

# The State of the Art of Architecture

## Seeing the Biennial: A Guide for Exploration

CHICAGO  
ARCHITECTURE  
BIENNIAL

CHICAGO  
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FOUNDATION

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## CHICAGO ARCHITECTURE BIENNIAL

### ABOUT THE CHICAGO ARCHITECTURE BIENNIAL

The inaugural Chicago Architecture Biennial (CAB)—titled *The State of the Art of Architecture*—provides a platform for groundbreaking architectural projects and spatial experiments that demonstrate how creativity and innovation can radically transform our lived experience.

By shining a light on realized architectural projects, projects in formation, spatial experiments made visible, and public gatherings, the Biennial seeks to generate thinking about architecture and its implications for our times.

[chicagoarchitecturebiennial.org](http://chicagoarchitecturebiennial.org)  
[@chicagobiennial](https://twitter.com/chicagobiennial)

## CHICAGO ARCHITECTURE FOUNDATION

### ABOUT THE CHICAGO ARCHITECTURE FOUNDATION

Since 1966, the Chicago Architecture Foundation has served as a cultural ambassador—welcoming the world to Chicago and using its architecture to inspire millions.

Each year CAF docents and educators inspire more than a half a million people to discover why design matters. As one of Chicago's top 10 cultural organizations and the world's largest public architecture organization, CAF is devoted to celebrating and promoting Chicago as a center of architectural innovation.

As Chicago's forum for the exchange of ideas on the built environment, CAF inspires people to participate in the building of vibrant communities and to demand the highest standard in urban design. CAF accomplishes this through tours, programs, exhibitions, field trips, curricula and online tools that are part of a dynamic learning journey for all ages.

[architecture.org](http://architecture.org)  
[@chiarchitecture](https://twitter.com/chiarchitecture)



PHOTO Iwan Baan, Chicago Architecture Biennial

# welcome

Welcome to the 2015 Chicago Architecture Biennial. As North America's largest international exhibition of contemporary architecture, the Biennial provides a snapshot of the extraordinary ways in which architects, artists, designers, planners, activists, and policy makers from around the world are tackling the most pressing issues of today.

**Installations in the Biennial ask you to consider:**

*How are architects and designers solving problems in new ways?*

*What new materials are architects and designers using?*

*What is the impact of architecture and design on our lives and cities today?*

The Chicago Architecture Foundation is the official Education Partner for the Chicago Architecture Biennial. Along with this Guide we have developed a suite of programs—including special invitation field trips, Saturday Studio “master classes” with architects and designers, a Teen Ambassador program, The BP Student Design Competition for Chicago Public School students—to help make the Biennial accessible to a broad and diverse audience and reach Chicago-area youth who might otherwise not be exposed to architecture and design.

# how to use this guide

There are more than 100+ installations in the Biennial at the Cultural Center. There is no “right way” or “right order” for exploring the Biennial. This Guide was designed with educators and students grades 5-12 in mind. The guide introduces you to twelve Biennial installations organized into four themes: Gather, Live, Make and Play. Each theme provides:

- A starting point for “looking”
- An overview of each project
- Discussion questions
- Opportunities to practice observing and interpreting buildings and art installations

We’ve chosen twelve engaging installations throughout the Biennial. The four themes we’re exploring will help students understand the big ideas behind what the artists and architects are thinking.

**GATHER** Three projects help us reimagine how we gather together on the sidewalk, in a large public building like the Cultural Center and in an office.

**LIVE** Three projects raise big questions, with complicated answers, about how we live at home and in our communities.

**MAKE** Three projects explore the diverse ways in which we make and construct objects and ideas.

**PLAY** Three projects examine how architects and designers create objects and places for children and adults to escape from their everyday lives and interact with interesting buildings and spaces that delight and inspire.

The guide can be printed and shared directly with students. Space is provided for students to respond to the question prompts, take notes or sketch.

