


Skyscrapers in Cities as a Primary Source
July 27, 2018

This lesson can be utilized by many different teachers in the subject areas of art, STEM, and technology; it is also ideal for a collaboration between art and core content and/or technology teachers. Through the lessons students will learn more about primary and secondary sources, skyscrapers and how they are constructed, scale, drawing 3D items, building and support systems, and about architects and what they do. There will be different focuses in the lesson depending on the subject area and the collaborating teacher's needs.

Overview	
Student Objectives <i>List the bulleted goals/objectives behind your lesson plan</i>	Students will: <ul style="list-style-type: none"> ● be able to identify primary and secondary sources. ● Answer questions about their skyscraper and perform research. ● Create a skyscraper to scale. ● Construct a tennis ball support system.
Grade level	6th, 7th, and 8th graders
Curriculum area	Art, STEM, and Technology
Materials	<ul style="list-style-type: none"> ● Primary source skyscraper pictures printed and cut ● Books on Architecture, architects, and building ● 28 student computers ● Projector ● Straws ● Masking tape ● Scissors ● Tape measure ● Tennis balls ● Legos ● Connects kit ● Lego kit ● Paper ● Cardboard ● Coloring materials



Standards

Learning Standards by State

Common Core Standards. Additional standard could be added depending on what teacher I collaborate with.

- CCSS.ELA-Literacy.RH.6-8. Cite specific textual evidence to support analysis of primary and secondary sources.
- CCSS.ELA-Literacy.RH.6-8 Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
- CCSS.ELA-Literacy.WHST.6- Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
- CCSS.ELA-Literacy.WHST.6- Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Procedures/Resources

Recommended time frame overview

3 sessions: 1 hour and 40 minute block schedule

This lesson will take 3 block 1 hour and 40 minute class periods. It could also be expanded.

List the procedure and resources for—bullet points with resource links for each sessions:

Session One:

- **Students will be put into groups.**
- **Each group will have a cut up primary source image skyscraper from the Library of Congress. Students will have to work together to put the picture together.**
- **Once the picture is assembled the students will work together to complete the ABC Photo Analysis worksheet in a limited amount of time. Once the time is up we will go through the letters of the**



	<p>alphabet and groups will call out their questions pertaining to that letter. The group with the most letters completed will win a little prize. After we finish the activity students will be given a worksheet to research the skyscraper they were given. They will also answer some of the questions that they came up with from the ABC Photo Analysis.</p> <ul style="list-style-type: none"> ● We will review the research process, databases, and the difference between primary and secondary sources. ● Worksheet questions <ul style="list-style-type: none"> ○ Where is the skyscraper located? ○ When was it built and how long did it take to complete the structure? ○ How tall is the skyscraper? ○ What materials were used in its construction? ○ Who was the architect? Why was it designed in a particular way? ○ What were some challenges that were faced when it was being built? ○ What materials or technology enabled it to surpass the heights of previously built skyscrapers? ○ What was the building originally used for? What is it used for today? ○ Was your skyscraper ever the tallest in the world? ○ Were there any important events that took place in your skyscraper?
<p>Session Two:</p>	<ul style="list-style-type: none"> ● Students will continue their research and answer the worksheet questions. ● Student groups will quickly share what they learned about their skyscrapers. ● We will talk about how building materials have changed and touch on how skyscrapers are constructed. ● (If I am working with a STEM class we would go more into how building structures work. If I am working with art we would go over how to draw a cityscape). ● Next we will look at more modern skyscrapers and their heights. We will then compare the skyscrapers they researched and some of the tall skyscrapers around the world. ● Students will be given a conversion scale in inches to create small skyscrapers that will be placed on display on the library glass wall. As a group students will design a replica of a skyscraper that they



	<p>researched and select another skyscraper. Students will design these replicas. (If I am working with art we may spend more time using boxes to create 3D replicas of their skyscrapers).</p> <ul style="list-style-type: none"> ● The skyscrapers can be extra colorful to add some fun!
<p>Session Three:</p>	<ul style="list-style-type: none"> ● Students will be given time to complete their skyscraper replicas. ● A skyscraper makerspace will be created in the library classroom with different centers where students can learn more about architecture and buildings throughout the month. ● The centers will include: <ul style="list-style-type: none"> ○ Tennis ball activity which everyone in the class will do at once - groups of students will be given, 25 straws, 40 inches of masking tape, a tennis ball, scissors, and a tape measure <ul style="list-style-type: none"> ■ Groups of students will be challenged to build a structure using the materials in a set amount of time. The structure must be able to support a tennis ball. The group that can support the tennis ball with the tallest structure wins! ○ Connect kit with challenge items to build. ○ Lego kit with challenge items to build. ○ A resource center with books and websites about buildings. ○ A career study about architects and what they do.
<p>Session Four:</p>	<ul style="list-style-type: none"> ● A 4th class session could be added on to give students additional time to complete their skyscraper work. ● The time could also be used to visit the rest of the makerspace centers.



Evaluation

Note the rubric which will help you evaluate/grade your students

- Students will be evaluated using...
 - Teacher observation of collaborative work and individual work.
 - The skyscraper worksheet will be graded.
 - Teacher observation on the construction on the tennis ball building.

Additional Resources

List any additional resources (example: websites related to lesson plan topic) that students can use for additional information and/or after class exploration

Works Cited

<http://www.discoveryeducation.com/teachers/free-lesson-plans/higher-and-higher-amazing-skyscrapers.cfm>

Students can explore the makerspace more if they finish early.

Websites for students below

<http://www.pbs.org/wgbh/buildingbig/skyscraper/index.html>

<http://www.skyscrapercenter.com/buildings>

Accommodations

Note any accessibility options that might be applied to address student needs

It could be modified by having students answer a modified worksheet with questions. The databases I select for research could be adjusted by reading level. The time for each activity could be extended to meet students needs.



Primary Sources from the Library of Congress

Image Thumbnail	Description	Citation	URL
	<p>Empire State Building 1931</p>	<p>Empire State Building New York City</p>	<p>https://www.loc.gov/item/90712231/</p>
	<p>Chrysler Building 1930</p>	<p>Chrysler Building, New York City 1930</p>	<p>https://www.loc.gov/item/2004673267/</p>
	<p>Sears Tower</p>	<p>Willis Tower, long known as Sears Tower, Chicago, Illinois</p>	<p>https://www.loc.gov/item/2011634494/</p>



	<p>John Hancock Center</p>	<p>John Hancock Center Chicago</p>	<p>https://www.loc.gov/item/2018648095/</p>
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