the five images—as large as possible—and put them up on a wall. Analyze the sequence.
 - Does the sequence appear to mimic real motion? Is it smooth?
 - Does it seem as though there are some missing parts in the sequence?
 - What happens if the drawings are arranged in a random sequence; i.e., not in order?
 - What could/should have been done differently?
6. The activity could be repeated with different groups of students, photographing different activities: hopping, dancing, crawling... If more cameras are available, they can be used to create longer sequences—perhaps ten students lined up photographing.

Conclusion:

- Have students discuss what they learned or discovered.
- Muybridge and Edgerton were both using cutting-edge techniques. What would be the equivalent cutting-edge technologies today?



Harold Edgerton
Moving Skip Rope, 1952, silver gelatin print
Collection of the Vancouver Art Gallery, Gift of Angela and David Feldman, the Menkes Family, Marc and Alex Muzzo, Tory Ross, the Rose Baum-Sommerman Family, Shabin and Nadir Mohamed



Eadweard Muybridge
[Vulture, flying] Plate 765 from *Animal Locomotion*, 1887, collotype
Collection of the Vancouver Art Gallery, Gift of Andy Sylvester

PRE- or POST-VISIT ACTIVITY: Layering Meaning: Collage & Paint (all grades)

Objective:

Students consider how Angela Grossmann layers images and meaning, and create their own mixed-media artwork.

Discussion:

Angela Grossmann reworks found images, infusing them with new meanings and contexts. She collages parts of magazine pictures or photographs onto her surface and constructs paintings over and around the found images. In doing so, she creates multiple layers of time, history and meaning.

Materials:

- Angela Grossmann images: <http://www.angelagrossmann.com/press.htm>
- variety of magazines, newspapers, pieces of textured cardboard, coloured paper
- large sheets of paper, glue sticks, scissors
- paint and paintbrushes: watercolour or tempera, or coloured markers

Process:

1. Divide the students into small groups and have each group look at a different image by Angela Grossmann, obtained from the website above.
Questions to guide their looking could include:
 - What has she used as her starting point(s)?
 - What has been added on?
 - What kinds of brushstrokes has she used (heavy, thick, streaky, wavy)?
 - What kinds of colour has she used (bold, complementary, warm, cool*)?
 - What was the artist interested in showing?
2. Have each group share their findings with the class. Discuss.
3. Ask each student to find an image of a person in a magazine or newspaper to use as a starting point for an artwork. They should choose an image they connect to: an athlete, pop star, chef, etc. Have them tear/cut out the image and place it on their paper.
4. Ask students to think about how they are going to incorporate the image into a painting.
 - Will it be the main focus of their work, or just a small part of it?
 - Do they want to leave the image whole, paint over parts of it or collage other magazine images into it?
 - What else do they want to build around the image?
 - What message or meaning will they be building on from these images?
5. What else would they like to add to their work?
 - Text? Coloured paper?
 - What kind of colours do they want to use? Strong contrasts or similar tones? Bright or muted? Why? For what effect or impact?
6. Have students glue on their chosen image(s) and start painting, using the colours they have chosen. Have them consider brushstrokes and lines as well as colours. What do they want to put in? What do they want to leave out? How much of the sheet do they want to cover?

Conclusion:

- Display the students' work.
- Have them look at each other's work and talk about what they see: brushstrokes, colours, composition, similarities and differences, etc.
- Discuss the process, as well as intended and unintended outcomes.
- Did meanings change by the completion of the work?

*See discussion on colour theory, next activity, page 14

PRE-VISIT ACTIVITY: Explorations with Colour, Form & Everyday Materials

(primary/intermediate grades)

Objective:

Students look at the theory and practice of colour in relation to artists' choices, and create a sculptural installation out of shoeboxes.

Discussion:

1. Robert Rauschenberg comes out of a long line of artists working with non-traditional art-making materials and non-representational subject matter. The artists and types of art that provide background and context to Rauschenberg's work include:
 - Hard-edge geometric abstraction, which began to make waves in the late 1950s, emphasized the use of strong colour, clearly defined outlines and clear, precise compositions. Colours were carefully chosen to enhance contrast and vibrancy, or to create optical effects. Michael Morris was one of the artists working with hard-edge painting in Vancouver.
 - Donald Judd used industrial materials and minimalist shapes, and he carefully balanced colours to create stark sculptural compositions often mounted on walls.
 - Minimalist artist Dan Flavin used light as the material and the subject of his work. In his installations using coloured fluorescent light tubes, light transforms the surrounding space, so that the viewer shares the space with the artwork.