## RESOURCES

Resources at the end of this guide include:

- Suggested readings and extension experiences for going beyond the Biennial
- Academic connections to the National Education Common Core Standards, the Next Generation Science Standards and the College, Career & Civic Life Framework for Social Studies State Standards

## FOR SPANISH-SPEAKERS

The guide is also available for download in Spanish at [architecture.org/guia-bienal-en-espanol](http://architecture.org/guia-bienal-en-espanol)

# learning to look

In the same way you can look at and read a book, you can also read a building (such as the Cultural Center) or a work of art and design (such as the installations in the Chicago Architecture Biennial).

Here are a few questions to ask yourself when you look at a building or view the Biennial installations.

## **WHO MADE IT?**

### Architect / Designer

- Who designed this project?
- What country do they live in?
- Do they work alone or with other people?
- Is the project specifically designed for their home country / city or could it be built anywhere?
- In creating this project, is the designer trying to critique or shine light on a current issue or problem? What is it?

## **WHY WAS IT MADE?**

### Purpose and Function

- What is the purpose of the project?
- Has this function changed over time?
- Who was the project designed for?
- Who uses it now?
- Can you interact with the project in some way or is it just designed to be viewed?
- Does this project try to change something in society?
- Is there some aspect of daily life or society that this project can help fix or make better?

## **WHAT IS IT MADE OUT OF?**

### Materials and Structure

- What different materials were used to construct this project?
- How do you think the project is standing up?
- Can you see the structural elements to hold it up?
- Is the designer using technology to make the project move in some way?

