surrey art gallery

TEACHERS GUIDE

Particles for the Built World
The Way Things Go

MATERIALS | CONSTRUCTION | EXPERIMENTATION

Omer Arbel *75.10*, 2019, fabric cast concrete. Photo: Scott Massey

FOR GRADES K-12

With Big Ideas Curriculum Connections

Dear Teachers

This guide is a classroom resource, designed to support teachers and students attending the exhibitions, *Particles for the Built World* and *The Way Things Go* on display at the Surrey Art Gallery from April 13 to June 16, 2019. The Teachers' Guide contains exhibit information, as well as activities that will help prepare your students for their Gallery visit and engage them in classroom discussion afterwards. These activities reinforce the ideas and processes explored in the exhibition—specifically themes related to materials and dimensions, as well as built environment—and provide continuity between the gallery visit and the classroom.

The pre-visit activity touches on process between 2 and 3 Dimensions as well as the use of the cross-section. The hands-on Art Encounter Workshop offered at the Gallery joyfully engages sketching and simple machines; and the post-visit activity considers built environment and collage.

This guide also provides vocabulary, a resource section, and links to the BC Education Curriculum in the area of Arts Education, from grades K-12. We hope that you enjoy using this guide to engage with the exhibition and create art with your students.

Sincerely,
Cecily Nicholson, Interpretive Programmer

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Teachers' Guides are created with contributions from Surrey Art Gallery staff including: Interpretive Programmer Cecily Nicholson, Art Educator April Davis, Volunteer Program Coordinator Chris Dawson-Murphy, Visual Arts Programmer Lindsay McArthur, Communications Coordinator Charlene Back, Curator of Exhibitions and Collections Jordan Strom, and Curator of Education and Engagement Alison Rajah.

ABOUT SURREY ART GALLERY

Surrey Art Gallery is the second largest public art gallery in the Metro Vancouver region. Internationally recognized, the Gallery showcases diverse contemporary art practices including digital and sound art and exhibits renowned local, national, and international artists. Surrey Art Gallery's mission is to engage the public in an ongoing dialogue about issues and ideas that affect our numerous communities as expressed through contemporary art, and to provide opportunities for the public to interact with artists and the artistic process.

To receive announcements about exhibitions and related events at the Gallery, sign up for our e-newsletters at www.surrey.ca/arts-signup. The City of Surrey also has an e-newsletter specifically for teachers: www.surrey.ca/12392.aspx.

SCHOOL PROGRAMS

The Gallery's school programs develop an appreciation, understanding, and excitement about contemporary art. Visit the Gallery's website to learn about our school programs and the resources that we offer for teachers called "Teachers in the Know" visit: www.surrey.ca/galleryeducation.

Omer Arbel Office, *8.0*, 2018-19, polymer-fibre filled concrete chairs. Photo: Scott Massey

IN THIS GUIDE

Omer Arbel, *75,* fabric cast concrete, detail of construction process, 2017. Courtesy of Omer Arbel Office

ABOUT THE EXHIBITIONS

April 13 – June 16, 2019

Particles for the Built World: Omer Arbel

Experimentation drives Omer Arbel's art and design practice. He manipulates basic materials by applying heat, force, pressure, electricity, or movement to achieve surprising results. *Particles for the Built World* focuses on Arbel's experiments with concrete over the past five years. What if we poured concrete into fabric forms rather than plywood boxes or tube columns used in most building construction? The astonishing results are on display in this exhibit. "My intention is to develop a way of working with concrete that acknowledges its liquid nature and yields expressive form," he says. "These new methods could have significant practical and sculptural ramifications to the construction industry."

The Way Things Go: Peter Fischli & David Weiss

This art video by Swiss duo Peter Fischli and David Weiss documents a spectacular chain reaction of objects set up inside a warehouse. Referred to as "the merry pranksters of contemporary art" by the New York Times, the artists built a precarious structure over 30 metres long made of ordinary items like tea kettles, tires, old shoes, balloons, and wooden ramps. Fire, water, gravity, and chemical reactions contribute to ingenious surprises and lots of chaos throughout this riveting 30 minute film.

VOCABULARY

Collaborative: produced or conducted by two or more parties working together.

