TEACHER RESOURCE PACKET

new territories
LABORATORIES FOR DESIGN, CRAFT AND ART IN LATIN AMERICA

November 4, 2014 to April 5, 2015
Dear Educator,

We are delighted that you have scheduled a visit to *New Territories: Laboratories for Design, Craft and Art in Latin America*. When you and your students visit the Museum of Arts and Design, you will be given an informative tour of the exhibition with a museum educator, followed by an inspiring art-making project in the museum’s MADlab. To make your museum experience more enriching and meaningful, we strongly encourage you to use this packet as a resource, and work with your students in the classroom before and after your museum visit.

This packet includes topics for discussion and hands-on activities intended to introduce the key themes and concepts of the exhibition. Writing, storytelling and art projects have been suggested so that you can explore ideas from the exhibition in ways that relate directly to your students’ lives and experiences.

Please feel free to adapt and build on these materials and to use this packet in any way that you wish.

We look forward to welcoming you and your students to the Museum of Arts and Design.

Sincerely,

Nakeisha Gumbs
Manager of School and Teacher Programs

Lessons written by Kristin Scarola, Museum Educator, in collaboration with the Museum of Arts and Design Education Department. Special thanks to Krysta Camea Manayon and Leila Zobgy for their input and assistance gathering and formatting information.
table of contents

WELCOME 03
THE MUSEUM OF ARTS AND DESIGN 06
HELPFUL HINTS FOR YOUR MUSEUM VISIT 07

NEW TERRITORIES
OVERVIEW & THEMES 09
INTRODUCTORY ACTIVITY 10

THEMES & LESSON
SPACE 12
REPURPOSING 14
NEW MARKETS 16
EXPERIMENTATION 18
CRAFTS 20
LEGACY 22

EXPLORE MATERIALS 24
WEBOGRAHY 24
how does a museum work?

THE MUSEUM OF ARTS AND DESIGN has been functioning as an international resource center for craft, arts and design since 1956. Through its collections, exhibitions, programs and publications, the Museum serves as a forum for critical debate concerning the nature of craftsmanship and the engagement with the process that links materials, techniques, forms, patterns and concepts in all creative work.

ADMINISTRATION: The team led by the Director of the Museum determines the programs, plans and philosophy of the Museum. It also raises funds to realize the Museum’s goals and works directly with the Board of Governors, which guides the Museum’s functions.

CURATORIAL: This is the team, led by the Chief Curator, that works together to decide which exhibits will be shown, how they will look, what artwork is to be included, and how they are to be interpreted.

EXHIBITION DESIGNERS: This team makes galleries look inviting to visitors and help to show the objects.

REGISTRATION: Led by the Registrar, this team arranges the safe handling of art to be placed in an exhibition and maintains the permanent collections acquired by a museum.

EDUCATION: This team provides the interactive interpretation of the objects on view through the educational programs designed for children, adults and families who visit the Museum.

DOCENTS: This team gives tours to engage visitors to learn from the exhibitions.

FACILITY MAINTENANCE: This is the team that allows the day-to-day operations of a museum to continue: from the lights being turned on, to the safety of all who enter the building.

SECURITY GUARDS: This is the team most often seen in a museum, because its main task is to protect the artwork from harm so that in the future people will be able to see the same objects as seen in a museum today.

Museums are places where we can learn about the past, present, and future of the world around us. The diversity of knowledge is endless when the habit of museum exploration is formed at an early age. We look forward to welcoming your group into our galleries.
helpful hints on your visit to the museum.

While visiting the exhibition try to use all your senses. Notice the way the pieces are displayed. Are there any specific groupings of pieces you can distinguish? If you enjoy looking at one piece more than others can you explain why?

Here are some questions and suggestions to think about as you move around the exhibition:

I. WHAT CAN BE OBJECTIVELY OBSERVED?
   A. What is the physical description? Measurement, weight, materials used, articulation of materials...
   B. What iconography, if any, is used? Designs, words, diagrams...
   C. What are the object’s formal design characteristics? Lines, shapes, forms, color, texture...

