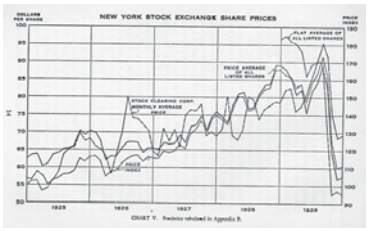
teacher guide

BOOM & BUST: SKYSCRAPERS & SPECULATION 1910-1930s

The documents in this dossier illustrate a key theme— speculation. The"boom and bust" of the "Roaring Twenties" and the Great Depression and the dramatic impact of speculative real estate investment on the New York skyline.





In the 1920s, the United States economy flourished in a way that affected every industry and every market. Likewise, the economic crisis that followed the stock market crash of 1929 had repercussions that extended into the far reaches of the country. The documents contained in this dossier concretely illustrate this rise and fall through the lens of the New York City skyline. High demand for space produces high rent and so, high-rise building.

In order to evaluate these images, it's important to keep in mind that most skyscrapers (and office buildings, broadly speaking) are built as 'speculative' commercial buildings, which means that they are constructed to produce a profit for the investor. With speculative commercial investment, companies and individuals purchase land in commercial areas, such as the Financial District of New York City, and erect large buildings with ample office space. The offices are then rented to different businesses, and investors earn a profit from the rental income. Speculative real estate investment continues today (think of the recent housing bubble) and is an important force behind the development of tall buildings in New York City. Buildings grow taller as land prices rise and investors seek to create more space that can be rented to make a profit. Until recently, New York City experienced a boom in speculative real estate investments and this boom created mixed-use high-rise buildings such as the AOL Time-Warner Center at Columbus Circle.

Students who are struggling to understand the concept of speculation in the context of the stock market bubble of the 1920s may find it easier to understand in a real estate context. Students with a more sophisticated understanding of the era will quickly understand the close relationship between the rising stock market of the 1920s and the availability of money for real estate investment. For both groups of students, these documents should shed light on a fascinating time in the United States and in New York City history.

This dossier supports teaching the following social studies skills and concepts:

SKILLS

- Locating, evaluating, and synthesizing information from a variety of sources

UNDERSTANDINGS

- Basic economic concepts such as investment, profit, and speculation influence skyscraper design
- Economic and industrial factors impact the growth of communities, especially cities
- Economic factors shape the physical features of a place
- Real estate growth in the early 20th century, especially the 1920s, was driven by speculation

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BOOM & BUST: SKYSCRAPERS & SPECULATION 1910-1930s

HISTORICAL CONTEXT

In the 1920s, the United States economy experienced remarkable growth that affected every industry and every market. Likewise, the economic crisis that followed the stock market crash of 1929 had consequences that extended into the far reaches of the country. The documents contained in this dossier concretely illustrate this rise and fall through the lens of the New York City skyline.

In order to evaluate these images, it's important to keep in mind that most skyscrapers (and office buildings, broadly speaking) are built as 'speculative' commercial buildings, which means that they are constructed to produce a profit for the investor. With speculative commercial investment, companies and individuals purchase land in commercial areas, such as the Financial District of New York City, and erect large buildings with ample office space. The offices are then rented to different businesses, and investors earn a profit from the rental income. As such, buildings grow taller as land prices rise and investors seek to create more space that can be rented to make a profit. Speculative real estate investment continues today.

TASK

Using at least four of the seven documents provided in this dossier, as well as your own knowledge of United States and New York City history, answer the questions that follow each document. Your answers to these questions will help you to write an essay, in which you:

- Discuss the effect of the boom economy of the 1920s on the development of the New York City skyline.
- Explain speculative real estate investment, and discuss how the growing economy increased investment funding for speculative real estate ventures, as well as demand for office space. Determine the height and location of tall buildings, as part of your discussion.

GUIDELINES

Be sure to:

- Address all aspects of the TASK by accurately analyzing and interpreting at least four documents
- Incorporate information from the documents in the body of the essay
- Incorporate relevant outside information throughout the essay
- Richly support the theme with relevant facts, examples, and details
- Write a well-developed essay that consistently demonstrates a logical and clear plan of organization
- Introduce the theme by establishing a framework that is beyond a simple restatement of the TASK or HISTORICAL CONTEXT and conclude the essay with a summation of the theme

1 DOCUMENT 1. STOCK MARKET GRAPH (1925-1929)

The New York Stock Exchange
Report of the President May 1, 1929 - May 1, 1930 by NYSE President, E.H.H. Simmons

WHAT IS IT?