Collage: a technique of composing a work of art by applying on a single surface, various materials that are not necessarily associated with one another.

Concrete (noun): a material made from a mixture of broken stone or gravel, sand, cement, and water, that can be spread or poured into molds. It forms a mass resembling stone upon hardening.

Construct (noun): an idea that has various conceptual elements, typically one based on feelings (subjective) and not based on empirical evidence.

Construct (verb): to build something, for example a building, road, or machine.

Cross-section: a surface or shape that is or would be exposed by making a straight cut through something, especially at right angles to an axis.

2-Dimensional: in art, two-dimensional compositions have length and width but do not possess depth. Examples of two-dimensional art includes paintings, drawings, prints, and photographs.

3-Dimensional: things have three measurable features (such as height, width and depth), like any object in the real world. Examples of three-dimensional art includes sculpture, installation and performance art.

Experimentation: the action or process of trying out new ideas, methods, or activities.

Form (object): the visible shape or configuration of something.

Installation: in art is work that is created, constructed, or installed on the site where it is exhibited, often incorporating materials or physical features of the site.

Kinetic: relating to or resulting from motion. In a work of art, depending on movement for its effect.

Kirigami: is a variation of origami that includes cutting of the paper, rather than solely folding the paper as is the case with origami, but typically does not use glue.

Linear: arranged in or extending along a straight or nearly straight line or row. Progressing from one stage to another in a single series of steps; ie sequential.

Machine: an apparatus using or applying mechanical power and having several parts, each with a definite function and together performing a particular task. Machines can be constructed or found in nature.

Material: the matter from which a thing is or can be made.

Observation: an act or instance of noticing or perceiving; an act or instance of regarding attentively or watching; the faculty or habit of observing or noticing.

Perspective: the ability to see, hear, or become aware of something through the senses.

Rube Goldberg Machine: is a machine intentionally designed to perform a simple task in an indirect and overcomplicated fashion.

Sensory: of or relating to sensation or the physical senses; transmitted or perceived by the senses.

Simple machines: levers, wedge, inclined plane, wheel and axle, pulley, and screw. Combinations of simple machines form complex machines. The lever is the basis of nearly every aspect of the musculoskeletal system of human beings.

Texture: The quality of a surface (i.e. smooth, rough, dry).

SUGGESTED PRE-VISIT ACTIVITY: FORM, SHAPE, AND CROSS SECTION

THEME: MATERIALS, PERSPECTIVE, AND DIMESION

Omer Arbel, *84,* 2019, scans, inkjet print. Photo: Scott Massey

OBJECTIVES

Consider the cross-section or dissection of a whole object.

Experiment with different perspectives.

ACTIVITY

Choose a selection of fruit to halve and create prints.

MATERIALS

* An Apple
* Paint with water
* Paper or tissue
* Sticks (optional)

BIG IDEAS FROM BC CURRICULUM

- Experience and interpret the local environment (Art Education, Grade 4).
- Explore elements, processes, materials, movements, technologies, tools, and techniques of the arts (Art Education, K-Grade 1).

DISCUSSION & INTRODUCTION

Discuss with your class that they will be visiting the Surrey Art Gallery to see the art exhibition *Particles for the Built World*. In this exhibition Omer Arbel uses different processes and techniques to experiment with materials. Arbel also contributes to architectural and industrial design.

Several items in Arbel's sculptural works begin with a whole object that are then sliced into sections to form a new outcome. Examples include glass work, concrete forms as well as architectural models. Experiment with some familiar materials to explore some unexpected results.

INSTRUCTIONS

Find some everyday objects to half and create prints. For example, an apple or orange will present an compelling design when halved. Use the fruit to create one-time stamps or multiple prints on a single page. For a less messy process with paint, a popsicle stick can be inserted into an apple to create a stick or handle.

VARIATION

Compile different colours of plasticine. Roll into several lengths then weave and role together in a multi-colour coil. Using a kitchen knife or wire clay cutter to create cross-sections. These cross-sections can be formed into a composition. Enjoy the different patterns that emerge.

