

TEACHER’S GUIDE -- UNIT OVERVIEW

Lessons 3-10 in this unit plan cover the following Illinois State Geography Standard:
 SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Lesson 10 in this unit covers the following Illinois State Science Standard:
 5-ESS 3-1 – Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

The following inquiry skills are covered in the lessons as indicated in parentheses.
 SS.IS.1.3-5 – Develop essential questions and explain the importance of the question to self and others. (Lesson 1)
 SS.IS.2.3-5 – Create supporting questions to help answer essential questions in inquiry. (Lesson 1)
 SS.IS.3.3-5 – Determine sources representing multiple points of view that will assist in answering essential questions. (Lesson 2)
 SS.IS.4.3-5 – Gather relevant information and distinguish among fact and opinion to determine credibility of multiple sources. (Lessons 2, 9)
 SS.IS.5.3-5 – Develop claims using evidence from multiple sources to answer essential questions. (Lessons 2,3,4,5,6,7,8, and 9)
 SS.IS.6.3-5 – Construct and critique arguments and explanations using reasoning, examples, and details from multiple sources. (Lessons 1,2,3,7, and 9)

Unit central focus (Essential Question): How has New York City changed over time?

Central focus of the lesson(Supporting Questions)	Key concepts covered
Population changes (How has the population of NYC changed over time?)	<ol style="list-style-type: none"> 1. The number of people living in a place changes over time. 2. The race/ethnicity/nationality of the people living in a place changes over time.
Culture changes (How has the culture of NYC changed over time?)	<ol style="list-style-type: none"> 3. Foods eaten by the people living in a place change over time. 4. Clothing worn by the people living in a place changes over time. 5. The types of art/leisure activities in a place changes over time. 6. Housing styles in a place change over time. 7. The religion of the people living in a place changes over time. 8. The language of the people living in a place changes over time.
Environmental changes caused by human activities (How have human activities changed the environment of NYC?)	<ol style="list-style-type: none"> 9. Land, plants, and animals change in a place over time. 10. Land uses in a place change over time.

Natural changes (How have natural processes changed NYC over time?)	11. Natural processes (i.e. erosion and deposition, earthquakes, volcanic eruptions, fire, plant succession, climate change) change the environmental characteristics of places over time. 12. Natural processes change the cultural characteristics of places over time.
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Unit Objectives:

Students will be able to:

- a. explain how the population and race/ethnicity of the population changed at four points in time.
- b. compare and contrast the foods, clothing, housing, arts/leisure activities, religion, and language for a place at four periods in time.
- c. describe how the physical environment and land use changed in the four time periods examined.
- d. identify, explain, and defend a natural process that changed the cultural and environmental characteristic of a place.

Unit Requirements:

- All lessons in this unit require a computer or iPad. Ideally there would be 1 computer or iPad for every two students in the classroom.
- Students will need access to Google Earth for the first and the ninth lessons. Students will need to know how to navigate to different places and view them at different scales.

Misc. Notes:

- Teachers will need to duplicate handouts for students before beginning each lesson.
- Each student should have a folder for this unit to keep all their papers together in one place.

Contact Information:

Dr. Patricia Rose,
Professor of Geography
Concordia University Chicago
7400 Augusta St.
River Forest, Illinois 60305
patricia.rose@cuchicago.edu

LESSON 1 – Asking Questions

This lesson introduces the following inquiry skills, but does not address a specific geography standard.
SS.IS.1.3-5 – Develop essential questions and explain the importance of the question to self and others.

SS.IS.2.3-5 – Create supporting questions to help answer essential questions in inquiry.

Objective:

Students will develop essential and supporting questions and understand their importance.

Lesson essential question:

What is a big question? Why is it important? How can I answer it completely?

Lesson Overview:

Engage: Part 1 - Mystery Map

Explore: Part 2 – The Big Question

Explain: Groups share questions and teacher-led discussion to identify the essential question.

Extend: Part 3 – Secondary Questions

Evaluate: Groups share questions and teacher-led discussion to identify the secondary questions.

Instructions: Be sure to print student handouts in black and white as the lesson does not explain the meaning of the different colors on the map. Also, students will need access to Google Earth and will need to know how to find a given location.

Engage: Part 1 – Mystery Map

Explain to students that the Mystery Map is the city they will be studying in this unit. Working in pairs, they are to identify the city using Google Earth images. They are given four options to choose from.

Answer: *New York City*

NOTE: Before moving on to Part 2, have students use Google Earth to look at key features in New York City such as Manhattan Island, Long Island, Staten Island, the Hudson River, and the East River.

Explore: Part 2 – The Big Question

Working in groups, students should follow the instructions in Part 2 of their Lesson 1 handout. Groups of five would be a good size as each individual could investigate one of the five sources and then report to the group.

Explain: Have each group share their questions with the class (perhaps by writing them on the board). Lead a discussion to get the class to come to consensus on the big (or essential) question for the unit. That is – How has New York City changed over time? Students should share information from the five sources that relate to the essential question. In other words, they must be able to justify the question. Have students write the essential question on page 2 of their Lesson 1 handout. For the students, the essential question is referred to as the “Big Question.”

Extend: Part 3 - Secondary Questions

Working in groups, students should follow the instructions in Part 3 of their Lesson 1 handout.

Evaluate: Have each group share their questions with the class (perhaps by writing them on the board). Lead a discussion to get the class to come to consensus on the secondary questions. NOTE: The secondary questions have been identified for you on the first page of this Teacher’s Guide. They are listed in the first column of the table and are called “Supporting Questions.” They do not need to be worded exactly the same, but make sure the same ideas are covered in the supporting questions your class comes up with. Explain to the students that these are the questions they will be answering in this unit as they investigate changes in New York City over time.

Also, ask students why these questions are important and how the questions relate to them. Question as necessary so the students realize the place they live in has changed over time, too. Even if students never go to New York City or have never been there, if they understand how things have changed in one place, it will help them understand change in other places. Just as New York City has changed over time, so has the community in which your students live.

LESSON 2 - All about Sources

This lesson introduces the following inquiry skill, but does not address a specific geography standard. SS.IS.3.3-5 – Determine sources representing multiple points of view that will assist in answering essential questions.

Objective: Students will recognize that all sources are not of equal value in answering the big question.

Lesson essential question: What sources of information are or are not useful for answering the big question?

Lesson Overview:

Engage: Class plays “Telephone” to illustrate the difference between a primary and a secondary source.

