



**ARCHITECTURE HAS MADE US GREAT**

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\*Note: As this lesson was written prior to 09/11/01, teachers will want to be aware that sample worksheets include brief references to the Twin Towers (e.g., pages 22, 31).



## **PROGRAM OUTLINE**

### **TARGET STUDENT AGE/LEVEL**

**Architecture Has Made Us Great** was developed for a gifted class of fourth graders but can be used for any group that can work together cooperatively from grade 2-6. The project can be adapted for students who are ESL or resource room, or as part of the social studies curriculum that focuses on New York or any large city. The various activities in the project are ideal for whole class lessons, small group instruction, and individual tasks. Since there is a great deal of visual stimulation, this project is appealing to those students who are visual learners, but it fits well with curriculum for the multi-intelligences.

## **MAJOR GOALS AND OVERVIEW**

**Architecture Has Made Us Great** is an interdisciplinary project that will help students become aware of:

- ?? The structural environment
- ?? Architectural terminology
- ?? Classical and historical forms of architecture
- ?? Architectural elements found in the local community
- ?? How architecture has made New York an important city
- ?? Data-gathering and table-making skills
- ?? Independent research using technology
- ?? Math and science concepts as they relate to architecture
- ?? Creative art and photography

This project begins with a teacher-made research packet that introduces the students to the topic of classical and historical architectural sights around the world. Students learn to use search engines on classroom computers and go on “virtual reality” tours of these same places, increasing their knowledge and appreciation.

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The students are encouraged to define useful architectural terminology and recognize the elements in the places that are visited on-line. Charts and tables are made and photos are taken of neighborhood locales to illustrate concepts and see architectural elements first hand.

Students then “adopt” several major architectural structures in New York to begin independent research. They are encouraged to turn in photographs taken of them as they visit their adopted structure. Students then write the dialogue and learn to scan their photos into computers using software that will enable them to make a video of all their efforts.

As a creative culmination, the class works in small groups to create their own skyscrapers of the future using art materials and incorporating math, science, and their newly acquired architectural knowledge.

A project of this scope and magnitude infuses itself into many lessons and in many ways throughout the school year. A class play was written based on the story of “Around the World in 80 Days” and many of the details learned about architecture were included in the main characters’ journey. (Play furnished upon request.)

The lessons in this packet can be done in the order they are presented or can be pulled out and used independently.



### PROJECT TIMELINE

SEPTEMBER	Introduction of the topic of architecture through teacher-prepared packet and textbook learning.
OCTOBER	Introduction of needed vocabulary. Study of ancient architectural sights through Internet “virtual reality” tours.
NOVEMBER	Science and math lessons that reinforce the concepts as they relate to the study of architecture are introduced. Neighborhood investigation and scavenger hunt for architectural element that can be seen locally.
DECEMBER	Adopt-a-building project introduced. Use of social studies textbook lessons to enhance leaning about skyscrapers in New York.
JANUARY	Map skills using New York City locations. Subway maps to locate and determine how to get to our adopted buildings. Independent research.
FEBRUARY	Graphs to show the height of various skyscrapers; timelines to show their ages.
MARCH	Writing of an original “architecture” song.
APRIL	Adapting the play “Around the World in 80 Days” to reflect the learning about architecture.



MAY	<p>Use of digital camera and computer software to make a video during computer lab and with the aid of computer teacher.</p> <p>Creative arts projects:</p> <ul style="list-style-type: none"><li>?? Bridge making</li><li>?? Futuristic skyscrapers</li><li>?? Resume—If I Were An Architect</li></ul>
JUNE	<p>Displaying all art works done in class related to the topic of architecture.</p> <p>Viewing of the class homemade video “Architecture Has Made Us Great.”</p>



## TYPES OF ASSESSMENT

Since all classes are different, assessment must therefore be individual. The following should be taken into consideration when judging how well a student has learned while doing **Architecture Has Made Us Great**:

- ?? Class participation and discussion
- ?? Use of technology
- ?? Proper use of architectural terminology
- ?? Working cooperatively in small groups
- ?? Incorporating newly learned material into independent research
- ?? Evaluation of oral reports
- ?? Comprehension skills taught throughout the project



## LESSON PLANS

READING LESSON: Children become aware of the historical structural environment using teacher-prepared reading packet.