## **HOW BIG IS IT?**

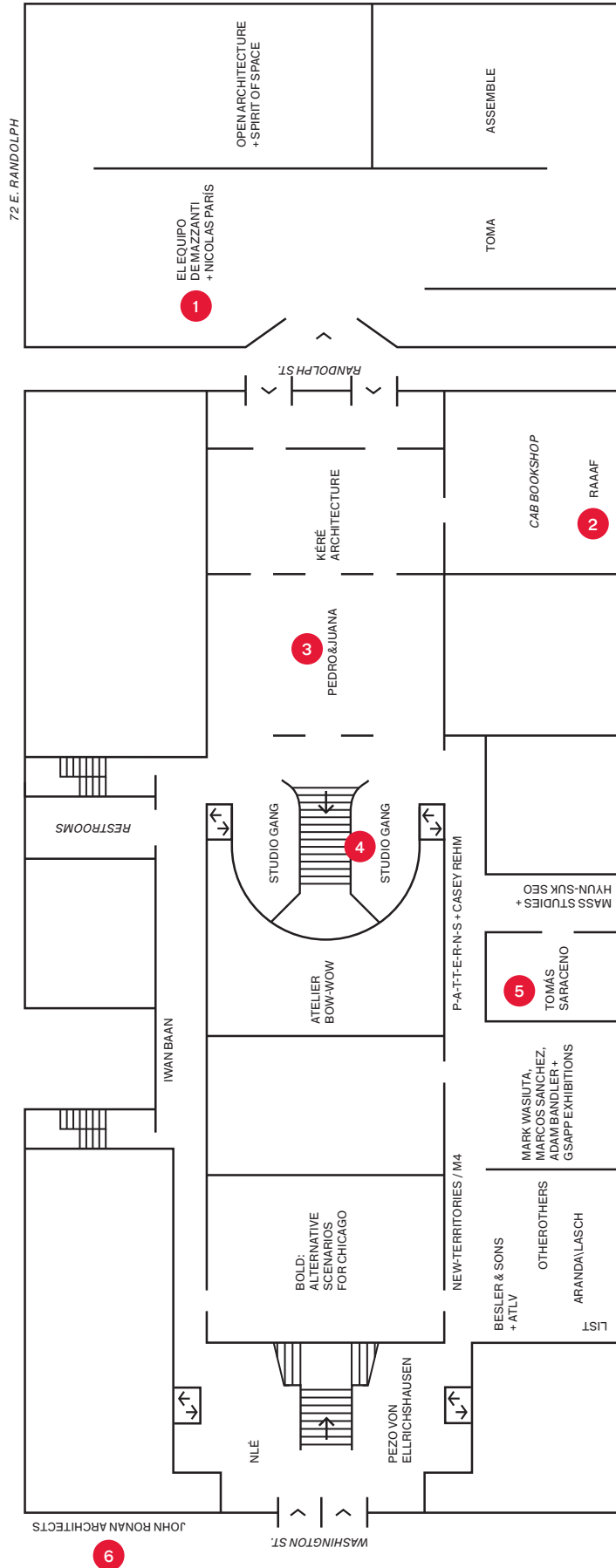
### Size and Shape

- How would you describe the overall size and shape of the project?
- Does the project make you feel large or small?
- How does the size and shape give the project its identity?

## **WHAT MAKES IT SPECIAL?**

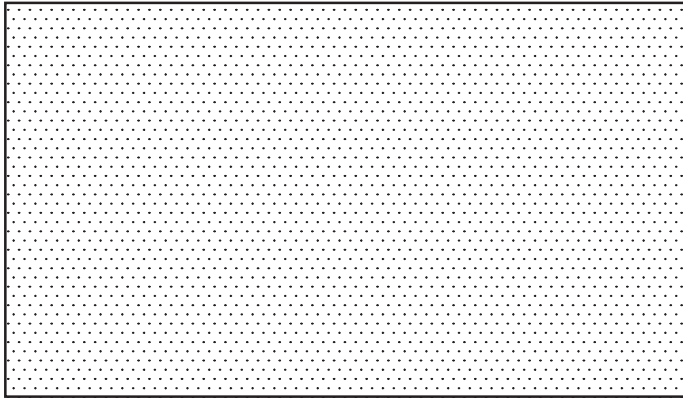
### Details

- Move in for a closer look. What kind of textures patterns do the materials have?
- Does the project have any special ornamentation or details?
- How do these details contribute to its overall character?