Explore: Part 1 – Primary or secondary?

Explain: Students identify and explain their choices.

Extend: Part 2 – Thumbs up or Thumbs down?

Evaluate: Part 3 – Wrap-up

Engage:

Explain to the class that you are going to play the children’s game called “Telephone.” You will whisper a message in the ear of one student. That student is to quickly whisper the message to the next student, who will whisper it to the next. The message will be relayed in this fashion until all students have heard the message. Make it clear that the message must be whispered so only the next student can hear and it must be done quickly. You might even give them an assigned amount of time, then announce “Time’s up” to inform the student who has just received the message that they must now share it with the next student. The last student to receive the message tells the class the message out loud. Usually the message has been greatly distorted by the time it gets to the last person.

Explain the similarity between this game and the kinds of sources you will use to study New York City. Some sources, called primary sources, are like the person who gave the original message. The person who received the message may have repeated it exactly as it was said, or may have put the message (or parts of it) in their own words. This is what secondary sources are like. Someone takes information from another source and presents it in their own way. Secondary sources may be accurate or may not be completely accurate.

But, primary sources are not always completely accurate either. To illustrate how primary sources may be inaccurate, repeat “Telephone” but begin by telling a student a statement that is false. Maps and photos are considered primary sources. But, if the cartographer accidentally leaves something important off the map, it is not completely accurate. A photograph may be more accurate, but even that can be misleading. The different angles at which the photograph is taken can suggest rather different settings. For this reason, it is important to use more than one source.

Explore: Part 1 – Primary or Secondary?

Working in pairs, students should follow instructions on Part 1 of their Lesson 2 handout.

Answers:

F. Secondary source – information about the Lenape Indians

G. Primary source – Census data

H. Primary source – map of Manhattan streets and public transit

I. Secondary source – Virtual New Amsterdam Project

J. Secondary source - Newspaper article about New York City's ethnic neighborhoods

Explain:

Students share their answers with the rest of the class. Teacher confirms answers and corrects any that are wrong. Make sure you explain why the correct answers are correct and why the wrong answers are incorrect.

Extend: Part 2 – Thumbs up or thumbs down?

Working in pairs or in groups, students should follow instructions on Part 2 of their Lesson 2 handout. When the groups are done, have the students share their answers with the rest of the class, explaining their choices. The teacher then confirms the correct answers and corrects any that are wrong. Make sure you explain why the correct answers are correct and why the wrong answers are incorrect.

Answers:

K. Thumbs down for New York City 5 day weather forecast. This provides information about very short term change. In this unit, we are looking at long term change.

L. Thumbs up for the census data. This tells us about population changes over time.

M. Thumbs up for information about the Dutch. This tells us about the culture of the people living in New York City at one point in time. Combined with information at other points in time, we can see how culture changed in New York City.

N. Thumbs down for information about where in NYC parts of Spiderman were filmed. Interesting, but provides no useful information for this topic.

O. Thumbs down for the schedule of the New York Mets. Again, it provides no useful information for our topic.

P. Thumbs down for editorial from the New York Times. Not only does the topic not “fit,” but this is also an editorial piece based on opinion.

Evaluate:

Working in pairs or groups, students should follow instructions on Part 3 of their Lesson 2 handout. Encourage students to view the map at different scales by zooming in and out. This will allow them to see more of the New York City area and see it in more detail. After students write out their answers, you should collect and check them.

Answers:

a) The Arcgis Story Map “Spyglass on the Past” includes two images, one a map of New York City in 1836 and the other a current satellite image of New York City. Individually, the satellite image and the map are considered primary sources. But, because they are overlaid on top of each other, and appear in a Story Map, this is considered a secondary source.

b) This source is very useful for answering the big question of this unit. By overlaying the map and the satellite image, change is very visible. Some of the more obvious examples of change are the building of skyscrapers in Lower Manhattan, the building of bridges across the East River, the removal of wharves along the southern edges of Manhattan Island, and the extension of Manhattan Island into what was water in 1836.

LESSON 3 – Population changes

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective:

Students will be able to explain how the population and race/ethnicity of the population changed at four points in time.

Lesson essential question: How did the number and race/ethnicity of people living in New York City change over time?

Lesson Overview:

Engage: Part 1 – How many is one million?

Explore: Part 2 – Population changes over time

Explain: Whole class review answering questions about graphs

Extend: Part 3 - Race/ethnicity timeline

Evaluate: Wrap-up

Instructions/pre-lesson:

Before the lesson begins, you will need to have 1 sheet of graph paper ready to hand out to each student.

Engage: Part 1 – How many is one million?

Working in pairs or small groups, students should follow the instructions in Part 1 of their Lesson 3 handout. The answers to the questions are: *1000 dots are shown on the page. 1000 pages of dots this size would be needed to show 1,000,000 dots. (1,000,000/1000=1000)*

Before moving on to Part 2, lead a brief discussion about the number one million, leading up to students recognizing there are cities with more than 1 million people. Ask students: Where in the world are there 1 million of something? Have you ever been in a place with 1,000,000 people? Where in the world are there 1,000,000 or more people? For a list of U.S. cities with a population of 1,000,000 or more, go to: <https://www.census.gov/newsroom/press-releases/2015/cb15-89.html>

Explore: Part 2 – Population changes over time

Working in pairs or small groups, students should follow the instructions in Part 2 of their Lesson 3 handout. The answers to the questions are below.

1. *No*
2. *Increments in the y axis are not equal. As a result, small numerical gains appear to be as great as larger numerical gains in population.*
5. *In 1626, the population of New York City was 270; less than one page of dots would be needed. In 1670, the population of New York City was 2000; 2 pages of dots would be needed. In 1900, the population of New York City was 3,437,202; 3437 pages of dots would be needed. In 2013, the population of New York City was 8,405,837; 8406 pages of dots would be needed. That is a lot, but you might also share with the students the fact that this is the population of New York City only. It does not include the population of the suburbs of New York City. If the population of suburbs is included, the population more than doubles.*

6. *There is no definite answer to this question. Students should discover that they do not have enough information to know the answer for sure. "About the Lenapes" says: "Some of the Lenape lived in large villages of two to three hundred people, but most of them lived in small bands of 25 to 50 people." If a large village was located here, the Lenape population could have exceeded the population of the Dutch settlement in the beginning. It is likely that the later population of New Amsterdam exceeded the population of the Lenapes, however. The website about the Lenapes does not provide enough information about their population or where they lived to give a definitive answer.*

Explain: As a whole class, review what the students just did by asking them to answer the following questions orally:

- What does the graph you made tell you about the population of New York City over time and how is this different from what the graph in Source 1 suggests? (*NYC had a very small population in 1626 and 1670, but the population grew a lot by 1900 and then nearly doubled from 1900-2010. The graph in Source 1 suggests that the population of NYC in the 1600s was a little less than half what it was in 1900 or 2013.*)
- Why are some graphs misleading? What can be done to prevent that? (*Because they don't use even intervals for the x and y axis. Make sure the graph does have even intervals on both axes or look at the data used to make the graph and make your own with even intervals.*)
- Why can't you give a definite answer to question 5? (*See answer above.*)

Extend: Part 3 – Race/ethnicity Timeline

Instruct students to work in groups once again in order to complete the population timeline and answer the questions in Part 3.