TIME: 3 periods (may vary according to reading level of class)

MATERIALS: Historical architectural coloring book pages, architecture books, Internet access

VOCABULARY: Architecture, structure, façade, tomb, fortress, exterior, interior, temple, mosque, cathedral, and arena

### OBJECTIVES:

- ?? To recognize the architectural sights of another time and culture
- ?? To recognize and understand that architecture is one of the ways to record the history of a time and the needs of a society
- ?? To view classical architectural structures and note the details

### PROCEDURE:

1. Define the new vocabulary and use in the context of a sentence.
2. Brainstorm with the students what they already know about architecture.
3. Introduce the topic through a reading, drawing, and comprehension packet of following architectural sights:
  - ?? Saint Basil's Cathedral    The Parthenon    Taj Mahal
  - ?? Conway Castle    Great Wall    Eiffel Tower    Coliseum





ACTIVITIES: Work in small groups, students:

- ?? Read orally for expression
- ?? Categorize the structures according to their function (i.e., dwelling, fortress, arena, place of worship, and place of entertainment)
- ?? Complete comprehension questions relating to the reading
- ?? Calculate how long ago each building was erected

FOLLOW UP:

Log onto the Internet and use search engines to take virtual reality tours of the previously mentioned sights. Have the children review note-taking procedures before they go on the tours.

USEFUL WEBSITES:

[www.digitalcity.com](http://www.digitalcity.com)

[www.enchantedlearning.com](http://www.enchantedlearning.com)

[www.loggia.com](http://www.loggia.com)

[www.GreatBuildings.com](http://www.GreatBuildings.com)

[www.askjeeves](http://www.askjeeves.com) for kids.com

HOMEWORK:

Have the students complete the teacher-made handouts and answer the comprehension questions from the booklet.



## LESSON TWO: ARCHITECTURAL TERMINOLOGY

OBJECTIVE: To have the children use the dictionary to locate the meanings of vocabulary related to the topic of architecture.

TIME REQUIRED: One period

MATERIALS NEEDED: Dictionaries and large photos of famous architectural sights studied

### PROCEDURE:

?? Discuss what the students most enjoyed learning about the classical architectural sights

?? Focus and make students aware of the way the building was erected

?? Introduce the following terminology related to the topic that the students will then define using their dictionaries:

- |               |                |
|---------------|----------------|
| 1. column     | 11. post       |
| 2. dome       | 12. cantilever |
| 3. arch       | 13. keystone   |
| 4. balustrade | 14. bridge     |
| 5. lintel     | 15. cable      |
| 6. dormer     | 16. foundation |
| 7. façade     | 17. suspension |
| 8. vault      | 18. capital    |
| 9. skyscraper | 19. Doric      |
| 10. beams     | 20. Ionic      |



ACTIVITIES:

- ?? Review classical sights using photos
- ?? Define new vocabulary words
- ?? Use new vocabulary words in the context of a sentence to increase knowledge and usage
- ?? Place the correct vocabulary word on the correct place in the photo to show the proper meaning

EXTENSIONS: Have students look through magazines and cut out pictures that illustrate the new vocabulary. Make a colorful collage using the pictures that are found.

HOMEWORK: Design your own home. Using drawing paper and crayons, make a picture incorporating as many details and architectural elements as you can.

ASSESSMENT: Did the student use the new terminology in a correct and meaningful way?



### LESSON THREE: SOCIAL STUDIES

#### A WALK THROUGH OUR COMMUNITY

OBJECTIVE: To see first-hand a variety of architectural elements and styles as we walk through our own neighborhood. To have students gain awareness and appreciation of the different styles they see. To notice the function of each place they view. To compare and contrast the differences in the architectural styles of the homes and buildings they see.

TIME REQUIRED: Two class periods or more, depending on the interest of the children and the architectural richness of the community

MATERIALS NEEDED: Cameras are suggested to document the trip

#### PROCEDURE:

?? Children work on independent task using a tally sheet to record the number of the architectural elements they find in the neighborhood.

How many arches, balustrades, keystones, etc.?

