



STANDING THE TEST OF TIME

OVERVIEW:

In this lesson, students will examine the role of an architect and explore basic architectural elements through the life and work of Cass Gilbert. Through this work, students will develop an understanding of the decision making process, scientific, and artistic thought that supports the creation of the built environment around them. In a concluding project, students design their own state capitol building to represent the people of their state.

OBJECTIVES:

- To understand the important role Cass Gilbert played in designing and building the American Skyline and the Minnesota State Capitol.
- To understand and appreciate the artistic and scientific thought process behind creating our built environment, and recognize the extent to which daily life is affected by architectural design.

CONTENT CONNECTIONS

This lesson compliments the teaching of westward expansion, industrialization, settlement patterns in MN and the building boom at the start of the 20th Century.

Connections to MN Academic standards in History, Social Studies and Art: MN Standards for Visual Arts, Grades 6-8

Artistic Interpretation

The student will understand and use artistic processes to analyze and interpret a variety of works.

The student will:

- understand how the following components of visual arts are used to convey meaning:
 - elements, including color, line, shape, form, texture, and space;
 - vocabulary;
 - structures, such as two dimensional or three dimensional;
- understand the connection between a visual art work, its purpose, and its cultural and historical contexts;
- communicate a personal reaction to works in visual art using the components of visual art

LESSON:

Grade level: 6-8

Subject: History, Social Studies, and Art

Time needed: 1-2 class periods

Materials:

Video Cass Gilbert: Standing the Test of Time

Copies of primary sources

Note: This lesson may be used with Ch. 12, "Bigger, Taller, Faster" of the Northern Lights Curriculum.

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Artistic Creativity and Performance

The student will understand and use artistic processes to create and perform.

The student will:

- understand how audience and occasion affect artistic choices in creation of visual art
- generate ideas for artistic expression in visual arts
- make and explain artistic choices in creating visual art

MN Social Studies Standards, Grades 4-8

MN History Grades 4-8, II. Minnesota History, E. Industrial Era 1865 - 1914, “The student will know and understand Minnesota’s major industries and the economic, social, political, and technological changes that accompanied industrialization.”; Historical Skills grades 4-8, IV Historical Skills, B. Historical Resources, “The student will begin to use historical resources,”; Geography Grades 4-8, V. Geography, D. Interconnections, “The student will describe how humans influence the environment and in turn are influenced by it.”

INTRODUCTION:

Architecture is the art & science of erecting buildings. Most of us take for granted the art and design that is all around us, letting elements and details go unnoticed. Houses, hotels, schools, stores, and places of worship are all designed with particular purposes for their use in mind. A look at these concepts through the life and work of Cass Gilbert will offer students the opportunity to become conscious of how the “built” environment around them impacts their own lives.

In addition, the story of Cass Gilbert is one that shares the power of reaching for goals, setting one’s sites on their dreams, and committing to the hard work necessary to see them become reality. As alluded to in this documentary, Cass Gilbert was not a model student. His artistic flare was evident at an early age and he perfected his drawing as a way of thinking and seeing. Cass knew at a young age that he wanted to be an architect and through persistence, creativity, and insistence on “doing it right”, he was able to weather even the toughest of economic times to continually build more beautiful, bigger, and enduring structures that would leave their mark on this Nation’s history.

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For More Detailed Background information on Cass Gilbert,

visit the Cass Gilbert Society's Website: <http://www.cassgilbertsociety.org/bio.htm>

For information on architecture for children,

visit the Architecture in Education website: <http://www.aiaphila.org/aie/>

For Further Information on the construction of the Minnesota State Capitol,

visit the MN Historical Society's State Capitol website: <http://www.mnhs.org/places/sites/msc/>

Virtual Tours of the MN State Capitol are available by visiting:

<http://www.leg.state.mn.us/youth/>

CONSIDERING BEFORE VIEWING...

Connecting to Students Experiences: Architecture in Your World

The critical decisions faced by architects in the design process are easily viewed by students when asked about the construction of the environments with which they are already familiar. Ask students to look at the room they are sitting in. Give students a few minutes to play detective by dissecting their environment. Consider: What materials is the building made from? What colors are most noticeable in your surroundings? How do those colors make you feel? How does the arrangement of the room (furniture, carpets, wall coverings, colors) influence how people use this room? How are sources of light and temperature controlled? Give students another few minutes to think about the design of another room in the school. In what ways are they alike & different? How does the design of the room influence the way it is used and how people interact within those walls?