Answers:

- Lenapes (Native Americans)*
- Dutch settlers from The Netherlands*
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Year	Percent white	Percent black	Percent American Indian....	Percent Asian and Pacific Islander	Percent Hispanic
1900	98	1.8	-	0.2	NA

4.

Year	Percent white (White alone, not...)	Percent black	Percent American Indian....	Percent Asian and Pacific Islander	Percent Hispanic
2010	45%	25%	Less than 1%	12%	28%

- They are nearly alike. % foreign born in 1900 = 37% (1,266,963/3,437,202)*100
 % foreign born in 2010 = 38% (3,209,428/8,405,837)*100*
- In 1900, 25% of the foreign-born population was from Germany, 22% from Ireland, 15% from Russia, and 11% from Italy. In 2013, 28% of the foreign-born was from the Caribbean, 12% from China, and 6% from each of the following: The Russian Federation, India, and Mexico.*

7. *Answers may vary here depending on whether students identify leading racial/ethnic groups or leading groups of foreign-born. For 1900, students should recognize that the largest share of the population in New York City was white, and Germany, Ireland, and Russia were the leading countries from which immigrants came. For 2010/2013, students should recognize that New York City had much more racial diversity. Leading groups at this time were White, Hispanic, and Black. The top three places where foreign-born come from are: the Caribbean (many of whom are Black or Hispanic), China (Asian), and India (Asian) /Mexico (Hispanic) /Russia (White). The important thing about this question is that students can explain how they identified the top groups and what sources were used to do so.*

Evaluate: “Wrap up” – Conduct an oral class review or have students do a “quick write” to answer the Lesson Essential Question (How did the number and race/ethnicity of people living in New York City change over time?) Total population and composition of the population should be included in either review.

LESSON 4 – Culture changes (pre-1609)

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective: Students will be able to compare and contrast the foods, clothing, housing, arts/leisure activities, religion, and language for a place at four periods in time.

Lesson essential question: What did the culture of New York City look like in pre-historical time?

Lesson Overview:

Engage: Play a video with sounds of the forest and show a picture of Eastern U.S. woodlands. Have students brainstorm about how they would survive if they lived in this place in 1600.

Explore: Students investigate website to find answers to one of the questions posed.

Explain: Students answer questions about Lenape culture.

Extend: Students draw a picture of an object related to Lenape culture.

Evaluate: Play “Lenape Pictionary”

Engage: Begin class by turning out the classroom lights, having students shut their eyes, and listen to a video playing sounds of a forest. Have students listen to the sounds for several minutes. Tell them to pretend this is your home. Ask them where they live and see if they can identify the place as a forest then explain that this is what New York City sounded like when the Lenape Indians lived there in 1600.

One video you might use is:

[http://search.myway.com/search/video.jhtml?n=7839c442&p2=%5EY6%5Echr999%5ETTAB02%5E&pg=video&pn=1&ptb=06D0E11C-40D0-4847-B488-4DE3029E0913&q5=&searchfor=sounds+of+the+forest&si=&ss=sub&st=tab&tpr=sbt&trs=wtt\)](http://search.myway.com/search/video.jhtml?n=7839c442&p2=%5EY6%5Echr999%5ETTAB02%5E&pg=video&pn=1&ptb=06D0E11C-40D0-4847-B488-4DE3029E0913&q5=&searchfor=sounds+of+the+forest&si=&ss=sub&st=tab&tpr=sbt&trs=wtt)

As you stop the video, and turn on the lights, tell the students today they are going to pretend they are Lenape Indians living in this forest in 1600. Project a large picture of the eastern woodlands such as the one below. (Or hand out printed copies of the picture to each group.) Explain that this is what parts of New York City looked like in 1600. Then, lead a discussion about how they would survive in this place. What would they eat? Where would they live? What would they wear? What would they do for fun? What higher power might you believe in?



Photo from: <http://www.strollingoftheheifers.com/woodlands-exhibit-at-the-expo/>

Explore: Divide the class into five groups. Give each group (or each student) a copy of the Lesson 4 handout. Assign each group one question to investigate. Remind students they will find useful information in three places on this website: “About the Lenapes” section, the videos, and the “Kids Fun Page.”

Explain: Each group should take turns presenting their findings to the class. Make sure the following questions are answered:

Group a)

- Where did the Lenape’s food come from? *(Some food was grown, others gathered or hunted.)*
- What did the Lenape eat? *(Make sure they identified multiple foods, including “The Three Sisters,” wild berries, fish, and meat from wild animals.)*
- How was the food prepared? *(Some was cooked over a fire, other food was eaten raw.)*
- How did their winter diet differ from their summer diet? *(Many foods eaten in the winter had been dried the previous summer.)*

Group b)

- What type of clothing did the men wear? *(breech clout and leggings with deerskin moccasins)*
- What did the women wear? *(wrap around skirt, loose top, and deerskin moccasins)*
- Where did their clothing come from? *(mostly from hides of animals such as beaver and deer; men were the hunters, women made the clothing)*
- How was their clothing different in summer and in winter? *(Cold winter temperatures required extra layers.)*

Group c)

- How did the Lenape build their homes? What materials did they use? *(They used tree branches to make the frames, then covered that with bark, skins, or woven mats.)*
- What shape were the homes? *(They were rounded on top. Sometimes two families lived together in larger homes called longhouses.)*

Group d)

- What did Lenape children do in their leisure time? *(They played with toys, many of which were miniature replicas of the tools and weapons their parents used.)*
- What did Lenape young adults do in their leisure time? *(They played games, danced, or listened to stories being told. Many of the games were competitions to show skill and strength, such as Lacrosse.)*
- What did Lenape adults do in their leisure time? *(They told/listened to stories, they danced and played musical instruments.)*

Group e)

- What higher powers did the Lenape believe in? *(They believed that spirits surrounded them. Some of these spirits are good, others were evil.)*

-What religious observances did they practice? *(They had ceremonies and rituals. Many ceremonies celebrated events in nature such as the wind blowing or trees budding. Others celebrated birth and death.)*

Extend: Each student should draw a picture of something that is related to the answer to their group's question. Have the students meet in groups once again so they can identify things that could be drawn and decide who will draw each item. Each student should draw a picture of something different.