?? To locate and photograph the following if possible:

- |              |              |
|--------------|--------------|
| 1. balconies | 5. keystones |
| 2. columns   | 6. eaves     |
| 3. domes     | 7. lintels   |
| 4. arches    | 8. dormers   |

?? To notice how these elements are used in the structure

?? To notice the similarities and the differences in the use of the elements



**ACTIVITIES:**

- ?? A tally sheet is kept as a record
- ?? Notes, sketches, and photos are taken during the walk
- ?? Introduce a discussion with the question “Should a neighborhood have rules and regulations about what can be built?”

**HOMEWORK:**

Students write an essay voicing their opinions about the question “What rules should govern building in a community?”

**EXTENSION:**

Children use the computer to find out who and what governs the structures we build in our community.



## LESSON FOUR: ADOPT-A-BUILDING PROJECT

### OBJECTIVES:

- ?? To have students become familiar with the famous structures in New York that have made it a great city
- ?? To assist children in choosing two of the famous sights they wish to investigate independently
- ?? To introduce a research rubric for them to follow
- ?? To work on listening and note-taking skills
- ?? To work on word-processing skills on the computers

TIME REQUIRED: One or two months of independent work

MATERIALS REQUIRED: Teacher handout listing famous architectural sights in New York:

- |                          |                               |
|--------------------------|-------------------------------|
| 1. United Nations        | 11. Yankee Stadium            |
| 2. Brooklyn Aquarium     | 12. Coney Island              |
| 3. Empire State Building | 13. Bronx Zoo                 |
| 4. Chrysler Building     | 14. Penn Station              |
| 5. Flatiron Building     | 15. Saint Patrick's Cathedral |
| 6. Rockefeller Center    | 16. Macy's Department Store   |
| 7. Trinity Church        | 17. Verrazano Bridge          |
|                          | 18. Lincoln Center            |
| 8. Guggenheim Museum     | 19. Fraunces Tavern           |
| 9. Statue of Liberty     | 20. Brooklyn Bridge           |



PROCEDURE:

- ?? Introduce teacher handout list and encourage children to “adopt” two of the building
- ?? Allow children to pick places they have visited or have relatives working
- ?? Place the buildings into the proper category in order to familiarize student to the function of the building

ACTIVITIES: Have the children prepare a list of questions they would like to answer about their adopted building. The following is a list they came up with:

1. When was the building erected?
2. Who was the architect?
3. Where is the building located?
4. How old is the building?
5. What is its height?
6. What is its primary function?
7. What materials were used in the construction?
8. What do you like about the building?

FOLLOW-UP ACTIVITIES: MAP STUDY

Supply each child with a New York subway map. Have the children work in teams to write directions to their adopted building.



## LESSON FIVE: ARCHITECTURE AND BRIDGE BUILDING

### OBJECTIVES:

- ?? To learn about the famous bridges in New York
- ?? To learn how bridges are built
- ?? To review the terms that are used in bridge construction

TIME REQUIRED: One period

VOCABULARY: Bridge, suspension cable, arch, stanchion

MATERIALS NEEDED: construction paper, worksheets, stacks of pennies

### PROCEDURE:

- ?? Have the children work in small groups to make a bridge using construction paper
- ?? Test the strength of the bridge by seeing how many pennies it will support

### ACTIVITIES:

- ?? View the film “The Brooklyn Bridge” (PBS Vol. 125) by Ken Burns
- ?? Do the work sheet “Reading a Table” that gives important facts and details about the bridges in our city
- ?? Work with a partner in bridge construction

FOLLOW-UP: Take a walk across the Brooklyn Bridge.

Read about architect John Roebling.





## LESSON SIX: ART / MATH

**OBJECTIVE:** To recall and identify the architectural elements architects use in erecting a structure.

To work cooperatively in building our own skyscrapers, using at least three different shapes and two different architectural elements.