II. WHAT WOULD IT BE LIKE TO INTERACT WITH THIS PIECE OF ART?
    HOW WOULD YOU HANDLE, LIFT, DISPLAY IT?
   A. How would the piece of art feel, move, and sound?
   B. What does the piece do? Does the piece have a function? How would the figures move if they were alive?
   C. What is our emotional response to this beaded figure? Fear, joy, indifference, curiosity, revulsion, excitement...

III. WHAT IS IN THE MIND OF THE ARTIST? WHAT ARE THE VIEWERS THINKING AND FEELING? USE CREATIVE IMAGINING AND FREE ASSOCIATION.
   A. Review all of the above information and consider what was going on in the world when the work was produced to develop possible interpretations of the piece. (Theories and hypotheses)
   B. Do the figures tell a story? Does the piece have underlying political or social meaning? (Understanding and visual thinking)
   C. Develop a program to investigate the questions posed by the material evidence. (Program of research)

IV. BRAINSTORM ABOUT AN EVENT OR SITUATION that is happening in your life at the moment which you could animate into one scene which could be made into your very own figurative sculpture. (Design themes)
new territories
LABORATORIES FOR DESIGN, CRAFT AND ART
IN LATIN AMERICA

New Territories: Laboratories for Design, Craft and Art in Latin America examines the state of making in today’s globalized society in which art, design and craft converge, by exploring the collaborations between small manufacturing operations and craftspersons, artists, and designers, and demonstrates how the resulting work addresses not only the issues of commodification and production, but also of urbanization, displacement and sustainability. This trend is tracked through several distinct cities throughout Latin America, where some of the most pertinent new directions in arts and design are emerging today.

EXHIBITION THEMES INCLUDE:
- Navigating Personal and Civic Space
- Upcycling and Repurposing Objects
- Developing New Markets for Design
- Cultivating Collectivity and Experimentation in Design and Craft
- Moving Craft into the Future through Collaboration with Artists and Designers
- Conversations with Artistic Legacies

Accompanying the exhibition is a comprehensive website that offers extensive resources for your students: http://newterritorieslab.org/

ENVIROMENT

Central to each of the themes is the interaction between the artist and his/her environment. In the broadest sense, environment is the set of conditions—physical, political, social, and cultural—that shape the life of a person or population. The environment offers resources, sets limitations, inspires and influences.

This Teacher Resource Packet (TRP) serves to bring to light some of the environmental factors that have provoked the artists represented in New Territories to create their work. As you go through the packet with your students, consider how similar environmental factors are affecting you and your community.
introductory activity

SKETCH THE ENVIRONMENT

For five days, have your students spend time in one place outside of the classroom, preferably a public place. It can be inside the school (e.g., library, cafeteria, or hallways) or outside the building (e.g., a park, playground, on a corner, etc.). Each day they should observe and sketch observations about the environment through a series of prompts.

WARM UP

What is sketching? Sketching is a form of visual note-taking. A sketch does not have to be an exact rendering, but should strive to communicate an idea. Each day, spend a brief period (two - three minutes) warming up the mind and body for sketching. The prompts below will help your students to find a variety of methods for mark making, loosen up their muscles, and help them to become comfortable with the idea of a sketch.

- Use a pencil that is freshly sharpened.
- Young children will benefit by sketching in the air, using their whole arm, before actually sketching the paper.
- Focus on being free. Ask your students: What does it mean to be free when sketching? Consider both physical and mental states of freedom.

DAY ONE: FILL A PAGE WITH LINES, ALL KINDS OF LINES!

- Straight, curvy, zig-zags, etc.
- Fast and spontaneous, slow and deliberate
- Light, thin lines; heavy dark lines
- Lines of all sizes!

DAY TWO: FILL THE PAGE WITH ALL KINDS OF CIRCLES (USE ABOVE PROMPTS TO HELP).

DAY THREE: USE SIDE OF PENCIL TO CREATE NEGATIVE SPACE.

- Shade in areas and leave other areas open.
- What kinds of shapes or forms did you create?

DAY FOUR: GO BACK TO DAY ONE.

DAY FIVE: SKETCH A FIGURE USING OVALS.