Evaluate: Play "Lenape Pictionary." Have each student show their picture to the rest of the class and tell the class the question (a-e above) that the picture relates to. Have students from other groups guess what the object is. The student who drew the picture then confirms or corrects the answers and explains the object shown.

LESSON 5 – Culture changes (1609-1664)

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective: Students will be able to compare and contrast the foods, clothing, housing, arts/leisure activities, religion, and language for a place at four periods in time.

Lesson essential question: What did the culture of New York City look like from 1609-1664?

Lesson overview:

Engage: Listen to video recordings of Lenape, then Dutch language.

Explore: Part 1 – Find information about New Amsterdam

Explain: Class review and completion of chart.

Extend: Part 2 - Write a narrated tour of New Amsterdam to accompany the Costello map.

Evaluate: Groups present tour to class.

Engage: Begin the lesson by playing a video of someone speaking Lenape. (One example is: “Lenape Language – Elements of Nature” found at:

<http://search.myway.com/search/video.jhtml?searchfor=lenape+language+elements+of+nature&n=7839c442&p2=%5EY6%5Echr999%5ETTAB02%5E&ptb=06D0E11C-40D0-4847-B488-4DE3029E0913&qS=&si=&ss=sub&st=tab&trs=wtt&tpr=sbt&ts=1497382499827>

Tell the students that this is the Lenape language and it is what the Lenapes spoke when they lived in the area of New York City before 1609. (yesterday’s lesson) At the time period we are studying in this lesson another language was used. Listen to it for a few minutes. Can you name this language?

(Answer: Dutch)

One website where you can hear Dutch spoken is:

<https://www.bing.com/videos/search?q=speaking+dutch&&view=detail&mid=DBBB9C9E5A62655E242E&FORM=VRDGAR>

Explore: Part 1 on Lesson 5 handout

Working in groups, students are to find information about the language, religion, food, clothing, housing, and arts/leisure activities in New Amsterdam from 1609-1664 using the sources cited on the student handout.

Explain:

List the following headings on the board: Language; Religion; Food; Clothing; Housing; Arts/Leisure Activities. Have each group report on the information they gathered for one category, then add information to the other categories if they have additional information not presented by another group.

Extend: Part 2 on Lesson 5 handout

Hand out a copy of the map of New Amsterdam to each group. Each group should follow the instructions in Part 2 of the Lesson 5 handout to write a script they would use for a narrated tour of New Amsterdam using the Castello map found online. Make sure to review the instructions in Part 2 with the class before they begin.

Evaluate: Each group shares their tour with the class, including the information they would say at each site. Show each group's numbered map to the class as they speak.

LESSON 6 – Culture changes (Around 1900)

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective: Students will be able to compare and contrast the foods, clothing, housing, arts/leisure activities, religion, and language for a place at four periods in time.

Lesson essential question: What did the culture of New York City look like around 1900?

Lesson overview:

Engage: Part 1 – Flashcard ID

Explore: Part 2 – One step back...and two steps forward

Explain: Whole class review of questions in Part 2 of the Lesson 6 handout and write a story for the picture.

Extend: Part 3 – Victoria and Becky

Evaluate: Part 4 – Alike and different

Instructions/pre-lesson:

Before teaching this lesson, go to the following website which has pictures of immigrants arriving at Ellis Island in the early 1900s in native dress.

https://www.washingtonpost.com/news/wonk/wp/2015/10/24/what-americas-immigrants-looked-like-when-they-arrived-on-ellis-island/?utm_term=.8b248c762500

Print out eight of the pictures on cardstock for each group. Keep a corresponding list (for yourself) that identifies the country from which the person/people came. Alternatively, use the pictures provided for this lesson. If you use the pictures accompanying this lesson, they are:

- | | |
|---------------------------------------|-----------------------------|
| 1. <i>Three Dutch women</i> | 5. <i>An Italian woman</i> |
| 2. <i>A Greek soldier</i> | 6. <i>A Norwegian woman</i> |
| 3. <i>Men from the Russian Empire</i> | 7. <i>Slovakian women</i> |
| 4. <i>A Bavarian man</i> | 8. <i>A Hindu boy</i> |

Also print out the following picture which can be found at:

<https://www.loc.gov/teachers/classroommaterials/presentationsandactivities/presentations/immigrati on/polish6.html> Make enough copies so each group can have one or two copies of the photo.



Students should also be familiar with Ellis Island before this lesson begins. Background information can be found at: <https://www.libertyellisfoundation.org/ellis-island-history>

Engage: Part 1 – Flashcard ID

Divide the class into pairs or groups. Give each group one set of Ellis Island flashcards. Tell each group the pictures are of immigrants as they arrived in the U.S. in their native dress. They were taken by Augustus Sherman, an amateur photographer who worked at Ellis Island from 1892-1925. Give each group a few minutes to try to identify the country from which each person came. Each group should record their ideas on the handout for Lesson 6. When the groups are finished, tell the class the correct answers and have students see how well they guessed.

Explore: Part 2 – One step back ... and two steps forward

Working in pairs or small groups, students should follow the instructions on Part 2 of their Lesson 6 handout.

Explain: Review answers to Part 2 of the Lesson 6 handout with the class as a whole.

Answers:

1. *Old immigrant groups were German and Irish.*
2. *New Immigrant groups were Russian and Italian.*
3. *Most immigrants lived in the Lower East Side neighborhood.*
4. *Tenements were often built of brick and housed more than one family in small apartment. Each apartment often had two rooms, a kitchen and bedroom. There was no running water or toilets. Outhouses were used. Sometimes people worked at home in the tenement, too. There were few windows (often just one or two) and poor ventilation.*
5. *Many jobs were in manufacturing. They were low paying, dirty, and dangerous. Some involved digging, burying pipes, or building.*

Then, have students study the picture, then tell a story about it incorporating information about tenements and jobs.