Develop a Shared Vocabulary

Key terms:	architect	keystone	masonry	dome
	facade	arch	spire	column
	symmetry	focal point		

PROCEDURE:

View the documentary, "Cass Gilbert: Standing the Test of Time". Discuss key questions raised by reviewing the "Discussion Questions" included here. Next, divide the class into groups of 3-5 students for review of Primary Sources. Allow students to record their findings as they answer the following questions for each source:

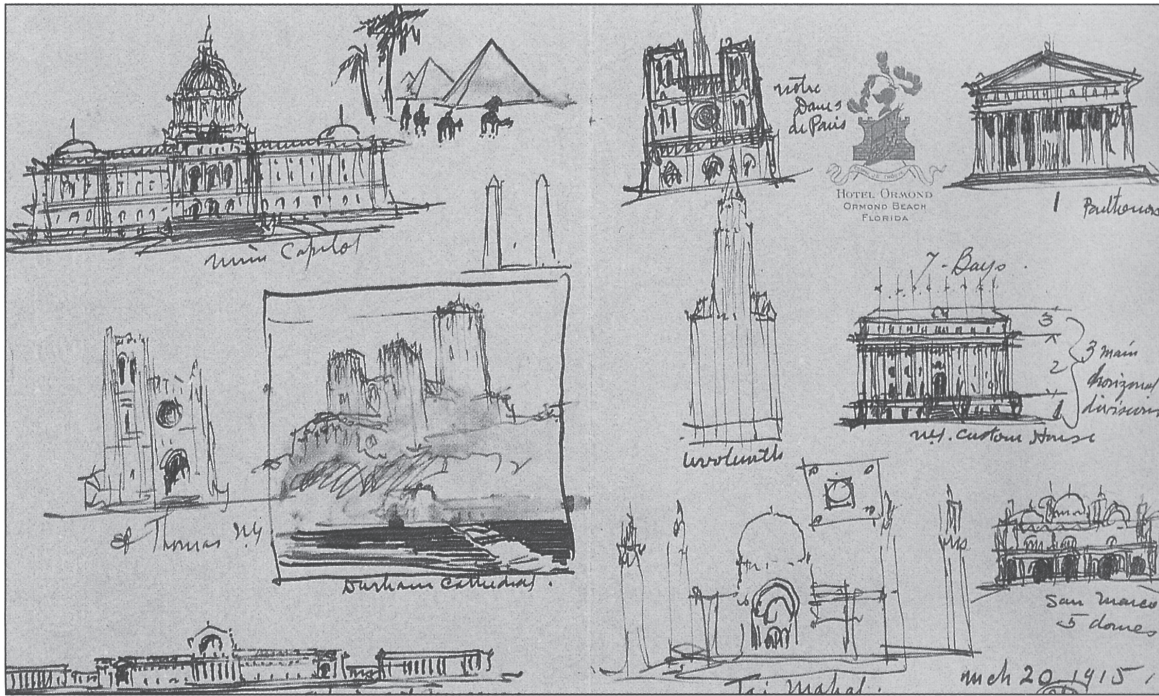
1. What is this source?
2. Who created this source?
3. When and where was this created?
4. What does this source tell you about life at the turn of the 20th Century? In MN? In the nation? In the world?
5. What information are you able to gather about Cass Gilbert and his architecture by looking at this source?

After each group has had an opportunity to view the sources, discuss each of them as a group, noting the following information and points for discussion.

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PRESENTATION AND ANALYSIS OF PRIMARY SOURCES

Primary Source Activity A:



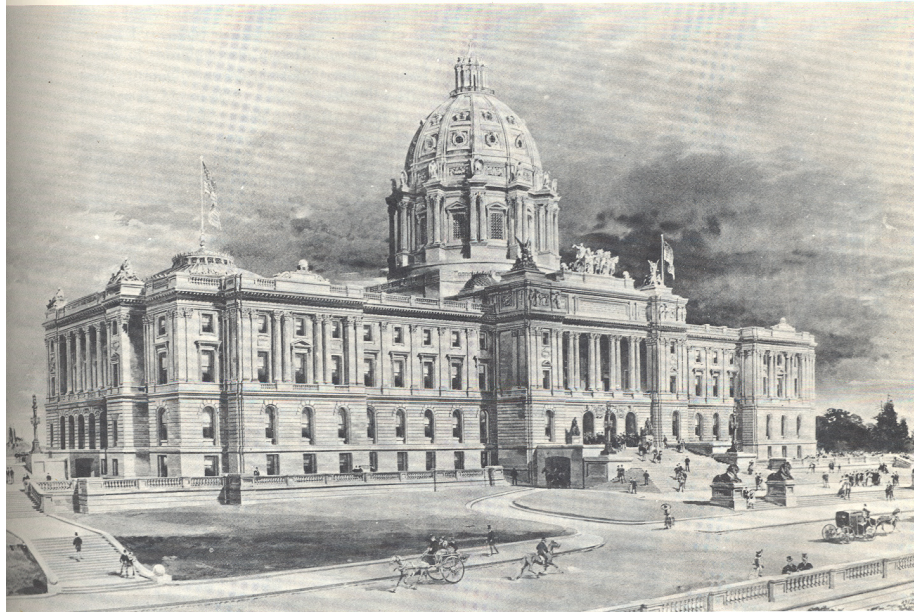
Sketches by Cass Gilbert, March 20, 1915