- Students can work in pairs to pose for each other.
- Model how each section of the body is divided by the joints. Each length between the joints can be represented as an oval.
introductory activity

Find a comfortable place to sit and observe for about 10 minutes each day (less for younger students).

DAY ONE: START BY JUST WATCHING.
- Who is in the space? What are they doing? How are they interacting with each other?
  The space? What do you hear, see, smell?
- Sketch in response to these broad observations.
- Reflect as a class. What did you expect to see? What did you notice? What surprised you?

DAY TWO: OBSERVE THE SPACE.
- What do you notice about the space? Look at it from a variety of perspectives.
- Reflect: How did it feel to focus on the space rather than the people?

DAY THREE: OBSERVE THE PHYSICAL ATTRIBUTES OF THE ENVIRONMENT AND HOW PEOPLE RESPOND TO IT.
- Notice the ground. Look for topographical details.
- How are people responding to the surface they are walking on? How do people move in the space? Is it slippery? Uphill and challenging? Is it an easy surface to walk on?
- Notice the surrounding space. Is it a narrow or open space? What is enclosing it? Are people bumping into one another? Are they moving freely? Is it safe? How can you tell?
- Sketch: How do people move within the environment you are observing?
  Show how the space limits movement or allows them to move freely.
  Reflect: How does the physical environment affect how people move?

DAY FOUR: OBSERVE OBJECTS IN THE ENVIRONMENT.
- What useful objects do you notice? What decorative features do you see?
- What is natural? What is man made? How are people using the objects around them?
  What objects are unnecessary?
- Sketch the objects you notice.
  Reflect: What objects are well used? What would be repurposed?

DAY FIVE: FREE OBSERVATION: OBSERVE THE ENVIRONMENT AND THE PEOPLE WHO INHABIT THE SPACE.
- Sketch what you notice.
  Reflect: What did you learn through observing people in the environment?
  What surprised you? Did you notice any problems (or disconnects) between the space and the people? How did people respond to challenges?
navigating personal and civic space

Our interior private spaces interact with the exterior civic space. Explore how individuals are navigating between their personal and public spaces through architecture.
look and discuss

Look closely at the photograph.

START THE CONVERSATION (K-8)

- List the details you notice about the building and its architecture.
- Look for patterns. Where are the patterns broken?

CONTINUE THE CONVERSATION (3–8)

- Look at all the architectural features. How are they used?
- This photograph is part of a series called The Architecture of Necessity. Looking at the photo, what do you think was added to the building? Why do you think it is a necessary addition?
- Why do you think the stairs would be placed outside rather than inside the building?

DIG DEEPER (6-8)

Oroza said, “Form follows necessity. The modified houses of Havana express this relationship. It’s an architecture of necessity” (Axonmetrics and a Perspective).

- What do you think this statement means?
- Do you agree or disagree?
- Has this concept played out in our life? If so, how?
- Site the evidence you see of this in Luyanó. Watch the short film Axonmetrics and a Perspective found here: http://www.ernestooroza.com/category/architecture-of-necessity/
- Debate the artist’s statements.

think about: limits

Oroza said, “The house is limit and possibility. It’s a prison and, at the same time, an asset. Havana’s transformed houses adjust themselves to legal, economic, cultural and physical limits. These very limits enunciate/articulate the city’s architecture. Architecture is limit and possibility” (Ernesto Oroza, Statements of Necessity (Miami: Alonso Art, 2008), 18 cited in Lowery Sims, New Territories: Laboratories for Design, Craft and Art in Latin America (Madrid and Mexico City: Turner, 2014, 45)).

- What limits do you encounter in your environment?
- How are those limits also a possibility?
- What do you improvise or respond to the limitations of your space?

do

In this activity, students will adapt the outside of a building in their community to better fit the needs of the individuals who use that space.

MATERIALS:
Camera, vellum or tracing paper, colored pencils.

1) Take pictures of several buildings in your neighborhood.
2) With a partner talk about why you selected those particular buildings. Select one building to adapt.
3) Print the building photo that you will adapt in black and white.
4) Overlay piece of vellum.
5) With your colored pencils, fill in elements of the building’s architecture that will remain the same.
6) Add features that will make the building a better place for the individual lives there or the community. Describe why you have made those choices.
7) Would you live in the building you created? Why or why not?
An artist who upcycles interacts with his/her environment in two ways: The local environment presents discarded material to create with, and through repurposing those objects the environment is less impacted by manufacture and waste.
look and discuss
Take a moment to look closely at the Tulip Bolts Chair.