Part 3 – Victoria and Becky

Using the resources cited on the student handout, students learn about the life of two fictional immigrant girls living in the Lower East Side in the early 1900's -- Victoria Confino (from Turkey) and Becky Moscovitz (from Russia). As in the Explore portion, the students could spend a lot of time investigating these two resources. You will need to use your judgement here as to how much time to allow.

Evaluate: Part 4 – Alike and Different

Students create a Venn diagram to see similarities between Victoria and Becky's lives and discover that although the language, religion, dress, food, housing, and leisure activities were different for the many immigrant groups living in New York City at that time, there were also some similarities.

LESSON 7 – Culture changes (2010/present)

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective: Students will be able to compare and contrast the foods, clothing, housing, arts/leisure activities, religion, and language for a place at four periods in time.

Lesson essential question: What does the culture of New York City look like today?

Lesson overview:

Engage: Part 1 – Who’s Who in New York City today?

Explore: Part 2 – Picture Bingo

Explain: Students share their answers to Picture Bingo, explaining why they placed the pictures where they did.

Extend: Map exploration and what they tell us about cultural characteristics of NYC today

Evaluate: Write a letter

Instructions:

Before beginning this lesson, print out copies of the Picture Bingo cards, making one set of cards for each group. Pictures should be small (approximately 2” x 3”). You will also need to make copies of the Picture Bingo table (see below) on poster board. Each cell on the Picture Bingo Board should be as large or larger than the pictures. Make as many Picture Bingo Boards as there are groups.

	Language	Religion	Housing	Clothing	Food	Arts/Leisure
Chinese						
Dominican						
Indian						
Mexican						
Puerto Rican						
Russian						

Engage: Part 1 – Who’s Who in New York City today?

Working in pairs or groups, students follow the instructions in Part 1 of their Lesson 7 handout. When students are done, check their answers. Also show students a map of the Caribbean region, including where Puerto Rico and Dominican Republic are located.

Answers:

1. *White*
2. *Black*
3. *Asian*
4. *Hispanic*

In 2013, 28% of the foreign born population was from the Caribbean, 12% from China, and 6% from each of the following: Russian Federation, India, and Mexico.

#1. Puerto Rico (Puerto Rican refers to a person from Puerto Rico.)

#2. Dominican Republic (Dominican refers to a person from Dominican Republic.)

Explore: Part 2 – Picture Bingo

Hand out a set of “Picture Bingo” cards to each group. The pictures should be in different order in each set that is handed out. Working in pairs or groups, students follow the instructions in Part 2 of their Lesson 7 handout. Stop when the first group calls “Bingo.”

Explain:

Beginning with the first group to call “Bingo,” have each group show two or three cards and explain to the class where they placed them on the Bingo sheet and why they placed them there. Some pictures could be placed in different categories, but since they only have one picture, they must decide where to place it. The most important thing is that students provide good justification for where they placed it on the Bingo sheet.

Answers: *(Clues they would use to identify)*

#1: Chinese-language (Chinese characters in pix and picture appears in website)

#2: Puerto Rico-arts/leisure (Parade with Puerto Rican flag in the background)

#3: Mexican-arts/leisure or dress (for special occasions, not every day) (Parade with colors of Mexican flag)

#4: Chinese-arts/leisure (Dragons associated with Chinese, signs in back show Hunan House and Chinese Characters and picture appears in website)

#5: Indian-clothing (Man wearing turban. Picture appears in website)

#6: Russian-clothing (Picture appears in website)

#7: Dominican-Food (Bakery sign includes word “Dominicano”)

#8: Mexican-Food (Grocery store sign has colors of Mexican flag and Spanish words)

#9: Puerto-Rico-Food (Restaurant has Puerto Rican flag flying above)

#10: Dominican-Clothing or Arts/Leisure (Parade. Dresses in colors of Dominican flag.)

#11: Russian-Food (Cabbage rolls. Picture appears in website)

#12: Indian-Arts/Leisure or Clothing (for special occasions, not every day dress) (Parade with Indian flag and colors of the flag)

#13: Russian-language (Picture appears at website)

#14: Russian-Arts/Leisure (The word “Moscow” appears on one of the videos and picture appears at website)

Extend:

Show students the colored version of the map of New York City they looked at in Lesson 1. The map can be found at: <http://www.nytimes.com/projects/census/2010/explorer.html> (Mapping America, Every City Every Block)

Also show students the map of neighborhoods in New York City found at:

http://www.nytimes.com/interactive/2011/01/23/nyregion/20110123-nyc-ethnic-neighborhoods-map.html?_r=0

Have students think about what they saw in Picture Bingo and in these two maps of New York City. Ask students, “Do you think the things we saw in Picture Bingo (i.e. clothing, food, arts/leisure) would be found mixed throughout New York City or is it more likely that we would find different clothing, food, arts/leisure activities in different places? Why do you think so?”

Answer: It is more likely we’d find different clothing, food, arts/leisure activities in different places because the maps show New York City is divided into different neighborhoods.

Ask students: Why do you think it is harder to find pictures related to religion and housing than pictures related to clothing, food, and arts/leisure for today’s ethnic groups?

Answer: Many of today’s immigrant groups have come to New York City recently and settled in neighborhoods that were built up by other immigrant groups. As a result, many churches look the same (except perhaps for the language used in worship) and residences look the same as they did in the past. The culture of the people living there is more visible inside these buildings than outside.

Evaluate:

Have students pretend that they were a 500 year old Lenape Indian who has lived their entire life on Manhattan Island. Have each student write a letter to their great-great-great-great- great-grandchildren explaining how the culture of New York City has changed during their lifetime, beginning when they were young up to the present day. Explain that they should be sure to include information from each of the four periods studied in the last four lessons.

LESSON 8 – Changes in New York City’s Plants, Animals, and Land

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective: Students will be able to compare and contrast the physical environment and biosphere of New York City today to what it was prior to European settlement.

Lesson Essential Question: How have the land, plants, and animals of New York City changed since European settlement of the region?