SUGGESTED POST-VISIT ACTIVITY: EXPERIMENT WITH PAPER TO LEARN MORE ABOUT SHAPE AND FORM

THEME: MATERIALS AND EXPERIMENTATION

MATERIALS NEEDED:

* Variety of paper
* Carboard
* Small scissors
* Adhesives
* Paints (optional)

OBJECTIVES

Experiment with paper materials and techniques to collage or construct. Observe how paper can transition from two to three dimensions, and introduce ideas of sculpture and experimentation.

ACTIVITY

Use a variety of paper materials and techniques to collage or construct fantastic structures.

BIG IDEAS FROM BC CURRICULUM

- Artists experiment in a variety of ways to discover new possibilities (Art Education, Grade 4).
- Creative experiences involve an interplay between exploration, inquiry, and purposeful choice (Art Education, Grade 3).

DISCUSSION & INTRODUCTION

Being able to transform a flat sheet of paper into a 3-dimensional form is a useful skill. Engage in purposeful play with different kinds of paper and try a variety of techniques. Encourage students to invent their own.

Discuss with your class that about what they saw while visiting the Surrey Art Gallery and the art exhibition *Particles for the Built World*. In this exhibition Omer Arbel uses different processes and techniques to experiment with materials. Arbel also contributes to architectural and industrial design.

While students may not be able to work with glass or concrete like Arbel in this show, they can consider ideas of experimentation with materials. Beginning with paper is one affordable way to think through the concept and practice of experimentation.

Examples of artistic outcomes involving paper include, for example, origami and kirgami practices. Students may wish to develop these more advanced and disciplined techniques, however encourage them to begin without a pattern or plan, and to allow the material to influence what forms.

Omer Arbel, 75.10, 2019, fabric cast concrete. Photo: Scott Massey

SUGGESTED POST-VISIT ACTIVITY: EXPERIMENT WITH PAPER TO LEARN MORE ABOUT SHAPE AND FORM, CONTINUED...

Omer Arbel, *75.10,* 2019, fabric cast concrete. Photo: Scott Massey

INSTRUCTIONS

Collect a variety of paper: writing, cardstock, tissue as well as reclaimed materials such as magazines, wrapping paper, wall paper, newsprint. Have on hand some small scissors and adhesives (i.e. glue, glue stick, tape, coloured tape). Beginning with the paper, encourage different treatments of the paper:

⇒ Tear paper into strips and shapes, use plain or multi-coloured paper to different effect

⇒ Fold a sheet of paper in whatever way they wish. Make some snips along the folds and open it to see what you have (students may be familiar with this technique for making snow flakes, what other interesting shapes and designs can they form?)

⇒ Use torn or cut strips of paper to form curls, rosettes or bundles

⇒ How does water affect paper?

⇒ In a safe controlled environment, assist students in apply heat or a flame to paper to different effect

⇒ Scrunch, roll, bend, fold, gather, link and more. Consider other ways of activating this stationary material

Now students will have a variety of forms, shapes, and textures of paper available. Use these materials to then form a collage of a fantastic building. What are the main ideas for their structure – i.e. play, adventure, comfort – how can that be represented in the design? Allow for the experimental materials to help influence a creative design.

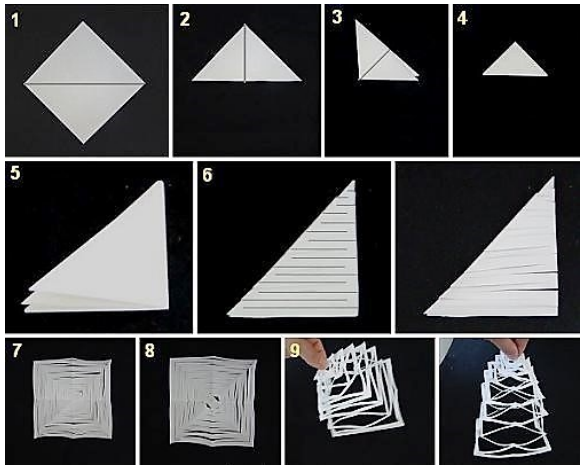
VARIATION

Consider building an imagined structure out of paper or cardboard, but in 3 dimensions.

Cardboard can be stacked as bricks, roll paper to form tubes, logs and columns. Tear evenly pieced paper to create a roof. Corrugated cardboard can be torn, scored, and painted to create different effects. Using cardboard try to come up with at least four different ways of repurposing the material.