Library of Congress, Prints and Photographs division, HABS, LC-USZ62-92505

1. Here, Cass sketched great monuments of the world. Which of his buildings are among these? How do you think Cass Gilbert felt about his work on the MN State Capitol?
2. At the age of 20, Cass traveled to Europe to visit places that represented the origins of Western architecture. What difference did seeing these structures make to his later work in the United States?
3. What buildings in your community are notable today? What makes a building important? Long lasting? (Note the use of materials, details, attractive sites)

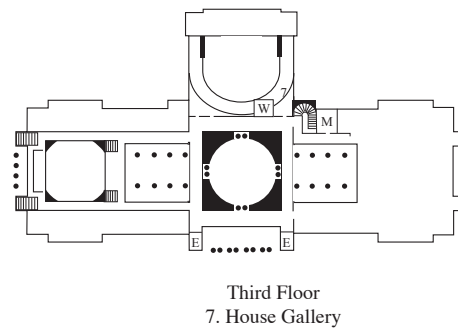
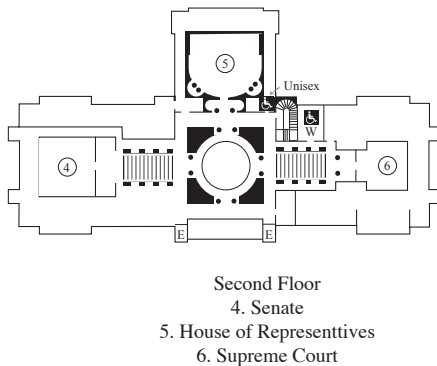
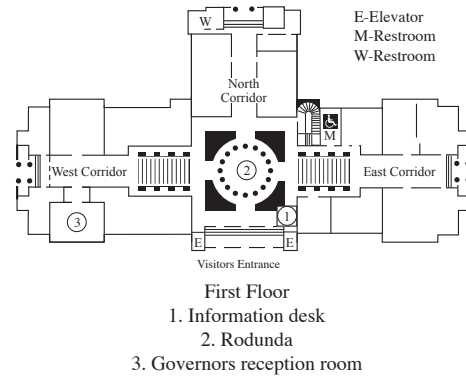
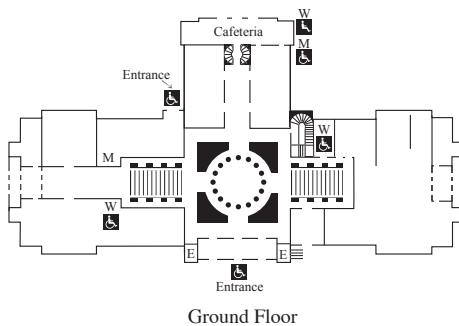
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Primary Source Activity B:



Cass Gilbert's winning design for the capitol as it appeared in 1898.

Images on this page are provided courtesy of MN Historical Society



(Activity continued on page 6)

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The MN State Capitol is not only an historic building, but a place where history is made every day. The layout was designed with a great deal of purpose in mind. The placement of particular rooms and offices were not randomly assigned, but decided upon with thought to how our governing bodies operate and relate to one another.