**TIME REQUIRED:** two periods

### **MATERIALS REQUIRED:**

- ?? Construction paper
- ?? Recycled materials such as corrugated cardboard, wall paper, plastic bottles, wooden sticks
- ?? Scissors
- ?? Glue
- ?? Masking tape
- ?? Duct tape
- ?? Pipe cleaners
- ?? Spray paint

### **PROCEDURE:**

- ?? Question children about the basic shapes they see in photos of skyscrapers
- ?? Divide the class into groups of two students
- ?? Demonstrate how to make the simple shapes of cone, rectangular prisms, and cylinders
- ?? Encourage the use of many different types of building materials that are found in our recycling bins



?? Have children evaluate the things they made together

?? Work on problem solving

### ACTIVITIES:

1. Provide students with the time, place, and materials to sketch their buildings.
2. Work on the construction of our skyscraper.
3. Put all projects on display for viewing.
4. Have children discuss what they erected and how they did it.

### FOLLOW UP: PROBLEM SOLVING

Encourage students to write a journal entry and answer the following questions:

What problems did you have?

What problems do architects have?

What shapes did you use most often?

Why did you use those shapes?

How did you get your building to stand?

What would you do differently?

ACTIVITY: Show the movie “Frank Lloyd Wright” by Ken Burns and Lynn Novick” (PBS VIDEO VOL. 281)

### EVALUATION:

Allow the children to evaluate each other’s work based on the following criteria: strength, beauty, purpose of function, name given, and creative use of material.

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## **SAMPLE WORKSHEETS**

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## ARCHITECTURAL RESEARCH PAPER

YOU ARE ASSIGNED THE FOLLOWING TWO BUILDINGS TO  
DO YOUR RESEARCH. -----

-AND-----.

VISIT YOUR STRUCTURE AND TAKE ABOUT FIVE  
PICTURES OF THE PLACE TRYING TO CAPTURE THE  
BEAUTY AND THE IMPORTANCE OF IT. TRY TO HAVE  
YOURSELF IN AT LEAST ONE OF THE PICTURES SO YOU  
WILL BE IN THE FILM. DO THIS FOR BOTH PLACES.  
BEFORE YOU VISIT THE PLACES SO SOME RESEARCH TO  
PREPARE BY ANSWERING THE FOLLOWING QUESTIONS;

1.WHAT IS THE CORRECT NAME OF YOUR STRUCTURE?

2.WHO WAS THE ARCHITECT OF THE STRUCTURE?

3.WHERE IS THE STRUCTURE?

4.WHEN WAS IT BUILT?

5.LIST AS MANY DETAILS AS YOU CAN ABOUT ITS  
IMPORTANCE.

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## **ARCHITECTURE RESEARCH PAPER**

**HERE IS A LIST OF THE POSSIBLE STRUCTURES IN NEW YORK THAT YOU  
MAY VISIT AND FILM FOR OUR RESEARCH PROJECT;**

**KENNEDY AIRPORT  
BROOKLYN BRIDGE  
BROOKLYN BATTERY TUNNEL  
VERRAZANO BRIDGE  
EMPIRE STATE BUILDING  
FLAT IRON BUILDING  
GRAND CENTRAL STATION  
CHRYSLER BUILDING  
STATUE OF LIBERTY  
ELLIS ISLAND  
LINCOLN CENTER  
CARNEIGE HALL  
METROPOLITAN MUSEUM  
ROSE PLANETARIUM  
UNITED NATIONS  
BROADWAY THEATERS  
SHEA OR YANKEE STADIUM  
SUBWAY MUSEUM  
CONEY ISLAND PARACHUTE JUMP  
STATEN ISLAND FERRY TERMINAL  
BROOKLYN NAVY YARD  
ELDRIDGE STREET SYNAGOGUE  
ANY BEAUTIFUL RESURANT**

**GRAND ARMY PLAZA ARCH  
STOCK EXCHANGE  
CUSTOMES HOUSE- NATIVE AMERICAN MUS  
BELVEDERE CASTLE  
BROOKLYN MUSEUM  
BOTANIC GARDENS  
AQUARIUM  
MAIN POST OFFICE  
MACY'S 34 STREET  
42 STREET LIBRARY  
FRAUNCES TAVERN  
PLAZA HOTEL  
GUGGENHEIM MUSEUM  
TRINITY CHURCH  
ST. PATRICKS CATHEDRAL  
RADIO CITY MUSIC HALL  
COLUMBIA OR COOPER UNION  
HOLOCAUST MEMORIAL  
BRONX ZOO  
TWIN TOWERS  
ROCKEFELLER CENTER  
ROOSEVELT ISLAND TRAMWAY**