START THE CONVERSATION
● What do you notice first?
● How would the chair feel if you were to run your fingers over its surface?
● What is the chair made out of? What do you see that makes you say that?
● Notice the overall shape of the chair. What about it resembles a tulip?

CONTINUE THE CONVERSATION
Compare and contrast the two chairs.
The original (and iconic) Tulip Chair was designed in 1956 by the Finnish-American designer Eero Saarinen. Through designing this chair, Saarinen hoped “to eliminate the ‘slum of legs’ found under chairs and tables with four legs.” (knoll.com).
● How are the chairs similar? How are they different?
● Describe the components of the chairs (armrest, seat, back).
● What is each chair’s intended function? How does the design support its function?
● Discuss how Capote redesigned the chair in his own vision.

DIG DEEPER
Capote grew up assisting in his family’s hardware store in São Paulo. “Everyday objects inspire me,” he says. “I like to change the utility of an object. Every object can be other things.” (www.iconeye.com). Consider the transformation of everyday objects as they are incorporated as a structural element unrelated to their intended purpose.

think about: upcycling
Upcycling is a form of recycling in which discarded materials are turned into a new and better-quality product. As a hub of contemporary design, Brazilian designers are at the forefront of the upcycling movement, creating pieces that are beautiful in form, functional, and environmentally aware. Along with Leo Capote, other designers (located in Brazil and throughout Latin America) in the exhibition are upcycling using aluminum cans, sheet metal, and plastic bottles to name a few materials.
Consider a discarded object that you often see. Imagine how you could repurpose the material to become something even better than what it once was!

do
In this project, your students will use building materials to create a prototype for a piece of furniture.

MATERIALS:
A selection of small items from the hardware store: bolts, wire, screws, wood scraps, etc.; Hot glue gun; Corrugated Cardboard; Masking tape

1) SKETCH: Make a piece of furniture using corrugated cardboard and masking tape.
● What do you need to do to ensure that your furniture piece can stand up independently?
● What kinds of creative choices did you make?
● How will your upcycled piece be similar to your practice now? What changes will you make?

2) Select the materials that you will use to make your furniture. Choose only one size.
● In what ways will you transform the material? Will you alter its shape? Will you change its texture or paint its surface?
● Do you need a secondary material to help you create a structure? If so, what?

3) Build your piece

4) Add finishing touches, such as textiles for decorative and comfort purposes

5) Assess your furniture. If it were to be made in full size, would it be a sculptural object or a functional one? Why or why not? If functional, for what purposes would it be used? How would you design complementary pieces?
NEW MARKETS

developing new markets for design

Implicit in the whimsically designed desk accessories is the cultural connection to Argentina’s ranching industry. Through exploring vacaValiente’s vision, students will assess how it is realized and communicated to their consumers.
look and discuss
Select one object to discuss with your class or break your class into four groups, each to explore one object. Take a moment to make observations about the animal-shaped desk accessories.

Special questions for the youngest viewers:
● What animals do you see?
● What parts of the animal look realistic?
● What parts were changed by the artist?
● Search for shapes in the animals

START THE CONVERSATION
● Notice how the artist formed the different parts of the animal.
● With a piece of paper, try to recreate one of the three-dimensional forms you see.
● How are the pieces assembled?

CONTINUE THE CONVERSATION
These are meant to be placed on a desk to help organize supplies. How would you use the animal you see? What features do you see that tell you you can use the object for that purpose?
● Devise a word list to describe the animals.

DIG DEEPER
vacaValiente is a collective of designers interested in exploring “the relationship between form and structure based on the laws of nature” (http://newterritorieslab.org/makers/vacavaliente). Find evidence of this in the animal figure you are viewing. What other design aesthetics do you think are a part of vacaValiente’s vision?

think about: marketing
vacaValiente’s pieces can be found in design stores in the U.S., Argentina, and online throughout the world. Their designs are instantly recognizable to consumers familiar with their products. This is called branding. One way to describe a brand is the personality of a group’s products or services. Every object or service created by a company or organization should be an expression of its personality.