This line graph shows the fluctuations in four different indices related to the New York Stock Exchange. The visual distinctions among the four lines (one solid, one comprised of large dashes, one comprised of small dashes, and one punctuated with dots) may be challenging for students to recognize. The most easily identified and most pertinent line on the graph is the solid line, which illustrates the average price of all the listed shares on the stock market, and can be easily measured using the y-axis on the left side of the graph, which shows dollars per share. To fully understand this graph, students may need to be reminded of the effect of inflation (one dollar in 1927, for example, is the equivalent of about twelve dollars today). Students who are ready for a greater challenge may want to compare the four lines and attempt to ascertain the relationship among them.

WHAT DOES IT SHOW?

This graph provides a picture of the upward progress of the New York Stock Exchange in the second half of the 1920s. Students should be able to correlate the growth illustrated in this graph with their knowledge of the Roaring Twenties, a time of economic prosperity and optimism. The rapid rise in share prices during this period was caused by speculation in the stock market. Speculation is essentially a monetary investment made in anticipation of future profits. Stock speculators invest in the stock market; real estate speculators invest in land and buildings. During the 1920s, easy access to credit enabled investment in the stock market, which was seen as a safe use of money. The growth in the stock market generated profits for shareholders, and this increased the amount of money available for investment in real estate. The process worked in the other direction, too: growth in the real estate market generated profits that could be invested in the stock market. Note that the graph also shows the crash in share prices after October 29, 1929, which shrunk the markets for both stock and real estate investments.property. Students may mistakenly believe that skyscrapers were built because land was scarce on Manhattan Island. This map illustrates that skyscrapers were built as a consequence of financial considerations, rather than land scarcity.skyscraper filled with offices than they could from building a low-rise warehouse on waterfront property. Students may mistakenly believe that skyscrapers were built because land was scarce on Manhattan Island. This map illustrates that skyscrapers were built as a consequence of financial considerations, rather than land scarcity.

1 DOCUMENT 1. STOCK MARKET GRAPH (1925-1929)

The New York Stock Exchange
Report of the President May 1, 1929 - May 1, 1930 by NYSE President, E.H.H. Simmons

WHAT CAN WE LEARN FROM THIS DOCUMENT?

- **This graph provides an economic context for the period under consideration in this Dossier.** The progress of the stock market, then as now, is reflective of the economic situation in the country as a whole. While the average American was not likely to have purchased stock personally, banks, corporations, and wealthy businessmen certainly rode the boom economy to the peak of the stock market. After the crash of 1929, banks collapsed, businesses closed, and investment dried up, precipitating the Great Depression.

- In the boom economy of the 1920s, the demand for real estate increased as new companies formed and existing companies sought to expand their business or move to better offices. As such, **the market for real estate speculation followed a pattern similar to the one represented on this graph.** The same banks, companies, and wealthy businessmen who speculated in the stock market would have also enjoyed the affluence that allowed for speculative real estate investment.

Students should be able to draw the conclusion that, especially at a time when transportation and communication were less efficient, an important factor in the real estate market was proximity to money and power.

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

Some students are going to struggle to track the different lines on this document, and this is going to frustrate them. Though the questions have been written so that students will only have to look at the clearest line on the graph, you may want to trace the price Average of All Listed Shares line with a marker or dark pen before photocopying.

Also, note that some students will fail to notice the Y-axis on this chart. The left side is given in dollars per share, and the right side provides the price index. Students need only look at the left side for the purposes of this document.