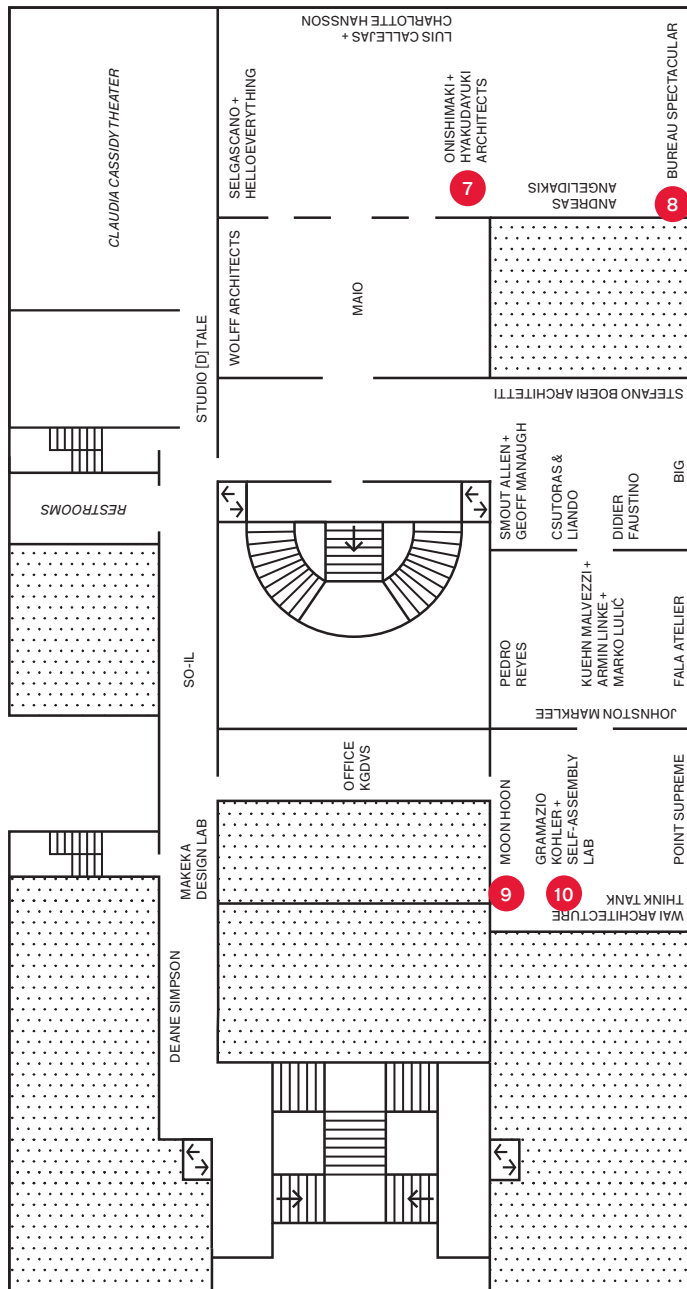
# first floor

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# second floor

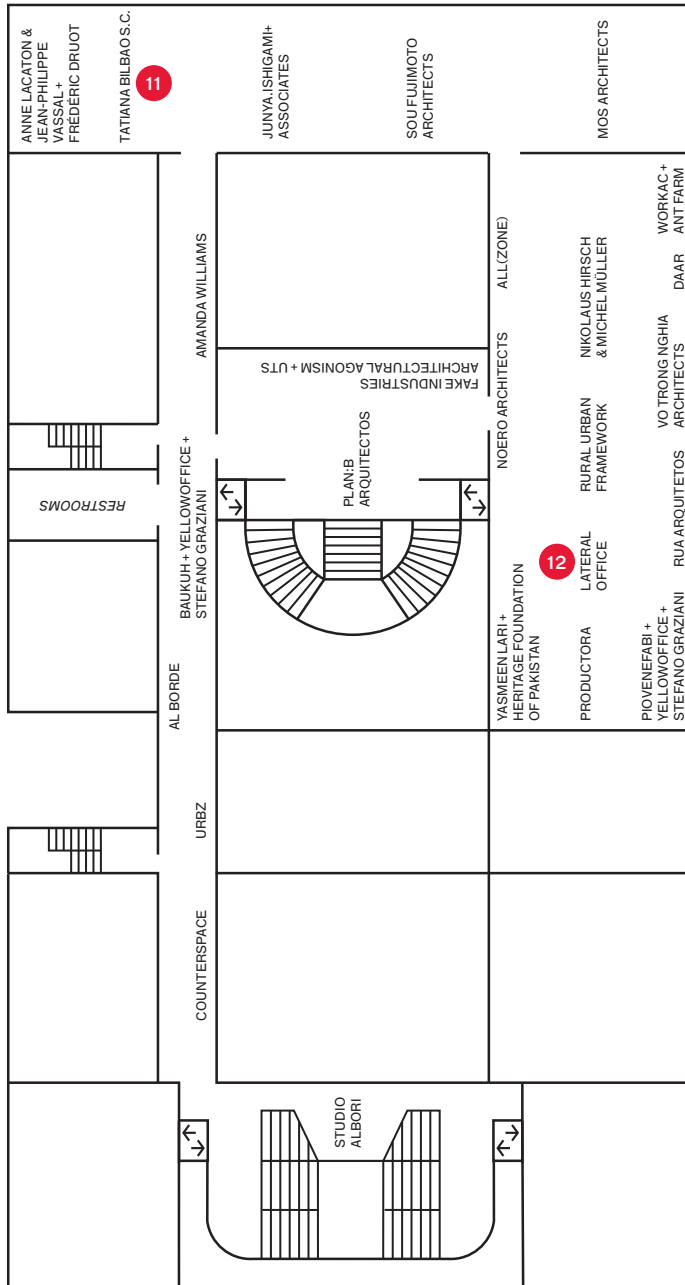
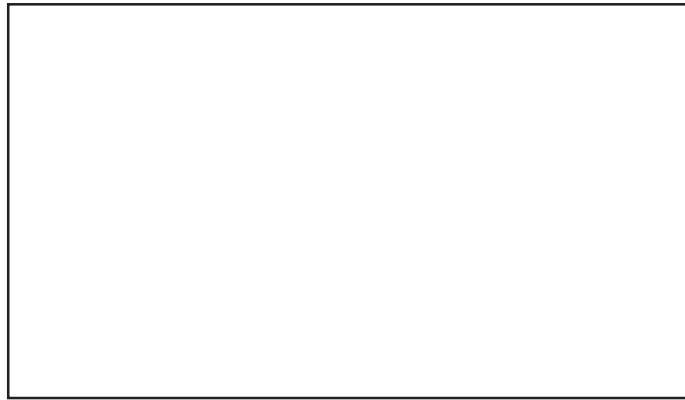
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# 1 Speaking Architecture