Companies and organizations large and small strive to create a brand, so that consumers know what they are about through minimal communication. For example, consider McDonalds. How can you identify their brand?

Consider vacaValiente’s brand. Start by analyzing the collective’s name. What language is it in? What does it mean? Notice the unusual capitalization of the name. What does that communicate to the consumer? Its designers live and work in Argentina, a country known for its cattle ranching. All of vacaValiente’s products are made from recycled leather. How does the use of recycled leather connect with vacaValiente’s brand?

In the previous section, you generated a list of words to describe the animal figures. What does the design aesthetic of the desk accessories tell you about vacaValiente’s brand? Finally, check out their website: http://www.vacavaliente.com/en/

How is the brand being communicated online? How do you think vacaValiente’s branding helps them to sell their products?

Challenge: Describe branding of a product that you have recently purchased.

do
In this activity, students will use design principles to create a throne that has historical significance.

Materials: Pencils, Tracing Paper or regular paper (9x12). Red pencils, Foam sheets (preferred) or cardstock, Hole puncher, Brads & Rulers.

1) On a sheet of paper draw or trace an animal that you would like to turn into a sculpture.
2) Notice the form of the animal. With your red pencil, break the animal up into smaller sections based on its anatomy. For example, draw a line at the point where the neck and back meet.
3) Next, turn each of those sections into shapes. Example: The wide hind leg of a giraffe can be expressed as a triangle; a head is an oval, etc.
4) What would you need to do to make those shapes three dimensional? Have your students, draw one of their shapes on a sheet of paper and bend the paper so that it becomes three dimensional. For example, the triangle would be formed into a cone.
5) Once students have practiced, they should draw the shapes that are forming their animal onto the foam sheets. Students should make sure to think about the form of the animal and the need for balance.
6) Students should cut out the shapes, leaving space for them to be turned into three dimensional forms.
7) Punch a hole where the forms will be joined.
8) Assemble
cultivating collectivity and experimentation in design and craft

Pottery, wood carving, and metal casting are traditional craft practices that can be found throughout Latin America. The designers gT2P experiment with how tradition and new technologies can connect to ensure the longevity of traditional crafts.
look and discuss
Take your time and look closely at the two versions of each scene.

LOOK AND DISCUSS (K-8)
Take your time and look closely at the two versions of each scene.

- What do you notice?
- Identify the different objects in the scene.
- What is the figure doing? What kinds of tools is she using to accomplish her task?
- Imagine a story for the scene.

CONTINUE THE CONVERSATION (3-8)

- How would you describe the differences between the two versions of the scene?
- Notice specifically the shapes and textures. What might these elements tell you about the material used to create the scene?

DIG DEEPER (6-8)
These sculptures are a part of a larger series called Losing My America. gt2P is concerned with the loss of traditional craft processes as a result of mass production. The manufacturing of objects allows for more objects to be created quickly and often with inferior materials. Makers of traditional objects hone their craft through years of practice, with skills often being passed down from generation to generation.

gt2P is using 3D printing technology, to provide artisans with a means to more quickly produce pieces while still being able to use their skills and talents to create through traditional practices. The pieces in Losing My America are a fusion of traditional practices and cutting-edge technology. In the above piece, the sculptures were scanned to create a prototype that would allow the artisan to more quickly reproduce the clay figure while still being able to work with clay and paint.

- Find evidence in the sculptures of the transition in craft practice. How have the shapes and forms changed?
- Do you think they are successful creations? Why or why not?

think about: value
Consider the word value. Often, it refers to monetary value, but other qualities such as personal or emotional connections, craftsmanship, or usefulness can imbue value on an object.