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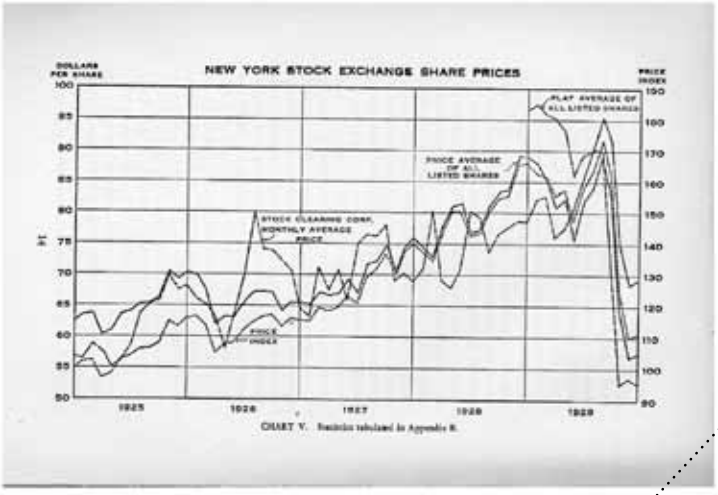
PART A: SHORT ANSWER QUESTIONS

1 **DOCUMENT 1. STOCK MARKET GRAPH (1925-1929)**

The New York Stock Exchange

Report of the President May 1, 1929 - May 1, 1930 by NYSE President, E.H.H. Simmons

The four distinct lines in this graph show the fluctuations [up and down changes] in four different **indexes** related to the New York Stock Exchange. One line represents the price index, one line represents the stock clearing corporation's monthly average share price, one line is the price average of all listed shares, and the fourth line is the flat average of all listed shares. As you look at this graph, keep in mind that the stock market often provides a useful mirror for the United States' economy as a whole.



1. What is the highest price average of all listed shares on this graph, and what approximate date corresponds with this price?

2. What is the lowest price average of all listed shares on this graph, and what approximate date corresponds with this price?

3. What is the difference among these two prices, and what accounts for this difference?

2

example responses

The highest price average of all listed shares is just under $90 per share, in August or September 1929.

The lowest price average of all listed shares is about $57 per share, in November or December 1929.

In just a few short months, the price average per share dropped by over $30. This makes sense, since the stock market crashed in October 1929.

2 DOCUMENT 2. COMPARATIVE NEW YORK CITY SKYLINES

The Skyscraper Museum Collection

WHAT IS IT?

This document juxtaposes two images. The first is a photograph from 1925, and the second is a photograph from 1931. Though the two skylines show the city from the same perspective, students do not have to identify the same buildings in each picture in order to make sense of their significance. Big-picture observations will provide students with all of the information they need: In a short period of time, between 1925 and 1931, Manhattan's architecture grew significantly taller and more dense.

WHAT DOES IT SHOW?

The images illustrate the dramatic change in New York's skyline in a short period of time, a mere 6 years. The 1925 image shows an urban skyline dotted with skyscrapers; the later image shows a skyline defined and dominated by skyscrapers. Students should be able to easily surmise that the intervening years were a time of rapid upward growth in Lower Manhattan.

It is worth noting, as background information, that the greatest growth in commercial office space during the years represented in this document occurred between 1928 and 1931 (for example, the Chrysler Building and Empire State Buildings were both erected during this period). Students may puzzle over this, given the timing of the stock market crash of Oct. 1929. Remind them that money invested in buildings cannot be recouped until construction is complete and rental income is generated. Though the market for real estate may have been declining in 1930 (see Document 4, Percent Occupancy Table), investors would have the best chance of earning back even part of their money by finishing the projects and hoping for some rental income.

If time allows, you may want to give students an opportunity to research the names, locations, construction dates, and investors for the major buildings in each skyline image.

WHAT CAN WE LEARN FROM THIS DOCUMENT?

The two skylines provide a concrete illustration of the dramatic vertical growth in Lower Manhattan during the boom economy of the 1920s.

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

This document will likely be one of the easiest in the entire Dossier for students to understand. However, if a student is struggling, break down the corresponding question for them. Instead of having them broadly explain the differences between the two images, have them describe each image independently. Help them to focus on concrete facts: How many buildings do they see? How many tall buildings? How tall are the two tallest buildings? Alternatively, you might pair up struggling students and encourage each one to take ownership over one of the images and then discuss the differences to minimize the amount of writing students need to do.