**CIRCLE THREE OR FOUR PLACES THAT YOU MIGHT BE INTERESTED IN VISITING AND DOING  
RESEARCH FOR OUR FILM ABOUT ARCHITECTURE. YOU WILL BE ASSIGNED TWO PLACES.**

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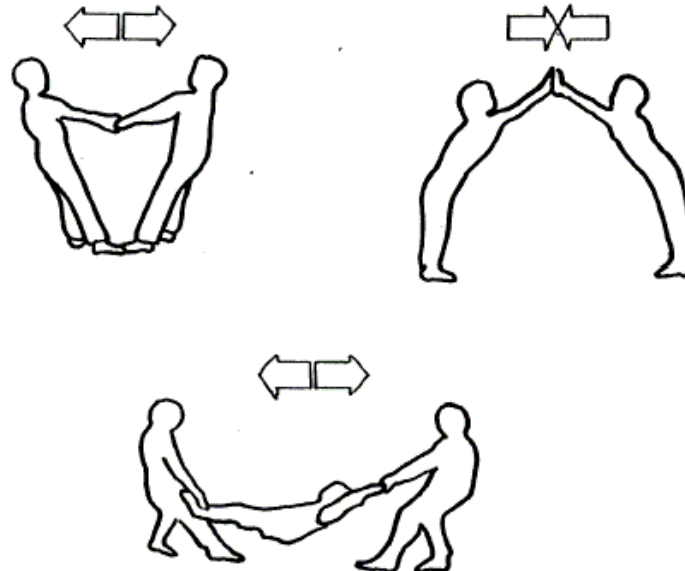
### Suggested Learning Activities

#### Structures

All buildings and other structures are subject to being pulled (tension) and pushed (compression). Learning about tension and compression can help students to understand why bridges, arches and other structures stand up.

#### Pushing and Pulling:

Compression and tension are easily understood through these simple experiments involving pushing and pulling.



For each of these activities ask students to report what they feel. The pushing sensation they feel is compression. The pulling sensation they feel is tension.

Which part of the body is in compression and which part is in tension?

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Places of Worship: The Power of Symbols

**St. Basil's Cathedral**

Moscow, Russia  
1550-60

The Russian Czar Ivan the Terrible ordered this cathedral built to celebrate one of his military victories. Legend says that he was so pleased with it that he had the architect's eyes removed so that he could not build a building of such beauty elsewhere. No one knows if the story is true, but the exotic shapes and colors of St. Basil's make it one of the most attractive cathedrals Moscow has ever seen.

At first, Ivan wanted eight churches built to mark his victory—one for each saint on whose day he had won a battle. After they were built Ivan decided he didn't like the churches and had them demolished. He assigned the task of building St. Basil's to Postnik Yakoviev, who drew up a plan for what looked like one building, but was really eight small churches gathered around one. If you could look at the buildings from above, you would see that its parts are arranged like the shape of a cross.

The top of each building has an onion-shaped dome, a common feature of Russian architecture, perhaps devised to keep snow from collecting on the roof. The exterior, originally white, was painted over with brilliant colors in the 18th century.

- ① Where is this building? \_\_\_\_\_
- ② How old is it? \_\_\_\_\_
- ③ Why was it built? \_\_\_\_\_
- ④ Who ordered the building? \_\_\_\_\_
- ⑤ Who was the architect? \_\_\_\_\_
- ⑥ What is at the top of each building? \_\_\_\_\_
- ⑦ When was the exterior repainted? \_\_\_\_\_

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***Places of Worship: Homes of the Ancient Gods***

**The Parthenon**

Athens, Greece  
432 B.C.

The names of the architects of ancient buildings are often lost forever. But we do know that Ictinos and Calicrates were the architects of the Parthenon.

The Parthenon was built to house a 40-foot-high statue of Athena, the Greek goddess of wisdom (for whom the city of Athens was named), which was made of ivory and gold. The statue has not survived, but many other pieces of sculpture from the Parthenon have.