REFLECTION

In relation to Omer Arbel's exhibition, think about process and how art comes to be. For this artist, "Form is born not of an author [or artist's] imagination, but rather as a consequence of […] experimentation with the material". How can other materials shape how we make art?



Kirigami design example, 2019, www.origami-resource-centre.com

SUGGESTED ACTIVITY: LEARNING FROM RUBE GOLDBERG MACHINES

DISCUSSION & INTRODUCTION

Discuss with students Peter Fischli and David Weiss' video work *The Way Things Go*. What did they think about the video? What did they enjoy about the video and why? Reuben Garrett Lucius Goldberg, known best as Rube Goldberg, was an American cartoonist, sculptor, author, engineer, and inventor. The Rube Goldberg machine is a machine intentionally designed to perform a simple task in an indirect and overcomplicated fashion. It is often intended to be fun. In the video *The Way Things Go*, the creators also poke fun at art and design, but the work overall is based on the science of simple mechanics, chemical reactions, and process.

1. Define and understand basic simple machines.
2. Evaluate how they work, why might they be helpful?
3. Can students think of simple machines in their lives; how about in nature?
4. Can students name, count, or describe some of the processes and elements that occur in the video?
5. Design a series of simple machines such as a Rube Goldberg Machine or consider the elements of compound machines such as a bicycle. What else can we imagine?

Peter Fischli and David Weiss, 1987, *The Way Things Go,* production still. Image courtesy of the artists.

BC CURRICULAR COMPETENCIES, ELABORATIONS:

Applying and innovating — sample ways to use physics phenomena to design may include: airbags, elevator, Rube Goldberg machine (Grade 11, Science and Physics)

RESOURCES:

There are many examples, instructions, and videos available online to inspire ideas to prepare your students for this activity. Your machines, or overlapping machines and process can be very simple, or complex, depending on skill, intent, time, and capacity. Here are a few places to look for more information:

- Lesson Plans and Resources for teaching Rube Goldberg style: https://www.rubegoldberg.com/education/teaching-resources/
- How to guide: https://www.wikihow.com/Build-a-Homemade-Rube-Goldberg-Machine
- STEM curriculum: https://www.teachengineering.org/activities/view/cub_simp_machines_lesson05_activity1
- Five Rube Goldberg Machines made by Grade 4-5 students: https://www.youtube.com/watch?v=x1jU_kvGshM

CURRICULUM CONNECTIONS FOR SCHOOL PROGRAMS

Participating in a guided tour, studio workshop, or self-guided tour in conjunction with the exhibitions supports Big Ideas and Learning Standards in the British Columbia Arts Education Curriculum for grades K-7. The exhibitions can be used as a touchstone for discussion relating to themes and concepts addressed in a variety of curricular areas.

Omer Arbel, *75.8*, 2019, plywood, concrete, tin. Photo: Scott Massey

K-12 ARTS EDUCATION CURRICULAR COMPETENCIES

Students will be able to use creative processes to create and respond to the arts:

KINDERGARTEN - GRADE 2

- Explore elements, processes, materials, movements, technologies, and techniques of the arts
- Create artistic works collaboratively and as an individual, using ideas inspired by imagination, inquiry, experimentation, and purposeful play
- Reflect on creative processes and make connections to other experiences
- Interpret how symbols are used through the arts
- Express feelings, ideas, stories, observations, and experiences through the arts
- Describe and respond to works of art
- Experience, document, perform, and share creative works in a variety of ways

GRADES 3 - 4

- Create artistic works collaboratively and as an individual, using ideas inspired by imagination, inquiry, experimentation, and purposeful play
- Reflect on creative processes and make connections to personal experiences
- Creative experiences involve an interplay between exploration, inquiry, and purposeful choice

GRADES 5 - 7

- Observe, listen, describe, inquire, and predict how artists use processes, materials, movements, technologies, tools, techniques, and environments to create and communicate
- Works of art influence and are influenced by the world around us.
- Experience and interpret the local environment
- Intentionally select artistic elements, processes, materials, movements, technologies, tools, techniques, and environments to express meaning in their work

GRADES 8-9

- Purposeful play: learning that uses real-life and/or imaginary situations to engage and challenge learners' thinking. Students express their natural curiosity while exploring the world around them