- How does the value of an object change when it is created through mass production instead of by hand? Why do you think that is?
- What are the benefits of mass production of crafts?
- What are the benefits of hand-crafted objects?
- What are the economic implications of mass production?
- Consider objects that you value. Why do you value them?

do
Storytelling Round Robin: Imagine a story for the above scene through a fast-paced game. Depending on your students’ age and level, you may want to provide a prompt or an opening line. One student volunteers to start the story. Going around the classroom, each student adds a line or phrase to the story. Guide your students to include details based on what they see in the sculpture. For example, after a few students have told their line, interrupt to prompt them to include the tree or any other element that hasn’t been added. Once each student has contributed, you can ask one student to volunteer an ending or have your students each write their own ending.

Extension: Create a scene based in literature and tell a new story.
1) Guide your students to work together to create a small scene based on your current unit in literature. Scenes can be made in 2D or 3D form.
2) Write a new story based on the scene.
moving craft into the future through collaborations with artists and designers

Collaboratively fusing traditional and innovative ideas and techniques, the Sinkhole series shows how the physical environment can inspire creativity through use of a black clay found only in a small region of Oaxaca, Mexico, and by evoking the sometimes devastating phenomenon of the sinkhole.
Closely examine Sinkhole No. 1 Bola.

START THE CONVERSATION
- Describe Sinkhole No. 1 Bola.
- What materials is the piece made out of?
- What words would you use to describe the surface of the vessel? How do you think it would feel?

CONTINUE THE CONVERSATION (3–8)
- Compare and contrast “Bola” with “Chaparrito.”
- Take notice of the shape, surface, size, and presentation.
- In Spanish, the word “bola” means ball. “Chaparrito” is an informal word used to affectionately describe a short man or child. How do these words describe the vessels?

DIG DEEPER
A sinkhole can be a devastating natural occurrence in which the ground collapses. Sometimes these are caused by a geological change on the surface of the earth. Other times, they are the result of human activity such as water main breaks.
- How do the vessels resemble actual sinkholes?
- Why do you think the artist chose to design these vessels in the form of this disastrous occurrence?
- The designer Liliana Ovalle was born in Mexico City, but lives in London. In what ways is it significant that she is collaborating with artists from her homeland?
- Focus in on the boot. How does the location of the boot play a part in the balance of the piece? Find areas of symmetry, asymmetry, and balance in the sculpture.

think about: collaboration
The Sinkhole vessels would be impossible to create without the collaboration of two distinct makers: designer Liliana Ovalle and the traditional artisans of Colectivo 1050°. “The collaboration... brings together Ovalle’s aesthetic explorations with the richness of vernacular pottery from Oaxaca” (http://newterritorieslab.org/makers/liliana-ovalle). Along with innovating new designs created through traditional means, the collaboration provides economic support to the indigenous makers who live in some of the poorest regions of Mexico.
- With your students, brainstorm a list of talents, strengths, and abilities that students in the class possess.
- Group several of the qualities together to create teams that have a diverse set of complementary skills.
- Once the students are grouped by skill, ask them to consider how they could use one another’s skills and knowledge to innovate a useful object.
conversations with artistic legacies

The impoverished citizens of a locality are often relegated to the margins of society. Pepe López responds to the inequity he encounters in Caracas through both materials and concepts.
look and discuss

START THE CONVERSATION

- Describe in detail the installation.
- What colors, shapes, and forms do you notice?
- What found objects did the artist collect?
- How do you think the object was constructed?
- View this short video to watch the artist at work! http://vimeo.com/108952273

CONTINUE THE CONVERSATION

Installation is a kind of artwork that interacts with the space around it. Geometrias marginales is a large-scale two-dimensional installation. Imagine viewing the installation from several perspectives: up close, at a distance, from one side, looking up at the top, squatting to see the lower portion at eye level. Another way to get a different perspective is to roll up a piece of paper into a tube to notice details in a small area.

- What did you notice by looking at the installation from a variety of perspectives? What is the artist showing us through the size and scale of the object?

DIG DEEPER

López states, "The development of my artistic work is the result of continuous observation of my urban environment" (http://newterritorieslab.org/makers/pepe-lopez). In Geometrias marginales he illustrates the geography of the expanding poor neighborhoods called ranchos, which line the steep hills that surround Caracas. Using Google Maps, López isolated the ranchos and represented each neighborhood through the geometric forms that can be seen from an aerial view.