The Parthenon was the largest and first of a group of temples, called the Acropolis, built at the top of a hill in Athens. The building basically uses a post-and-beam type of construction—the posts are vertical columns that hold up the horizontal beams on top. The building may look perfectly constructed, with evenly spaced columns that rise straight into the air. But in fact, slight irregularities were purposely designed into the building, and few of its lines are exactly straight. The base of the temple is slightly curved, and the columns tilt slightly inward and are not evenly spaced, but closer together at one end of the building. Nor are the columns of the same diameter—those at the corners are slightly larger.

The reason for these imperfections is not clear, but it is thought that the building would actually look better if it wasn't quite perfect.

The Parthenon had many uses. It was a Greek temple, a Christian church, and a Turkish mosque. It held up well for thousands of years. But in 1687 it was used to house ammunitions by the Turks, who were at war with the Venetians.

The Venetians destroyed much of the building when they sent a rocket into it.

- ① Where is The Parthenon? \_\_\_\_\_
- ② Who are the architects? \_\_\_\_\_
- ③ Why was it build? \_\_\_\_\_
- ④ What is the complete group of buildings called? \_\_\_\_\_
- ⑤ What kind of construction is this building? \_\_\_\_\_
- ⑥ What was the building used for? \_\_\_\_\_

⑫ 12

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***Places of Reflection: Eternal Resting Places***

**Taj Mahal ("Crown of the Palace")**

**Agra, India  
1654**

The Emperor Shah Jahan was very, very sad after his wife died in 1631. He wanted to find a way for her to be remembered. A beautiful building with gardens and pools, he thought, would best express the love he had felt for his wife.

Nowhere in the world is there a building that expresses love more dramatically and beautifully than the Taj Mahal. Some people have called it the perfect building.

Thousands of people worked for many years to build the Taj Mahal. The finest materials were gathered—jade from China, cat's-eye from Egypt, rubies from Burma, amber from Damascus, lapis and onyx from Italy, and agate, garnet, and moonstones from the seas. Workmen from India, China, Persia, Egypt, Ceylon, and Italy contributed their skills. From far away, the Taj Mahal looks a plain creamy color. But as you get closer you begin to see the tremendous work that went into decorating much of its surface with colorful geometric shapes, flowers, and writing.

The Taj Mahal is actually a group of buildings. The tallest, in the center with the big white dome, can be seen for miles. It was designed to house the empress's body. It also eventually became the emperor's tomb. A mosque and rest-house are nearby, and the gardens cover 42 acres. The entire complex stands on the bank of the Yamuna River.

- ① Where is this building? \_\_\_\_\_
- ② How old is this building? \_\_\_\_\_
- ③ Who ordered this to be built? \_\_\_\_\_
- ④ Name 5 materials used in its construction.  
\_\_\_\_\_
- ⑤ What is a tomb?  
\_\_\_\_\_

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### Reading a Table

One way to organize facts is to create a table. To read a table, first study the title and headings. They tell you what kind of information is in the table and how that information is arranged. For example, the table below is about the bridges of New York City. It tells when a bridge was completed, what boroughs the bridge connects, and the length of the bridge. Study the table and answer the questions that follow.

Bridges of New York City			
Bridge	Completed	Boroughs Connected	Length (ft.)
Brooklyn Bridge	1883	Brooklyn, Manhattan	1,595
Williamsburg Bridge	1903	Brooklyn, Manhattan	1,600
Manhattan Bridge	1909	Brooklyn, Manhattan	1,470
Queensboro Bridge	1909	Manhattan, Queens	1,182
Triborough Bridge	1936	Bronx, Queens, Manhattan	1,380
Bronx-Whitestone Bridge	1939	Bronx, Queens	2,300
Throgs Neck Bridge	1961	Bronx, Queens	1,800
Verrazano-Narrows Bridge	1964	Staten Island, Brooklyn	4,260

1. Which is the oldest bridge? \_\_\_\_\_
2. Which is the longest bridge? \_\_\_\_\_
3. Which bridges connect the Bronx and Queens?  
\_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_
4. Which bridges connect Manhattan and Brooklyn?  
\_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_
5. The Verrazano-Narrows Bridge connects the boroughs of  
\_\_\_\_\_ and \_\_\_\_\_

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Discover the Built Environment: Arches and Bridges  
Student Worksheet

Name: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_ Class: \_\_\_\_\_

The Brooklyn Bridge officially opened in 1883. It joined two separate cities: New York and Brooklyn. Much has happened since the Bridge was opened. This is a view of the Brooklyn Ferry from the Brooklyn shore around the early 1800's. Today this site is located in the shadow of the Brooklyn Bridge.