GRADE S 10-12

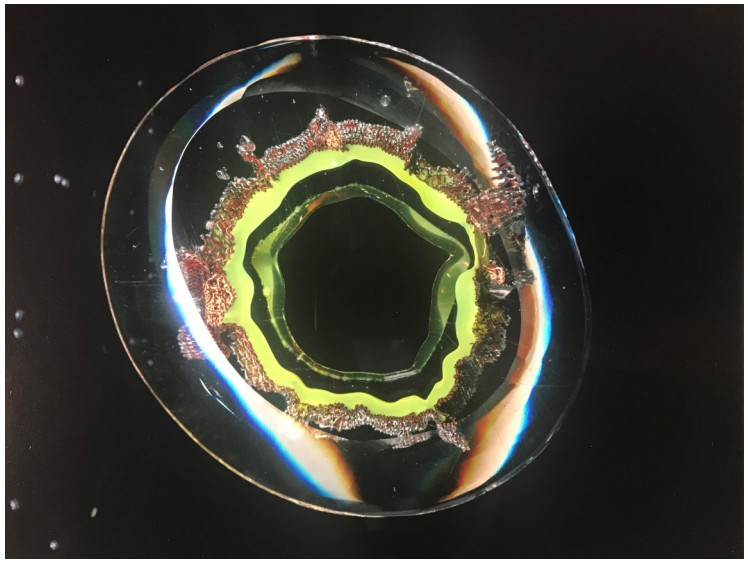
- Interpret and evaluate, using discipline-specific language, how artists use materials, technologies, processes, and environments in art making
- Engage in a period of research and empathetic observation
- Intentionally select and combine materials, processes, and technologies to convey ideas, and justify choices

ONLINE RESOURCES

GENERAL

Media coverage of exhibits

- https://www.surreynowleader.com/entertainment/fabric-formed-concrete-strengthens-new-surrey-gallery-show-and-house-under-construction/
- https://www.cloverdalereporter.com/entertainment/fabric-formed-concrete-strengthens-new-surrey-gallery-show-and-house-under-construction/
- https://vancouversun.com/homes/westcoast-homes-and-design/lifestyle/vancouver-art-scene-works-by-mowry-baden-omer-arbel-marleen-vermeulen
- http://www.altertuemliches.at/termine/ausstellung/46475



Omer Arbel, *84,* 2019, scans, inkjet print. Photo: Scott Massey

ARTISTS IN THE EXHIBITIONS

Omer Arbel

- omerarbel.com
- https://en.wikipedia.org/wiki/Omer_Arbel
- https://www.bocci.ca/
- https://www.dezeen.com/tag/omer-arbel/
- https://www.dwell.com/home/modern-angular-rural-family-home-in-canada-57c78f9d
- https://vimeo.com/278362950
- https://www.bocci.ca/news/particles-for-the-built-world/

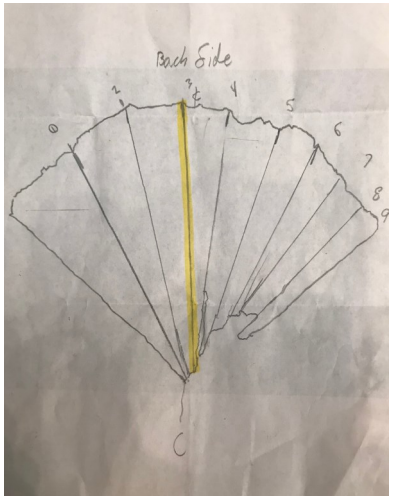
Peter Fischli and David Weiss

- https://en.wikipedia.org/wiki/Peter_Fischli_%26_David_Weiss
- https://www.guggenheim.org/artwork/artist/peter-fischli-david-weiss
- https://www.tate.org.uk/whats-on/tate-modern/exhibition/fischli-weiss
- https://www.interviewmagazine.com/art/peter-fischli
- https://www.theguardian.com/artanddesign/2012/jun/05/fischli-and-weiss-art-of-humour
- https://en.wikipedia.org/wiki/The_Way_Things_Go

IMAGE GALLERY

Omer Arbel, *84,* 2019, scans, inkjet print. Photo: Scott Massey

IMAGE GALLERY



Omer Arbel, *75.10*, 2019, geotextile, wood. Photo: Scott Massey

Omer Arbel, 75.10 sketch, 2019, paper. Image courtesy of the artist.