EL EQUIPO DE MAZZANTI + NICOLÁS PARIS (BOGATÁ, COLOMBIA)

Architects El Equipo de Mazzanti + Nicolás Paris of Bogotá, Colombia have created an exhibition where the architecture is manipulated by the visitors. Speaking Architecture is designed as a place to play—it is built with objects that can be moved around. Their exhibition gives visitors the opportunity to take control, create a new architecture, and change the configuration of spaces. When people move the large and small table-like objects unexpected forms are created—and change over and over.



? Describe how the objects are arranged when you first arrived at this exhibition?

? Are people moving the objects now? What types of spaces have they created?

? Give it a try. Did it feel like you were “playing?”  
How does this type of play feel different than playing with small blocks?

# gather

## 2 The End of Sitting

RAAAF (AMSTERDAM, THE NETHERLANDS)

We spend a lot of our time each day sitting—at school, at a job, in the car, on the couch at home. But too much sitting isn't good for our bodies. While we do need some type of furniture to work on top of, the Amsterdam architecture firm called RAAAF, questions whether we need to keep using traditional desks and chairs in the future. For the office of 2025, they have designed radical new objects to stand on, lean on, hang from, and lay down on—all while still providing places where people can gather, talk, read, and work.



? How would your day in a classroom be different if you were not required to sit at chairs and desks?

? Go find an enticing or interesting spot to stand on, lean on, hang from or lay down on. How does this feel different from sitting?

## 3 Randolph Square

PEDRO & JUANA (MEXICO CITY, MEXICO)

The Chicago Cultural Center was originally built in 1897 as the city's main public library. Inside, a reading room—called Randolph Square, located off the first floor rooms near Randolph Street—once provided a place where Chicagoans could read the latest edition of daily newspapers. Architects Pedro & Juana of Mexico City wanted to transform this current space with changing light and shadow throughout the day. Using a web of thick string and suspended old lights in addition to sofas and tables, they have redesigned this space to gather, to create a new kind of “living room for the city.”



? Think about the spaces where you gather with other people.  
What makes these places good for getting together, talking or just being alone?

? What types of groups do you see gathered in this space today?

? What are they doing and how are they using the space?

## 4 Polis Station

STUDIO GANG (CHICAGO, USA)

This year, President Obama created a special task force to evaluate how the police work with communities and to propose new ways of working together. Sometimes the relationship between police officers and the people in the neighborhoods they serve are strained and tense. Many communities across the United States struggle with violence. In their exhibition, Polis Station, the architects at Studio Gang of Chicago wondered if a radically different type of police station building might encourage positive interactions between residents and the police in order to improve and strengthen a community.



- ?

How would you describe the relationship between the police and residents in your community?
  
- ?

Make a list of the kinds of things that typically happen inside a police station.
  
- ?

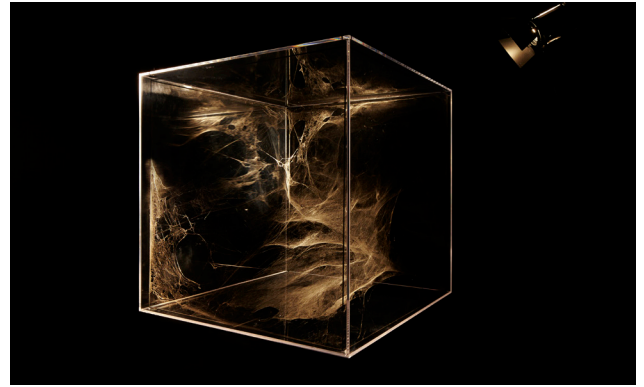
How does the Studio Gang's design change what traditional police stations are like?