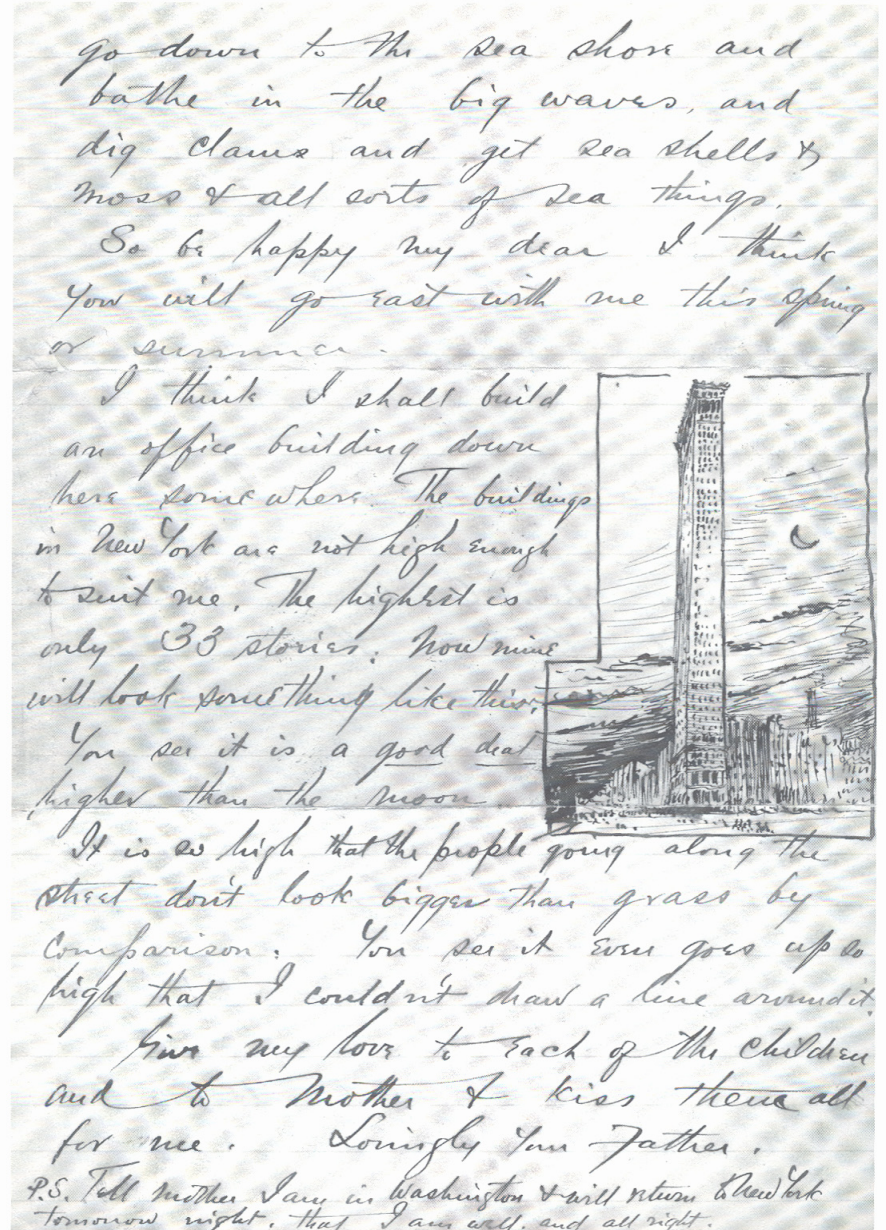
1. Locate the visitors' entrance to the building. Which area are visitors welcomed to immediately? Which parts of the building are able to be accessed from this area?
2. The rotunda is often noted to be the place of the most powerful persons in our government structure. Who does this space belong to?
3. Think about the series of checks and balances in our governmental structure. What is the relationship between the Senate and the Governor? Notice the location of the Senate Chambers and the Governor's Office. Why might Cass have chosen to arrange them this way?
4. Locate the House of Representatives. This room was placed in view of St. Paul, looking out over the city. Why might Cass Gilbert have made that decision?
5. Though the Capitol project began with a budget of close to 2 million dollars of the state's money, the project was completed after spending 4.5 million dollars. Considering the project was completed over a 14 year period, and began during a time of economic collapse, why would Minnesotans support spending so much on such an extravagant building?
6. Buildings look the way they do not just because of what they do, but also because of the sensibilities of their architects. What decisions in this design were likely linked to Cass's artistic vision than to the function of the building?

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Primary Source

Activity C:

In a letter home to his daughter Elizabeth in 1899, Cass's fascination with "building up" is apparent. Though he jokes that the buildings are too small for him, and that he'll introduce an office building higher than the moon to the city of Washington, he eventually goes on to begin working on skyscrapers for the New York City skyline. When the Woolworth building was completed in 1913, it was the tallest & most famous building in the world. Here we have the ability to compare his early thoughts about the form to his most notable towering creation.



Excerpt from one of Cass Gilbert's letters to his daughter Elizabeth, February 20, 1899.
(Gilbert letters, Library of Congress)

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1. Like Cass's drawing, early tall buildings were usually larger versions of the box shape. That skyscraper design created a new effect on the skyline. What do you imagine it looked like? Why was the city becoming "ugly and dark"?
2. Cass was given the challenge to design a memorable building for the Woolworth company. How did he approach the challenge of designing tall, differently than others of his time?
3. What details of the building allow it to soar or to draw the eye upward?
4. Cass designed this building to be 60 stories tall – 3 times higher than anyone had dared to go before. What invention would be needed that until now hadn't really been a necessity?
5. Examine the photo of the Woolworth building. What made people call it the "Cathedral of Commerce"?