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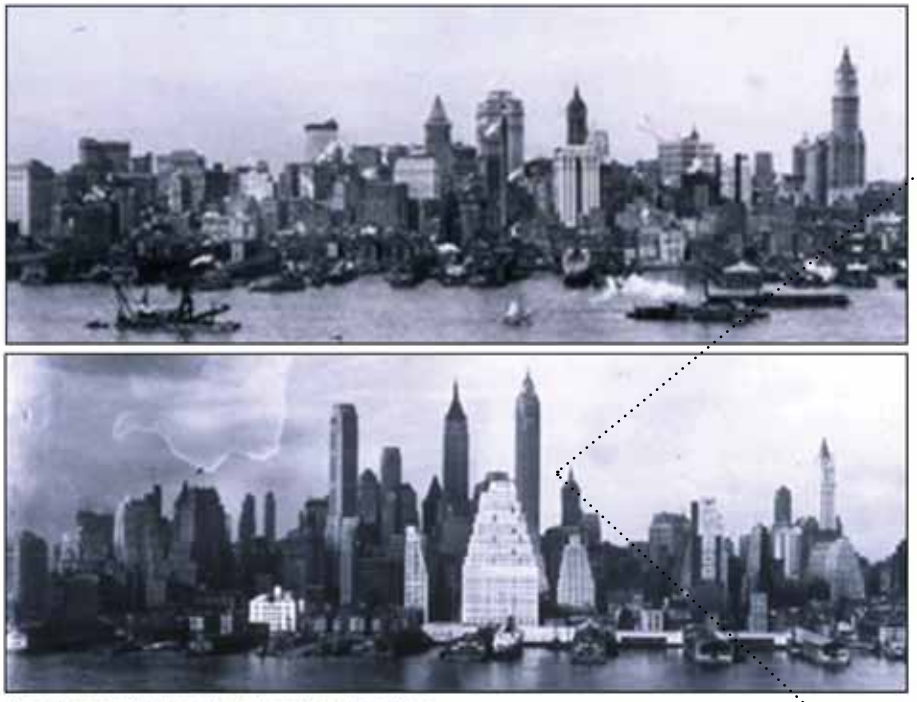
2 DOCUMENT 2. COMPARATIVE NEW YORK CITY SKYLINES
The Skyscraper Museum Collection

The two images below illustrate the dramatic growth in the Manhattan skyline between 1925, the date of the top image, and 1931, the date of the bottom image. Both photographs were taken from Brooklyn looking westward, across the East River. The Woolworth Building is located in the far right of both images, which will help to orient your perspective in both images.



Describe the difference between the two skylines.

3

example responses

The 1915 postcard shows a skyline with far fewer tall buildings. It has about six tall buildings, compared with well over a dozen in the 1931 postcard. What's more, the 1915 buildings that can be seen in the 1931 postcard do not seem as tall as they did in the 1915 postcard. This is probably because many of the 1931 buildings are much taller than most of the 1915 buildings. Overall, the second skyline looks far more crowded than the first.

3 DOCUMENT 3. HEIGHTS OF BUILDINGS (1930)

Regional Survey of New York and its Environs, Volume IV
Committee on Regional Plan of New York and its Environs

WHAT IS IT?

This map illustrates the locations of tall buildings in Manhattan south of 59th Street in 1930, at the tail end of the real estate boom of the 1920s.

WHAT DOES IT SHOW?

The map breaks building heights into four categories, according to number of stories. Though the map is small and highly detailed, making it difficult for some students to interpret with precision, certain trends are clear from even a cursory examination.

- Perhaps most obviously, tall buildings are generally clustered in two areas: Lower Manhattan and Midtown Manhattan (between 23rd Street and 50th Street on this map, roughly).

- Most tall buildings, especially outside Lower and Midtown Manhattan, are located on Broadway, a major thoroughfare.

WHAT CAN WE LEARN FROM THIS DOCUMENT?

From this document, students may deduce a number of important ideas.

- Students can see the sheer number of tall buildings in Manhattan at the end of the 1920s real estate boom.

- Students can locate the most highly prized neighborhoods for commerce and business at the time, especially Lower Manhattan and parts of Midtown Manhattan.

- Students should be able to locate other buildings referenced in this Dossier, especially the Empire State Building, and consider whether or not the location of those buildings was desirable.

- Students may also note that neither the Empire State Building nor the Chrysler Building are included on this map, since neither was open in Jan. 1930. Buildings whose construction had commenced with investments made in 1928 and 1929, before the stock market crash, were likely still under construction at this time. Students with excellent background knowledge may recall that the Great Depression did not follow immediately on the heels of the crash of Oct. 1929, but that it began months later as banks and businesses failed to recover from the crash.