Lesson Overview:

Engage: Show trailer for movie *A Night in the Museum*

Explore: Part 1- Research for exhibit at the museum

Explain: Groups describe their exhibit plan orally

Extend: Part 2 – Finalize exhibit plans

Evaluate: Groups describe their exhibit plan, including what the “PALs” would say/do

Instructions/pre-lesson:

In this lesson, you will need 1 copy of the “Beneath New York” map (“Before New York,” *National Geographic*, September 2009) for each group.

Engage: Show students the video trailer for the 2006 movie *A Night in the Museum*. This can be found on YouTube at: <https://www.youtube.com/watch?v=jWDwJIBqjSU> (2.25 minutes) Then tell the students that in this lesson they are going to pretend to work at the museum shown in this film – the American Museum of Natural History in New York City.

Explore: Divide the class into teams of 3 students. Each team is to pretend they work at the American Museum of Natural History and they have been given the task of creating a new exhibit called “If New York City’s PALs could Talk.” Assign each student in the team one of the “PALs” as a topic – plants, animals, or land. Using the websites identified on Part 1 of their Lesson 8 handout, each student is to gather, then record information about their topic. As a team, students then identify what will be in their exhibit. Tell students that the specific information (i.e. elevation change and % of land in hills) listed are just suggestions for the kind of information they are to collect. Some information is not available at all sites.

Explain: Each team presents their preliminary exhibit ideas to the Museum Director (teacher) and the museum’s Board of Directors (the rest of the class). The presentation should be brief and focus on what will be in the exhibit (i.e. a 3-D model of the land in 1782, a 3-D model of the city today including buildings, and a maple tree). The Director and Board of Directors may ask questions for further clarification. Questions might include how they plan to do this (i.e. What will the model of the land be made of? What will you use to show the buildings? Will you include a live maple tree? A picture of a tree? A fake tree?)

Extend: As a team, the students make any changes to their exhibit plan as suggested by the Board of Directors and Museum Director. The team then chooses 3 items (one plant, one animal and one item related to land such as a hill, a depression, a rock) that they have identified as being part of their exhibit.

At least one item should be related to those found in the past and at least one item should be related to those found in the present. As a team, the students identify an action or statement that each item would do or say if they could come alive at night. The items actions or words should also reflect changes over time. (i.e. A maple tree from the late 1700's might cry because it will be cut down in the future to make way for a building on that site or a tree that was introduced in New York City recently might stroll over to join other objects/items from that part of the world where it was originally found. Students record their ideas in Part 2 of their Lesson 8 handout.

Evaluate: Each team presents their final exhibit plan to the Museum Director (teacher) and the museum's Governing Board (the rest of the class). The presentation should be brief and focus on what the object in the exhibit would say or do if they could come alive at night.

LESSON 9 – Land use change

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Objective: Students will be able to describe how the land use changed in the four time periods examined.

Lesson essential Question: How do land uses in a place change over time?

Lesson Overview:

Engage: Intro to time capsules

Explore: Part 1- The Time Capsule Detectives to the Rescue

Explain: The Time Capsule Detectives report to the mayor

Extend: Part 2-The Time Capsule Detectives at Work Again

Evaluate: The Time Capsule Detectives report to the mayor

Instructions/pre-lesson: Before the lesson begins, you will need to:

- 1) show and explain a land use map to the class. Students need to realize that a land use map does not show each individual land use, but shows categories of land use such as: single-family residential; multiple-family residential; commercial; industrial; and recreational. This will be easier for students to understand if they look at a land use map of a place that is already familiar to them such as their hometown. Local land use maps are often available at a local government office or at local government planning agencies. Or, have students look at the Land Use map of New York City at the website listed below (Source 14).
<http://maps.nyc.gov/doitt/nycitymap/template?applicationName=ZOLA>
- 2) have access to Google Earth and make sure students know how to find a given location and use “Street View.”
- 3) expect that this lesson may take more than one class period.

Engage: Introduce the idea of a time capsule to the students. You might do this with a visit to the school or church’s cornerstone (especially if you know objects have been buried there). Or, show the following video to the students: <http://abcnews.go.com/US/oldest-time-capsule-us-samuel-adams-reburied/story?id=28064049>

Explore: Part 1 – Time Capsule Detectives to the Rescue

Divide the class into teams to complete Part 1 of the Lesson 9 handout. Teams can be referred to as Time Capsule Detective Team 1, Time Capsule Detective Team 2, etc. You will need to play the role of the mayor and call “Time’s up” when you would like students to quit working on Part 1.

Explain: Lead a class discussion where teams report to you, the mayor, explaining the significance of each item in the Castle Clinton Time Capsule. You might have each team report on one item at a time so

all teams have a chance to report in. Note: There may be different interpretations of some objects; others should have only one interpretation.

Answer key for the Castle Clinton Time Capsule:

Pre-1609	1609-1664	1811-1822	1824-1854	1855-1890	1896-1941	1946-present
Site was in river. Used for fishing.	Site was in river. Used for shipping and fishing.	Fort built on landfill	Cultural Emporium	Immigration Center	Aquarium	National monument

Graph of the number of visitors to Castle Clinton National Monument from 2008-2016. (1946-present)
 In lesson 1, students learned about the population of New York City at four points in time. They should use that knowledge to determine that this graph is very recent. The number of visitors exceeds New York City’s population in all years except the most recent. Also, this graph highlights the primary function of the site today – as a place tourists visit.

Model of a ship. (1609-1664) This model represents the reason the Dutch came to New Amsterdam (later called New York City) -- to find goods to trade. At the time this was New Amsterdam, this site was in the river (later named Hudson River after the Dutch explorer). Flag of The Netherlands distinguishes this as a Dutch ship, not an American ship that would have been here at the time Castle Clinton was a fort.

Framed picture of fish. (1896-1941) This picture that looks like an aquarium represents the use of this building when it housed the New York City Aquarium.

A Native American fishing spear. (pre-1609) This represents the use of this site when the Lenape Indians lived here (before the Dutch came in 1609). At that time, this site was part of the river.

A wooden trunk. (1855-1890) This represents the trunks and suitcases many immigrants used to carry their belongings from the “Old World” to the “New World.” Although immigration is still a big part of New York City’s story, this is an older trunk and refers to the period when Castle Clinton was used as an immigration landing center. After this point in time, Ellis Island was the New York location used to process arriving immigrants.

Bow tie, top hat, and stick pins. (1824-1854) These items represent the years when the building was used as a cultural emporium called Castle Garden. People would get very dressed up to attend events here.

Model cannon. (1811-1822) This represents the period when it was used as a fort intended to defend New York’s harbor from the British.