Woolworth Building, New York, New York, 1911
Library of Congress, Prints and Photographs division, HABS, LC-USZ62-127226

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FINAL ACTIVITY AND EVALUATION

Design A State Capitol

The State Capitol is the workplace of senators, representatives, the governor, and the highest judges in the state. They and the building represent Minnesota and its people. Ask students to consider everything they have learned about the job of an architect and the decisions needed to be made by Cass Gilbert throughout his various works, as they have seen through primary sources and the documentary film. Ask them to design a building for their state that serves as both a place for creating and interpreting the laws as well as a place that is representative of the people.

A successful design will include attention to:

- the purpose and function of the building
- the meaning of the building
- who will use the building
- incorporation of various art forms and/or symbols
- size of the building
- location of the building
- detail, intention and creativity

LESSON EXTENSIONS AND ALTERNATIVES

- Design an ideal school OR remodel a space in your own school
- Study the exterior of your school:
 - What shapes do you see? What materials were used to construct the school?
 - What message does the outside appearance of the school send to visitors or passers by? What architectural features or ornamentation do you observe? Why do you think they were added?
- Imagine what life will be like 50 years from now. Design a home to meet those needs!
- Learn more about the work of a sculptor through the study of the Quadriga (titled “The Progress of the State”) statue atop the MN State Capitol.

Further Reading for Students

The following books represent a few of many resources available to allow students to explore the topics addressed here, as their interests dictate.

Court, Rob. Form. Chanhassen, MN: The Scribbles Institute, 2003.

Court, Rob. Line. Chanhassen, MN: The Scribbles Institute, 2003.

Court, Rob. Space. Chanhassen, MN: The Scribbles Institute, 2003.

Crosbie, Michael J. & Steve and Kit Rosenthal. Arches to Zig Zags: An Architecture ABC. New York: Harry N. Abrams, 2000.

Haldane, Suzanne. Faces On Places: About Gargoyles and Other Stone Structures. New York: The Viking Press, 1980.

Isaacson, Philip M. Round Buildings, Square Buildings and Buildings that Wriggle Like a Fish. Alfred A Knopf, 1988.

Macanlay, David. Building Big. Boston: Houghton Mifflin/Walter Lorraine Books, 2000.

Salvadori, Mario. The Art of Construction: Projects and Principles for Beginning Engineers and Architects. Chicago: Chicago Review Press, Inc., 1990.

_____. Scholastic Voyages of Discovery: Architecture and Construction. New York: Scholastic, Inc., 1995.

Rubin, Susan Goldman. There Goes the Neighborhood: Ten Buildings People Love To Hate. New York: Holiday House, 2001.

_____. The Visual Dictionary of Buildings. New York: Dorling Kindersley, 1992.

Weber, Rebecca. Building with Shapes. Minneapolis, MN: Compass Point Books: 2005.

Wilson, Forrest. What it Feels Like To Be A Building. Washington, D.C.: The Preservation Press, 1988.

Zaunders, Bo. Gargoyles, Girders, and Glass Houses: Magnificent Master Builders. New York: Dutton Children's Books, 2004.

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Name:

Date:

Discussion Questions

1. What were the factors bringing people to Minnesota and specifically to the areas of Minneapolis and St. Paul during the time that Cass and his family arrived in 1868? What features made St. Paul a logical hub and an attractive choice for settlement?
2. Identity, cultural practice & lifestyle all influence the spaces we design, build and live in. At the turn of the 20th Century, parlors served as a focal point, or gathering place for entertaining and socializing. How are homes being designed today to allow for the way we gather to socialize and entertain in the 21st Century?
3. What types of buildings were in demand during Cass's early years?
Who was commissioning them?
4. Cass Gilbert was quoted as saying, "In the old days, the architect, the painter and the sculptor were frequently one and the same. There is no reason why they should not be so now." Discuss ways that he and other architects include various art forms into their designs for a building.
5. Cass Gilbert used drawings from his world travels as inspiration for creating buildings in "modern" society. With every new job, he had to consider the purpose of the building he was creating in addition to what meaning the building would have. What features of buildings in your community help to convey their purpose or meaning? What might have inspired the architects of these buildings when they were designing a "new" structure?

Think About: Have you ever accomplished something that others thought was unlikely or impossible? What allowed you to continue believing that you would succeed?