2. A brief review of **Colour Theory** would be helpful for most students in order to understand how the interaction between colours can create impact, and to make informed decisions about using colours.

Students should not see colour as absolute; colours react and change in context and in contrast to one another.

- **Primary colours** cannot be mixed from other colours. They are blue, red and yellow.
- **Secondary colours** are mixed from two primaries. They are green, purple and orange.
- **Tertiary colours** are mixed from two colours adjacent to each other on the colour wheel (one primary and one secondary); e.g., yellow-green, green-blue.
- **Complementary colours** are opposite each other on the colour wheel. They share no common colours. For example, red (a primary) and its complementary green (made up of the primaries blue and yellow) provide maximum contrast and intensify each other.
- **Analogous colours** are three colours next to each other on the colour wheel, all of which contain a common primary (e.g., yellow, yellow-green and green). Analogous colours are used to create harmonious compositions with subtle contrasts.
- **Shades** are created by mixing colours with varying amounts of black.
- **Tints** are created by mixing colours with varying amounts of white.
- **Warm colours** are reds, oranges and yellows and tend to pop to the foreground of the picture plane.
- **Cool colours** are blues, greens and purples and tend to recede to the back of the picture plane.

Materials:

- a shoebox for each student in the class
- primary colour paints, plus black and white (liquid tempera will provide the best coverage)
- paintbrushes, water containers, old newspaper to cover desks
- if paints are not available: construction paper, scissors and glue
- portable light source: desk lamp or strong flashlight

Process:

Before beginning this class, ask each student to bring a shoebox. If extras are needed, neighbourhood shoe stores usually have a good supply. It's fine if the boxes are of varying sizes.

1. Discuss **Colour Theory** with the class, as outlined on page 14.
2. Ask students to choose ONE colour to paint the outside of their box. They can use a pure primary, or mix to make a secondary, add black or white to change the shade or tint. They should mix enough to cover five sides of their box. The box needs to rest on one paint-free side to dry—preferably one of the two long, narrow sides.

Depending on the type of paint and thickness of application, students may need to apply two coats of paint, allowing it to dry completely between coats, to create opaque flat colour.

3. Put the boxes aside and allow to dry completely, preferably overnight.

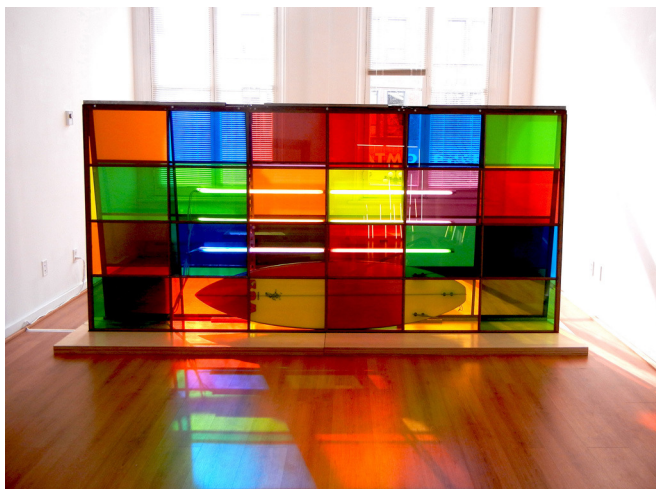
Alternatively, students can choose a colour of construction paper and cut and glue it to one of the long, wide sides of the shoebox.

4. Divide the class into two groups, and divvy up the boxes so that each group has roughly the same number of boxes. Individual students do NOT need to have their own boxes.
5. Have each group arrange and stack the boxes to create a “wall” of colour, a couple of feet from a real (preferably blank) wall. Ask them to think about the choices they are making regarding colours, proximity, size, etc. They can leave gaps between the boxes, or create a solid wall, trying out different arrangements: colours together, separated into a pattern, light and dark staggered, etc.
6. Look at the two separate structures, compare and discuss. How did each group make their choices? Why? What is the overall effect? How would it be/is it different to put similar colours together? To stagger them? To create a pattern?
7. Take the light and shine it on various parts of the structures. Then illuminate them from behind. How does it change the work? Brighter, darker, interesting, mysterious...