# make

## 5 Spider Webs

TOMÁS SARACENO (BERLIN, GERMANY)

This Biennial installation is the creation of German artist Tomás Saraceno with help from some very active spider ‘architects.’ The *Cyrtophora citricola* spiders come from warmer parts of Europe, Africa, and Asia and unlike other spiders, all the cells in their webs are rectangular. The artist takes his inspiration from architecture, space exploration, science fiction, and geometries. In this darkened space, dotted with glowing sculptures, he placed spiders inside clear, sealed cubes in which they create silvery webs. Each web becomes a unique, floating galaxy and a structural wonder. During the building period, each cube is rotated; changing gravity and changing the spider’s work. The artist is exploring what can be learned from what the spider is making. He is also wondering about the relationship between nature and humans: How do humans influence the architecture and geometries that nature creates?



? What types of architecture built by animals or insects can you think of?

? What adjectives would you use to describe the spider’s creation?

? How do you think the spider architecture would look if it were left untouched by humans?

## 6 Leaf Lounge

JOHN RONAN ARCHITECTS (CHICAGO, USA)

We usually think about sidewalks and streets as places for movement and buildings as places to shelter and gather. John Ronan Architects of Chicago have created, Leaf Lounge, a new outdoor space, located between the city streets and the Cultural Center. It feels as though you are outside and inside at the same time. Low walls made of metal wire mesh are filled with autumn leaves. While it has no ceiling or doors, the new temporary space created on the sidewalk creates a place to relax and gather together.



? Can you recall an outdoor space you've experienced that felt as if you were inside and outside at the same time?

? What would happen if the wire mesh was taken away?

? How would the space feel different if the wire mesh was filled with rocks?



## 7 Children's Town

ONISHIMAKI + HYAKUDAYUKI (TOKYO, JAPAN)

Young children love to imagine new worlds, imitate grown-ups and play house. As children learn, it's also important that they have some ability to control and make decisions about their play spaces. Architects Onishimaki + Hyakudayuki from Tokyo, Japan have created several small play houses on wheels. Children can parade with the houses or change the layout of them to make a new town.



? Did you have a favorite place to play as a child? Describe it.

? Children often use props to tell stories. The architects are hoping children will use these small houses as characters in their stories and play. If the child rearranged the three parts, how do you think the play would be different?

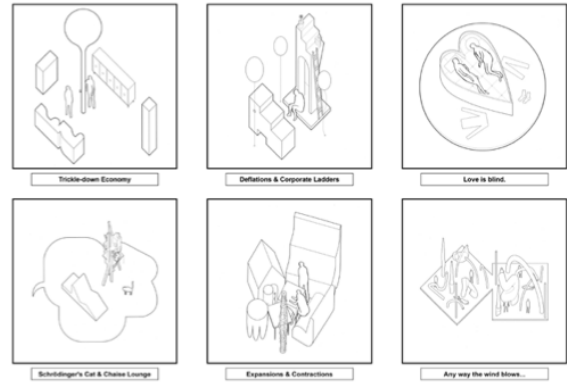
? How does the flexibility of the architecture make play possible?

# live

## 8 Furniture Urbanism

BUREAU SPECTACULAR (LOS ANGELES, USA)

Furniture can tell us how to behave. The way furniture is placed in rooms—in addition to the walls—creates zones where we eat, sleep, wash, cook, and relax. The exhibition created by the architecture team of Bureau Spectacular from Los Angeles is designed to make you to notice the lack of flexibility of furniture, objects and spaces within our homes and how these could be different in the future.



How does the arrangement and type of furniture in a room impact what you do in the space?



If these arrangements of furniture were in your home, how would they change how you moved through the spaces?