1. How did people get from Manhattan to Brooklyn before the Bridge was built? \_\_\_\_\_
2. Before the bridge, Brooklyn was a rural area. What kind of houses would you expect to find in Brooklyn at that time?  
\_\_\_\_\_
3. What kind of houses were built as a result of the Bridge?  
\_\_\_\_\_
4. The Bridge had to be built high above water and ground level of both cities. Why? \_\_\_\_\_

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**ARCHITICECTURE HAS MADE US GREAT**  
**EAST SIDE WEST SIDE**  
**ALL AROUND THE TOWN**  
**BIG BUILDINGS ARE ALWAYS GOING UP**  
**AND OLD ONES ARE COMING DOWN.**

**YOU CAN SEE THE EMPIRE STATE BUILDING,**  
**THE PLAZA AND UN TOO.**  
**THEY ARE ALL BIG AND MAJESTIC**  
**SCRAPING OUR SKIES SO BLUE.**

**THERE ARE STRUCTURES LIKE THE FLAT IRON,**  
**THEY WERE ALL MADE TO LAST AND LAST**  
**SOME ARE NEW AND MODERN.**  
**AND SOME LINK US TO OUR PAST**

**DO YOU THINK SKYSCRAPERS GROW TIRED**  
**OF HOLDING THEMSELVES UP HIGH?**  
**DO BUILDINGS SHIVER ON FROSTY NIGHTS**  
**WHEN THEIR TOPS SEEM TO REACH THE SKY?**

**WE LEARNED ABOUT FORM AND FUNCTION.**  
**WE LEARNED WHAT MAKES BUILDING TALL.**  
**YOU CAN LEARN A LOT BY COMING HERE**  
**BECAUSE NEW YORK HAS THEM ALL.**

**LINCOLN CENTER, TWIN TOWERS,**  
**A MUSEUM CALLED THE MET AND MORE.**  
**THEY'RE MADE OF BRICK AND MORTOR**  
**AND GRACE THE SIDEWALKS OF NEW YORK.**

**WRITTEN BY SIGMA -4-**  
**P.S.215**

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RESOURCES:

MATERIALS:

Architectural Coloring Book by Peter Dobrin, Running Press

- Wall maps of the city of New York and subway maps of the city
- Class play and adaptation of Jules Verne's "Around the World in 80 Days" (furnished upon request). The play was written by the class to include some of the facts they researched for this project.

BOOKS:

New York-Then and Now Steck Vaughn 1991

SOFTWARE:

- ?? ClarisWorks
- ?? Grolier's Encyclopedia
- ?? Adobe Photoshop

EQUIPMENT USED:

- Canon 35mm camera
- VCR
- Hewlett-Packard Scanjet scanner
- PC with Internet access

AUDIO VISUALS:

- Ken Burns and Lynn Novick- "Frank Lloyd Wright" (PBS Vol. 280)
- Ken Burns- The Brooklyn Bridge (PBS Vol. 125)





### TRIPS TAKEN:

The neighborhood walk was taken in the Gravesend area of Brooklyn.

The Brooklyn Bridge trip started on the Brooklyn side near Cadman Plaza and the class walked into Manhattan and back. The trip is approximately two miles round trip.

### USEFUL WEBSITES:

?? [www.usc.education](http://www.usc.education)- here you find a history of Architecture

?? [www.pbs.org/resources](http://www.pbs.org/resources)

?? [www.discovery.com/buildings/timelines](http://www.discovery.com/buildings/timelines)

?? [www.yahooligans.com](http://www.yahooligans.com)

?? [www.digitalcity.com](http://www.digitalcity.com)

?? [www.pbs.org/wgbh/buildingbig](http://www.pbs.org/wgbh/buildingbig)

?? [www.thinkquest.org](http://www.thinkquest.org)

?? [www.askeric.org](http://www.askeric.org)

?? [www.greatbuildings.com](http://www.greatbuildings.com)

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