Conclusion:

Discuss the work in terms of colour, shape and composition.

- What effect did their understanding of colour theory have on their structure? What did they discover about the ways colours affect each other and our response to their combinations? For example, complementary colours might cause each other to pop forward, or analogous colours to create a sense of calm.
- What part does repetition play? What rhythm, if any, is created through colour or shape?
- What other materials could be stacked to create such a structure? (Folded clothes, chairs, books, socks, cans...) Have students try some at home and report back.



Robert Youds
turn on your electric, 2011
glass, steel, plywood, surfboard, electrical parts
Collection of the Vancouver Art Gallery, Anonymous Gift

VOCABULARY

abstract/abstraction: a style of art that can be thought of in two ways:

- the artist begins with a recognizable subject and alters, distorts, manipulates or simplifies elements of it;
- the artist creates purely abstract forms that are unrecognizable and have no direct reference to external reality (also called non-representational art).

contemporary: created in the last thirty years. Most contemporary artists are living artists. Challenging traditional boundaries, many contemporary artists use a limitless range of materials and ideas to reflect, explore and comment on today's world.

hard-edge geometric abstraction: a term coined in the late 1950s to define a new style of painting, emphasizing the use of strong colour, clearly defined outlines and clear, precise compositions. Colours were carefully chosen to enhance contrast and vibrancy, or to create optical effects.

installation: art that is created from a wide range of materials and installed in a specific environment. An installation may be temporary or permanent. The term came into wide use in the 1970s.

minimalism: an approach that brings abstraction to its logical conclusion: that art should not refer to or imitate anything outside of itself. Minimalist artists sought to remove the presence of the artist's hand and challenged the notion that their objects needed to be created by artists themselves. They also brought attention to the space occupied by both the viewer and the artwork.

non-representational art: another way to refer to abstract art. These artworks do not represent or depict a being, place or thing in the natural world.

performance art: a work in any of a variety of media that is performed before a live audience. The performance itself, rather than a specific object, constitutes the artwork. Documentation is often an important part of the performance.

stroboscope: an instrument used to shine a momentary bright light at intervals so that a moving object appears slow-moving or stationary. Also known as a strobe.

zoopraxiscope: a device, invented by Eadweard Muybridge in 1879, that projected images from rotating glass disks in rapid succession to give the impression of motion. It is considered to be an early form of the movie projector.

RESOURCES

Books:

Bosello, Tony. *PHOTOGRAPHY: Series of Supplementary Lessons for the Secondary Teacher*. BCTF Lesson Aid #9654, 1998. Series of activities on depth of field, shutter speed, viewpoint, elements of design, principles of design, composition, lighting, assessment of negatives, analysis of photographs, framing, special effects and photojournalism.

Cartwright, Lisa, and Marita Sturken. *Practices of Looking*. Oxford: Oxford University Press, 2001.

De Oliveira, Nicholas, et al. *Installation Art in the New Millennium: The Empire of the Senses*. London: Thames & Hudson, 2004.

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Murray, Joan. *Canadian Art in the Twentieth Century*. Toronto: Dundurn Press, 1999.

Seitz, W.C. *Abstract Expressionist Painting in America*. Washington, DC: National Gallery of Art/Harvard University Press, 1983.

Smith, Annie. *Getting Into Art History*. Toronto: Barn Press, 1993.

Stallabrass, Julian. *Contemporary Art: A Very Short Introduction*. Oxford: Oxford University Press, 2006.

Storr, Robert, et al. *Art: 21: Art in the Twenty-First Century*. New York: Harry N. Abrams, 2001.

Varnedoe, Kirk. *Pictures of Nothing: Abstract Art since Pollock*. Princeton NJ: Princeton University Press, 2006.

Weintraub, Linda. *In the Making: Creative Options for Contemporary Art*. New York: Distributed Art Publishers Inc., 2004.

Wells, Liz, ed. *Photography: A Critical Introduction*. New York/London: Routledge, 2000.

Online:

www.artcyclopedia.com

Online art encyclopedia, listing international artists, and museums and galleries with collections of their work.

www.wikipedia.com

Online dictionary and encyclopedia, created collaboratively by laypeople.

<http://www.collectionscanada.gc.ca/women/index-e.html>

Online collection of Canadian women's art.

Artists can be Googled individually.

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