Framed collage of NYC items. (1946-present) These items represent the city today as a tourist attraction like Castle Clinton.

Framed picture of the Statue of Liberty. (1855-1890 or 1946-present) This could represent today since Clinton Castle National Monument is where tickets sales for the ferry to Ellis Island are found. This could also represent the period when the building was used as an immigration center, much like Ellis Island was after 1892.

Hatbox with the Paris design. (1824-1854 or 1855-1890) This hatbox could represent the hats and other formal attire worn by people attending programs at Castle Garden. Or, it could represent the hatboxes some women brought when they immigrated to the U.S. Hat boxes were used so hats would not get damaged when they were not being worn.

Fishnet (pre-1609 or 1609-1664) Both the Lenape and the Dutch fished in the river. The Lenape were more likely to use nets. But, some may think of this as rigging on a ship like those the Dutch used.

Extend: Part 2 – Time Capsule Detectives at Work again

Each Time Capsule Detective team completes Part 2 of the lesson – drawing 4 land use maps for the intersection of Wall Street and Broadway. Instructions on the Lesson 9 handout tell students to have you check their maps before going on. Their maps should indicate the same land uses and road patterns (or lack thereof) as in the sample land use map provided. If they do not, show students the sample map so they can see the actual land uses. Talk to them about how they identified the land uses and where they may have misinterpreted something.

Answer to question posed in Part 2:

The source that provides the least information for this task is the one with old pictures from the New York Public Library. There are only a couple of pictures from 1900 and even that is estimated. Not all the pictures clearly identify the location at which the picture was taken. One gets the impression that the land uses in 1900 are the same as they are today (church on the west side of Broadway and commercial district on the east side), but one cannot say that for sure. This makes the land use map for 1900 the least certain

After you have checked a group’s land use map, they are to fill in the second table on the Lesson 9 handout identifying objects they would recommend putting in the second time capsule. Encourage students to think of objects that are related, but not completely obvious. For example, they should not suggest a picture or model of a church, but instead suggest something one might find in a church.

Evaluate: You will again need to play the role of mayor and have the groups report on the objects they would recommend for the Wall St./Broadway Time Capsule. Answers will vary, but they should include some reference to the information listed below.

Time period	Objects for the Time Capsule	Rationale for objects
Pre-1609		Objects chosen for this time period should relate to the Lenapes who hunted on this land.
1609-1664		Objects chosen for this time period should relate to New Amsterdam. Wall Street is the location of the wall around the New Amsterdam settlement, so the objects may relate to that. The Costello map shows homes along Broadway with gardens/farmland

		there as well. Objects may relate to either of those land uses. Or, objects may relate to the road itself (Broadway.)
1900		Trinity Church was located west of Broadway in 1900, so objects may relate to that. To the east, along Wall Street, there were commercial buildings, including the Wall Street Stock Exchange. Objects may relate to that or to the road itself.
Today		Trinity Church remains west of Broadway today, so objects may relate to that. To the east, along Wall Street, there are commercial buildings, including the Wall Street Stock Exchange. Objects may relate to that or to the road itself.

Wall Street and Broadway
Land use map for pre-1609

At this time, the intersection of Wall Street and Broadway did not exist. Some sources say Broadway was built over a Native American trail, so that may be marked on the map, but not necessarily. The area around this intersection was most likely wooded, so the land use map should indicate that.

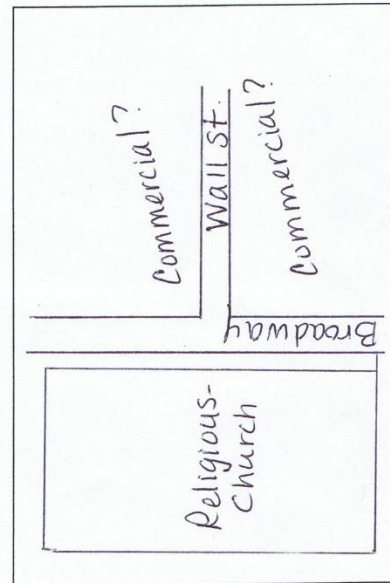
Wall Street and Broadway
Land use map for 1609-1664

Wall Street and Broadway
Land use map c. 1900

Wall Street and Broadway
Land use map c. 2010

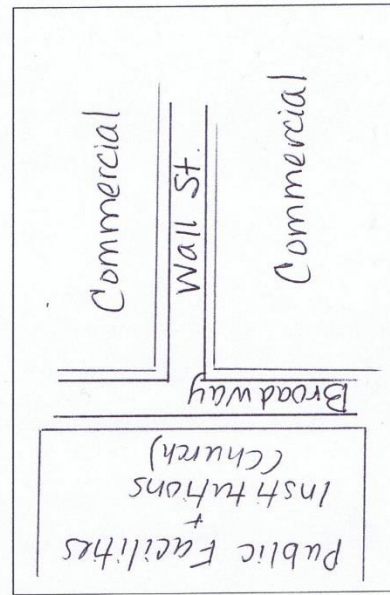
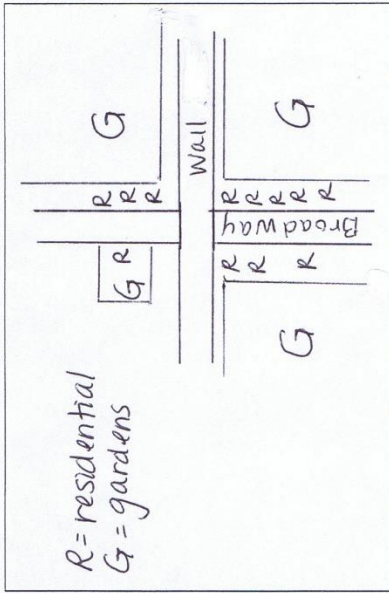
Wall Street and Broadway
 Land use map for pre-1609

At this time, the intersection of Wall Street and Broadway did not exist. Some sources say Broadway was built over a Native American trail, so that may be marked on the map, but not necessarily. The area around this intersection was most likely wooded, so the land use map should indicate that.



Wall Street and Broadway
 Land use map c. 1900

Wall Street and Broadway
 Land use map for 1609-1664



Wall Street and Broadway
 Land use map c. 2010



LESSON 10 - Natural Changes

SS.G.1.5 -- Investigate how the cultural and environmental characteristics of places within the United States change over time.