- What do you think the artist is communicating through his work?

think about: artist legacy

Along with being informed by his environment, López is inspired by rich artistic legacy of Venezuela. The use of geometric forms is a significant attribute of the works of Gego (Gertrude Goldschmidt, 1912-1994) and Carlos Cruz-Diez (b.1923), for example. Geometrias marginales also can be described as minimalist. In what ways is López able to communicate his ideas through a geometric and minimalist approach?

do

In this activity, students will develop an awareness of their space by creating a map of phenomena in a localized area. Once the points have been plotted, they will connect the dots to create geometric forms that can serve as the basis for an installation that remaps their municipality.

MATERIALS

Access to Google Maps or another online mapping program; Pencils, markers, scissors, masking tape; 20x30 sheets of paper (preferably tag board)

1) Working in pairs, have your students printout a map of a local area to explore. The area should be no smaller than a city block. Each pair in the class should have a different area.

2) Have each pair decide on an occurrence that they would like to investigate. You may choose guide your students based on a specific curriculum area or leave it open. General examples include: Number of number of dogs in the area, number of bottle caps littering the street, number of commercial vehicles parked; number of single family houses, etc.

3) Send your students off to collect their data. With their maps in hand, have them plot a point at each location within the area that they encounter the occurrence they are investigating. This can be done at one time, or students can go out several times to achieve more rich and varied results.

4) Once the points are plotted, students will connect the dots to create areas that show concentrations of their findings. Through connecting the dots, your students are making the geometric shapes that will be used to redefine your city space.

5) Name the regions created based on the occurrences your students have documented.

6) Draw the outline of the plotted points on the large sheet of paper and cut it out. If time allows, your students may decorate their regions.

7) Lastly, your students will assemble their municipality based on the concentration of varying phenomena. Guide your students consider how they want to remap and arrange the city. Once the regions have been arranged, install the map on a wall in the school or classroom.
explore materials

Pepe López, like many artists such as Liliana Ovalle, Leo Capote, vacaValiente, gt2P, and Ernesto Oroza, works in a variety of media.

“Paper, string, adhesive tape, polyethylene bags, are changed into whimsical swarms, networks that allude to the artificial world of post-industrial society in which nature has been definitively replaced by man-made materials” (http://pepelopezreus.blogspot.com/2013/09/geometrias-desechables-y-geometrias.html).

Pictured here is Geometría blanba, one of his many tapestry pieces that is made from upcycled plastic bags. Like Geometrias marginales, López creates his compositions of geometric shapes, but in this series, each tapestry is formed from 300 plastic bags.

- Ask your students to count how many plastic bags they see littering the street as they walk to and from school. There are probably far fewer plastic bags to be counted than even just a few years ago because of the efforts that many have been making to use reusable bags. Have your students research the impact of plastic bags on the environment.

The possibilities for upcycling plastic bags are endless! They can be woven into rugs, bags, and coasters; turned into a yarn for knitting and crocheting; lightly heated and formed into vessels; tied to create wreaths; fused to fabric to create objects such as jewelry and wallets, and much more.

Based on the time you have in class and your students’ level, search online for a project that is appropriate for them. Instructables.com is a good place to start, but there are many websites that offer step-by-step instructions.

TIPS:
- Like any new material, your students will need time to experiment with the plastic bags. Have them practice manipulating the bags before working on the finished product.
- Consider color, pattern, repetition, and rhythm in the design. Most plastic bags have a logo printed on them. Students should choose to either cut the logo away or to incorporate into their design.
- The project you choose can be collaborative or done individually.
- If you have your students working collaboratively, set-up a station in your classroom for them to work and contribute to the piece a little at a time.

artist pages

Ernesto Oroza:
http://newterritorieslab.org/makers/ernesto-oroza

Leo Capote:
http://newterritorieslab.org/makers/leo-capote

vacaValiente:
http://newterritorieslab.org/makers/vacavaliente

gt2P:
http://newterritorieslab.org/makers/gt2p

Liliana Ovalle:
http://newterritorieslab.org/makers/liliana-ovalle

Pepe Lopez:
http://newterritorieslab.org/makers/pepe-lopez