3 DOCUMENT 3. HEIGHTS OF BUILDINGS (1930)

Regional Survey of New York and its Environs, Volume IV
Committee on Regional Plan of New York and its Environs

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

This is a complicated document to read, simply because it is so detailed. For students who are struggling to read the document, give them a few minutes to color the map key and then apply the key to the small boxes on the map body. This will give them an opportunity to look closely at the document and find trends among the buildings.

Some students will have difficulty reading the street names. Show these students how to lay a ruler (or other straightedge) along the roads on the map so that they attribute the correct name to each street. Some students may not understand the main idea of the map, since portraying building heights with a two-dimensional map may be counterintuitive for them. help them relate this map to a relief map or elevation map, which may be more familiar to them and is based on the same principals.

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3 **DOCUMENT 3. HEIGHTS OF BUILDINGS (1930)**
Regional Survey of New York and its Environs, Volume IV
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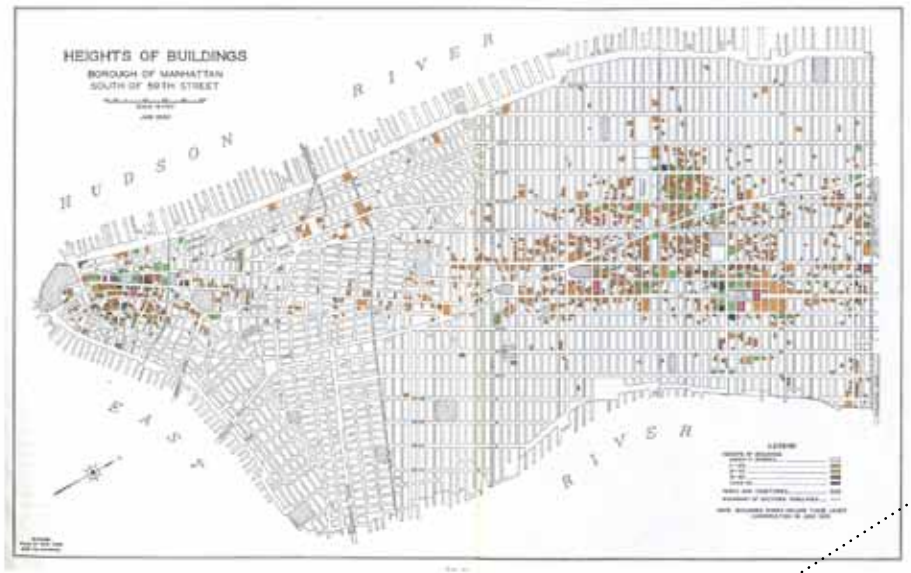
This map illustrates the locations of tall buildings in Manhattan south of 59th Street in 1930, at the tail end of the real estate boom of the 1920s.



1. How tall are the buildings near Grand Central Terminal (42nd Street and Park Ave) according to this map?

2. What trends do you notice regarding the location of Manhattan's tallest buildings, according to this map?

3. What might account for these trends?

4

example responses

RESEARCH TIP:
Explore Manhattan Time Transformations in the web projects on www.skyscraper.org
Turn on layers like "highways" or "commercial zones" or "monuments and parks."

Most are 21–30 stories, with a couple of 31–40 story buildings as well.

The tallest buildings appear to be clustered together. Many tall buildings are located at the southern tip of Manhattan, and even more tall buildings are located between 34th and 50th Street, and between Park and 7th Avenues. Finally, many tall buildings also appear to be located along Broadway.

A lot of factors might explain these trends. It is possible that businesses benefit from being close together. Maybe certain neighborhoods or addresses lend a business prestige. Transportation could be a factor, or maybe the visibility of being on a major thoroughfare like Broadway. Zoning might be an issue, since maybe more commercial space or taller buildings are allowed in one neighborhood and not in another. This map doesn't explain the clustering of tall buildings, it just shows where they are.

4 DOCUMENT 4. PERCENT OCCUPANCY TABLE (1934)

R. Armstrong and H.Hoyt, *Decentralization in New York City*

WHAT IS IT?