# make

## 9 Doodle Constructivism

MOON HOON (SEOUL, SOUTH KOREA)

Architect Moon Hoon of Seoul, South Korea has been doodling in sketchbooks for more than 40 years. His doodles are closely connected with the architecture he designs; sometimes he sketches fantastical structures he imagines, but which cannot be built. Hoon grew up in a coal mining town and his memories of those abandoned mines—as well as science fiction movies and other architectural sketchers from history—often inspire his drawings. For Hoon, his sketch book is a kind of journal of his day, except in picture form.



? What types of things do you sketch, create or build?

? Look closely at his drawings. Find an example of a building.  
Do you think this building could exist in real life? Why or why not?

? Why do you think the artist created such detailed drawings on small sketchbook pages?

# make

## 10 Robotic Rock Printing

GRAMAZIO KOHLER RESEARCH + ETH ZÜRICH + SELF ASSEMBLY LAB AT MIT  
(ZURICH, SWITZERLAND AND CAMBRIDGE, USA)

Traditionally new buildings are built by humans who use natural resources as materials (like stone or wood), materials produced at the construction site (like concrete) or materials created in a factory (like steel or insulation). The researchers from Gramazio Kohler Research + ETH Zürich + Self Assembly Lab at MIT are proposing a radically different method of construction and new types of materials: This structure was built by a robot. 3D printing with rocks. Imagine if one day a robot could 3D print a whole new building?



Imagine your home had a 3D printing robot. What would you like it to print for you?



How do you think this structure stands up?

# live

## 11 Sustainable Housing

TATIANA BILBAO S.C. (MEXICO CITY, MEXICO)

The Constitution of Mexico states that every family has the right to enjoy “decent housing.” Unfortunately, like many countries around the world, this does not always happen. Mexico’s population of 120 million is growing fast—and Mexico needs 9 million more homes. Architect Tatiana Bilbao of Mexico City has designed a small ‘prototype’ house—a model that other homes can be copied from—to help solve this problem. Her pitched roof house, which can be adapted to varying cultures and geography, uses local, sustainable materials like concrete blocks and recycled wooden pallets.



? How would you describe “decent housing”?

? Does everyone in your community have “decent housing”?

? Why do you think the architect chose these particular materials for the house?

## 12 Making Camp

LATERAL OFFICE (TORONTO, CANADA)

Since the 1950s, camping in North America has been a popular experience for some families. Packing up the car and leaving the city or suburbs behind, many Americans and Canadians head to the wilderness or the countryside to enjoy beautiful landscapes. The Toronto architects from Lateral Office wonder if 21st century campers are more removed from experiencing nature because they bring along or require modern amenities (like technology or comforts of home), even while in the woods. Their exhibition proposes five different prototypes of camping architecture and experiences.



? Look at the five camping structure prototypes. Which one would you want to spend a night in? Why?

? How do you think these structures will help people distance themselves from their life at home and better experience nature while camping?

# resources

***Ways of Seeing***, John Berger. Penguin Books, 1990. First published in 1972, Berger’s influential book of essays cuts through artistic jargon and gives strategies for “reading” artwork to see its symbolism, the context of place and time, and the artist’s intention.

***Architecture: Form, Space, and Order***, Francis D.K. Ching. John Wiley & Sons, 1996. Ching is well-known for his beautifully-illustrated architecture books. This text introduces readers to significant global buildings that span the centuries and their architectural principles, fundamental to every designer.

***Looking Around: A Journey Through Architecture***, Witold Rybczynski. Penguin Books, 1993. Written in an easy, readable style, Rybczynski demystifies architecture, explaining why certain buildings look the way they do and how architecture—as an art and a science—represents us as a society.

**DiscoverDesign.org** The Chicago Architecture Foundation’s free digital platform connects teens, educators, and architects/designers for project-based learning in architecture. Teens can choose a design challenge, learn about the design process used by professionals, post images and drawings of their solutions, and get feedback on their work.