IMAGE GALLERY

Fahim Kassam with sound by Paul Stewart, *75.8*, 2019, 3-channel video projection. Photo: Scott Massey

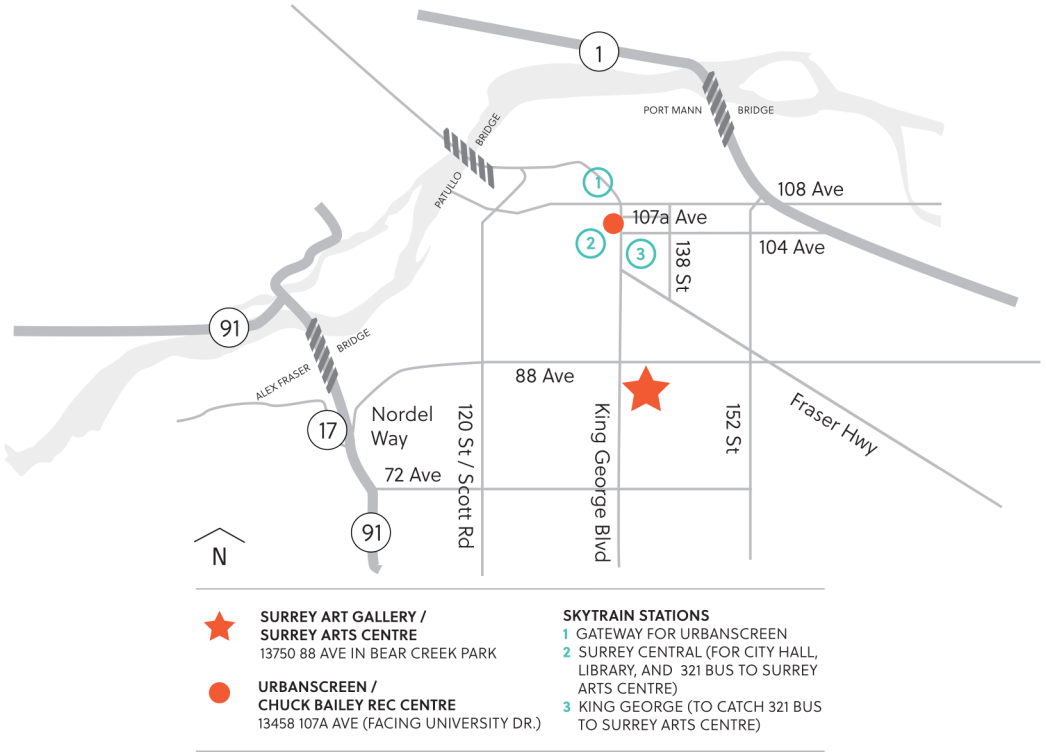
Omer Arbel Office, *8.0*, 2018-19, polymer-fibre filled concrete chairs. Photo: Scott Massey

Omer Arbel, *75.8*, 2019, plywood, concrete, tin. Photo: Scott Massey

IMAGE GALLERY

Peter Fischli and David Weiss, *The Way Things Go*, 1987, installation view. Photo: Scott Massey

INFORMATION / MAP



- *40 minute drive from downtown Vancouver*
- *2 km walk from King George Station*
- *Catch Bus #321 at Surrey Central Station and get off on King George Hwy at 88 Ave.*

SURREY ART GALLERY

13750 – 88th Avenue
Surrey, BC V3W 3L1

604-501-5566
artgallery@surrey.ca
www.surrey.ca/artgallery

GALLERY HOURS

Tues, Wed, Thurs: 9am – 9pm
Fri: 9am – 5pm
Sat: 10am – 5pm
Sun: Noon – 5pm
Closed on Mondays & holidays

Admission by donation

SIGN UP FOR OUR E-NEWSLETTERS

Visit **www.surrey.ca/arts-signup** to receive gallery exhibition and program updates.

CITY OF SURREY the future lives here.
Canada Council for the Arts
Conseil des Arts du Canada
BRITISH COLUMBIA ARTS COUNCIL An agency of the Province of British Columbia