This table supplies the percent of total occupied office space in popular business districts in Manhattan. In other words, this table answers the question, "Of the office space available in a given neighborhood, how much is actually being rented out?" The table itself comes from a book-length report written for the Urban Land Institute by two prominent real estate appraisers.

WHAT DOES IT SHOW?

The table provides data for seven Manhattan business districts, beginning at the southernmost tip of the island and moving northward, and then aggregates that data. For your own clarity, and for that of your students, definitions of the neighborhoods listed on the table are provided below.

Financial District: Though the boundaries of the Financial District have changed over time, the heart of the financial district has always been the intersection of Broad and Wall Streets, home of Federal hall and the New York Stock Exchange.

Insurance District: This area of Lower Manhattan would today be considered part of the Financial District. In the early part of the 20th century, however, the heart of the insurance industry was located in this neighborhood, between Maiden Lane and the Brooklyn Bridge.

City Hall District: This district, as the name suggests, centers around City hall, but also includes City hall park and adjacent courthouses. The area extends as far south as Fulton Street and north to Franklin Street. The district is bordered on the west by Church Street and on the east by pearl Street.

Grand Central District: This district centers around Grand Central Terminal, which was completed in 1914. The southern side of Grand Central Terminal is on 42nd Street, and this transportation hub contributed in large part to the development of Midtown Manhattan as a second skyscraper hub in the 1920s, in addition to Lower Manhattan.

Plaza District: The plaza district is located on the East Side of Manhattan, north of 45th Street and south of 59th Street. It includes park, Madison, and Fifth Avenues, which together comprise one of the most well-known business districts in Manhattan's history.

Times Square District: The Times Square district begins at 42nd Street and extends north to 53rd Street, and is bounded by Sixth Avenue on the east and Eighth Avenue on the west. Broadway runs through the heart of Times Square and the Times Square district. This area was emerging as a hub of office space at the time this document was created.

Columbus Circle District: Columbus Circle is at the southwest corner of Central park, where 59th Street meets Broadway. At the time this document was created, 59th Street was the northernmost border of "downtown" Manhattan, and would certainly be the northernmost limit for most speculative skyscraper ventures.

4 DOCUMENT 4. PERCENT OCCUPANCY TABLE (1934)

R. Armstrong and H.Hoyt, *Decentralization in New York City*

WHAT CAN WE LEARN FROM THIS DOCUMENT?

- **This document illustrates the importance of location when building a speculative skyscraper.** Clearly, a business area such as the Financial District was more popular among tenants than the plaza District. Though investment costs would be higher in the Financial District, due to higher land costs, profit would also be greater.

- **This document illustrates the growth and emergence of business districts during the building boom of the 1920s and early 1930s.** In 1925, when business occupancy records began to be kept, only four business districts existed in Manhattan. By 1929, that number had increased to six districts, with still another new district emerging by 1933. Though rentable office space within existing districts also increased during this period, the emergence of entirely new business districts shows the lure of the booming real estate market to investors.

- **This document clarifies the misconception that the Great Depression began as an abrupt economic drop, rather than a slow and steady economic decline.** Students often believe that the Depression began immediately after the stock market crash of Oct. 1929. As this document shows, though, the crash inaugurated a decline that took years to become a full-blown depression.

- **This document hints at the relationship between supply and demand.** The end of the economic boom of the 1920s, combined with the massive amount of new office space available at that time, led to significant vacancies in the real estate market. For commercial real estate, a normal vacancy rate is closer to 10%

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

The vocabulary in this document may be challenging for some students, particularly the phrase "percent occupied." help them understand the idea by creating a "percent occupied" table for your classroom. At the beginning of the school year, everyone is in attendance and the percent occupation of desks is high. Just before school breaks, the population dips and so does the percent occupancy. During the breaks themselves, the desks are empty and the percent occupancy is at zero. Then ask students to imagine that their desks were being rented out for money. When would the school make the most money? When would the school lose income on rental desks?

example responses

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4 **DOCUMENT 4. PERCENT OCCUPANCY TABLE (1934)**

R. Armstrong and H. Hoyt, *Decentralization in New York City*

This table shows the percent of total office space that is occupied in seven Manhattan business districts. The column furthest to the left, after "Date of Survey," lists the neighborhood closest to the southernmost tip of Manhattan Island, the Financial District. Each successive district listed on the table, moving right, is slightly north of the previous district, culminating with the northernmost Columbus Circle District at 59th Street and Broadway. The final column provides an aggregate (average) of the data for all districts given.