***The Architecture Handbook: A Student Guide to Understanding Buildings*** Chicago Architecture Foundation’s innovative college-prep architecture textbook for high school students includes hundreds of hands-on activities which teach the fundamentals of both architectural design and technical drawing. Using a sustainable green home as the book’s case study, students investigate 10 well-known residential buildings around the world. Includes both student and teacher edition. **Available at [shop.architecture.org](http://shop.architecture.org).**

**www.NEXT.cc** is a series of online activity ideas that introduce what design is, what design does and why design is important. It offers activities across nine scales—nano, pattern, object, space, architecture, neighborhood, urban, region and world.

## EXTEND YOUR BIENNIAL EXPERIENCE

The Chicago Architecture Foundation offers year-round programs exploring architecture, engineering, construction and design (ACED) concepts through our in-depth learning Institutes for teens, families, educators and professional architects and designers. Hands-on workshops, award-winning curricula, studio workshops and field trips use design thinking and the built environment to teach core academic subjects and inspire future designers. Learn more at [architecture.org/educators](http://architecture.org/educators)

# education standards

## English Language Arts<sup>1</sup>

CONCEPT / SKILL	GRADE 5	GRADE 8	HIGH SCHOOL
Close read of a text to determine info and make logical inferences	Reading Info	Reading Info	Reading Info
Writing	Writing	Writing	Writing
Describing a visual object	Speaking and Listening	Speaking and Listening	Speaking and Listening

## Social Studies<sup>2</sup>

CONCEPT / SKILL	GRADE 5	GRADE 8	HIGH SCHOOL
Human-Environment Interaction: Place, Regions, and Culture	D2.Geo.4.3-5	D2.Geo.4.6-8	D2.Geo.4.9-12
	D2.Geo.5.3-5	D2.Geo.5.6-8	D2.Geo.5.9-12
	D2.Geo.6.3-5	D2.Geo.6.6-8	D2.Geo.6.9-12
	D2.Geo.7.3-5		
	D2.Geo.8.3-5		
	D2.Geo.9.3-5		
	D2.Geo.10.3-5		
	D2.Geo.11.3-5		
	D2.Geo.12.3-5		
Human Population: Spatial Patterns and Movements	D2.Geo.4.3-5	D2.Geo.7.6-8	D2.Geo.7.9-12
	D2.Geo.5.3-5	D2.Geo.8.6-8	D2.Geo.8.9-12
	D2.Geo.6.3-5	D2.Geo.9.6-8	D2.Geo.9.9-12
	D2.Geo.7.3-5		
	D2.Geo.8.3-5		
	D2.Geo.9.3-5		
	D2.Geo.10.3-5		
	D2.Geo.11.3-5		
	D2.Geo.12.3-5		
Global Interconnections: Changing Spatial Patterns	D2.Geo.10.3-5	D2.Geo.10.6-8	D2.Geo.10.9-12
	D2.Geo.11.3-5	D2.Geo.11.6-8	D2.Geo.11.9-12
	D2.Geo.12.3-5	D2.Geo.12.6-8	D2.Geo.12.9-12

## Science<sup>3</sup>

CONCEPT / SKILL	GRADE 5	GRADE 8	HIGH SCHOOL
Earth and Human Activity	5-ESS3	MS-ESS3	HS-ESS3
Engineering Design	3-5-ETS1	MS-ETS1	HS-ETS1
Motion and Stability: Forces and Interactions	5-PS2	MS-PS2	HS-PS2
	5-PS3	MS-PS3	HS-PS3
Ecosystems	5-LS2	MS-LS2	HS-LS2

## Mathematics<sup>1</sup>

CONCEPT / SKILL	GRADE 5	GRADE 8	HIGH SCHOOL
Viewing one object from multiple viewpoints and spatial thinking in 3 dimensions	5.G	8.G	G-MG

<sup>1</sup> Common Core State Standards for English Language Arts and Mathematics

<sup>2</sup> College, Career, and Civic Life (C3) Framework for Social Studies State Standards

<sup>3</sup> Next Generation Science Standards

# acknowledgements

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