Science 5-ESS 3-1 - Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Objective: Students will be able to identify, explain, and defend a natural process that changed the cultural and environmental characteristic of a place.

Essential Question: How do natural processes change the environmental and cultural characteristics of places over time?

Lesson overview:

Engage: Students use wave experiment to answer Q1

Explore: Watch video on waves

Explain: Answer Q2 by answering the three specific questions on the Lesson 10 handout.

Extend: Answer Q3 using resources listed in lesson.

Evaluate: "Pair Share" wrap up answering the essential question

Materials needed for each group:

1. Paint roller pan
2. Five cups of sand
3. Six cups of water
4. Empty plastic water bottle (Not included; teacher needs to supply empty bottles).
5. Masking tape or camera

Engage: Divide the class up into groups. Have each group predict their answer to Question 1 and write down their prediction on the first page of their Lesson 10 handout. Then, give each group the supplies listed above. Have them follow the instructions listed under Q1 on the Lesson 10 handout.

Explore: As a class, watch at least the first 13 minutes of the You Tube video "The Beach: A River of Sand." Students should take notes as they watch the video.

<https://video.search.yahoo.com/yhs/search?fr=yhs-mozilla-003&hsimp=yhs-003&hspart=mozilla&p=The+beach+a+river+of+sand+video#id=1&vid=d42a8658cdf1ee112d693e6018dbb747&action=click>

Explain:

Lead the class in a discussion answering the following questions related to the video. Have students record the answers on their Lesson 10 handout:

1. Where does the material on a beach come from? (*The material on a beach is weathered rock material that is transported to the coast via rivers. It ultimately comes from the mountains.*)
2. How does the sand on a beach move in the summer and winter? (*In the summer, waves push the sand onto the beach. The bigger winter waves pull the sand out away from the beach and form underwater sand bars.*)

3. Why does sand on a beach not pile up at the mouths of rivers? Where does it go instead? How does it get there? (*Sand does not pile up at the mouths of rivers because longshore transport carries the sand down the beach.*)
4. In addition to eroding the beach (as seen in the first demonstration), waves also create beaches.

Extend:

Working in pairs (or small groups), students should use the sources provided to answer Q3.

Q3 answers:

A1) *a) a shoreline eroded by waves*

A2) *b) a shoreline extended by waves*

A3) *The places most likely to erode are on: Staten Island and Brooklyn (because they have more sandy beaches and less of the coastline has bulkheads or rip rap).*

Final question: *There is no one “right” answer to this question. The major advantage of bulkheads and riprap is they help to reduce erosion. Disadvantages include the cost, some would consider them unsightly, and the fact that they make the shoreline less accessible for people. The report mentions other approaches to reducing beach erosion. So, there are other options to consider.*

Evaluate: Using “pair share,” have students answer the essential question – Explain and give an example of how natural processes changed the environmental and cultural characteristics of New York City over time.

Answers:

Natural processes (i.e. longshore transportation) have created beaches in parts of New York City. But, the beaches are also threatened by coastal erosion, especially when water levels rise. This has implications for the rest of New York City as rising water levels lead to:

- *Less land in beaches for New Yorkers to enjoy.*
- *Less protection inland for storm surges when water level rises.*
- *Threatening homes and properties.*
- *The city spending more money to protect beaches making less money available for other things.*
- *More unsightly structures being built along the coast limiting access to the water.*

Sources for 5th Grade Unit on Changes in New York City

- A <https://www.youtube.com/watch?v=aRVSP7A8yM>
- B <https://story.maps.arcgis.com/apps/StorytellingSwipe/index.html?appid=97ae55e015774b7ea89fd0a52ca551c2&webmap=60a6d8d2ab754250918e7fc21d7ac999#>
- C <http://www.lenapelifeways.org/>
- D http://www1.nyc.gov/assets/em/downloads/pdf/hazard_mitigation/nycs_risk_landscape_chapter_4.2_coastalerosion.pdf
- E <http://metrocosm.com/where-new-yorkers-come-from/>
- F <http://www.lenapelifeways.org/>
- G <https://www.census.gov/population/www/documentation/twps0076/NYtab.pdf>
- H <http://web.mta.info/nyct/maps/lowermanhattan.pdf>
- I <http://www.newamsterdamhistorycenter.org/>
- J <http://www.businessinsider.com/the-best-ethnic-neighborhoods-in-new-york-city-2015-7/#ttle-guyana-richmond-hill-queens-1>
- K <https://weather.com/weather/5day/l/USNY0996:1:US>
- L <https://www.census.gov/population/www/documentation/twps0076/NYtab.pdf>
- M http://www.empirestatehistory.com/Rule_of_the_Dutch_1609-1664.html
- N <http://www.movie-locations.com/movies/s/spiderman.html#.Wjcfh9-nE2w>
- O http://www.espn.com/mlb/team/schedule/_/name/nym/new-york-mets
- P <https://www.nytimes.com/2018/08/28/opinion/new-york-senate-primary-endorsements.html>
- Q <https://story.maps.arcgis.com/apps/StorytellingSwipe/index.html?appid=97ae55e015774b7ea89fd0a52ca551c2&webmap=60a6d8d2ab754250918e7fc21d7ac999#>
1. <http://metrocosm.com/where-new-yorkers-come-from/>
 2. <http://www.lenapelifeways.org/>
 3. <https://www.census.gov/population/www/documentation/twps0076/NYtab.pdf>
 4. https://en.wikipedia.org/wiki/Demographics_of_New_York_City
 5. http://www.empirestatehistory.com/Rule_of_the_Dutch_1609-1664.html

6. http://nc-chap.org/castello/castello_key.php
7. <https://immigrants1900.weebly.com/jobs.html>
8. http://www.tenement.org/education_lessonplans.html
9. <http://www.businessinsider.com/the-best-ethnic-neighborhoods-in-new-york-city-2015-7/#ttle-guyana-richmond-hill-queens-1>
10. <https://www.cia.gov/library/publications/the-world-factbook/docs/flagsoftheworld.html>
11. <https://welikia.org/explore/mannahatta-map/>
12. [file:///C:/Users/rosepk/Downloads/BiodiversityAssessmentHandbk%20\(1\).pdf](file:///C:/Users/rosepk/Downloads/BiodiversityAssessmentHandbk%20(1).pdf)
13. <http://www.randymajors.com/2013/05/1660-new-amsterdam-atop-2013-new-york.html>
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