Fig. 159 Office building occupancy of Central Business Area, New York, 1925 to 1934.

1. Describe the changes in the occupancy of available office space in Manhattan, according to this table. How does this compare to your understanding of the U.S. economy in the late 1920s and early 1930s?

2. Note that data is not available for all of the districts during the timeframes given in the table. What might account for the absence of data in these neighborhoods?

5

Based on this table, it appears that the total occupancy of office space increased from 1925 to 1930. After 1930, occupancy declined fairly steadily, with neighborhoods like the Grand Central and Columbus Circle districts faring the worst. This matches my understanding of the U.S. economy's growth through the stockmarket crash of Oct. 1929, though it is a little surprising to me that the drop in occupancy wasn't more drastic after that date.

The districts that are furthest north, those farthest away from the Financial District, are the ones that are missing data. It is possible that this data is missing because those districts were underdeveloped until that time. No one would collect data for a business district until it became clear that a business district even existed in a given neighborhood.

5 DOCUMENT 5. EMPIRE STATE BUILDING POSTCARD (1930s)

The Skyscraper Museum Collection

WHAT IS IT?

This is a postcard of the Empire State Building dating from the early 1930s; the skyscraper was completed in 1931. Though the Empire State Building was constructed as a speculative real estate venture, the building became an icon representing New York City, as indicated by its representation on a historic postcard. At the time, postcards were used to show important places and advertise them to visitors, even as they are today.

****This DBQ document is also included in The Skyscraper Museum Tower Tube as document #1.*

WHAT DOES IT SHOW?

The postcard shows that the Empire State Building is not only one of the only tall buildings in the area, but it utterly dwarfs the surrounding structures. In fact, the Empire State Building was the tallest building in the world until the World Trade Center towers opened in 1970. When it opened, the Empire State Building quickly became a pricey tourist destination. Then, as now, admission fees to the Observation deck supplied an important part of the building's revenues.

WHAT CAN WE LEARN FROM THIS DOCUMENT?

- **The Empire State building was not centrally located when it opened.** Looking at this postcard, it appears that there are few other major office buildings in the area immediately surrounding the Empire State Building. This conclusion is accurate: in 1931, when the Empire State Building opened, Midtown Manhattan was still emerging as a commercial center (see Document 4, percent Occupancy Chart). Of course, proximity to other businesses is only one element in determining the desirability of a location. proximity to transportation hubs, such as Grand Central Terminal or Penn Station, or important institutions, such as City Hall or a university, is also valuable. At the time of its construction on the corner of 34th Street and 5th Avenue, the Empire State Building had none of these advantages.

- **This document indicates in some ways the speculative nature of the Empire State Building.** Why would investors want to build the largest skyscraper in the world in the middle of an emerging commercial neighborhood, if not to make money from the office space within? This may, in fact, have been one of the reasons the investors decided to distinguish it as the world's tallest building in the world, though we do not have historical documents to prove this. History does show that the speculation did not pay off for many years. The Empire State Building did not attract many occupants when it opened, and did not become profitable until the 1950s. This fact could not be discerned from the postcard alone, but it validates what the document reveals about the location of the building.

5 DOCUMENT 5. EMPIRE STATE BUILDING POSTCARD (1930S)

The Skyscraper Museum Collection

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

Students may struggle with the answer to the second question in this document. help them think through their options by suggesting that they make a two-column chart: on the left, reasons that the Empire State Building would make money for its investors; on the right, reasons that it might lose money. Remind them that DBQs and historical analysis are more concerned with logical arguments than with right and wrong answers.

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5 **DOCUMENT 5. EMPIRE STATE BUILDING POSTCARD (1930)**
The Skyscraper Museum Collection

This is a postcard of the Empire State Building dating from the early 1930s; the skyscraper was completed in 1931 and is located at the corner of 34th Street and Fifth Avenue in Midtown Manhattan. The building contained over two million square feet of office space, more than twice that of the Chrysler Building, its nearest competitor for the title of tallest building. Though the Empire State Building was constructed as a speculative real estate venture, the building became an icon representing New York City, as indicated by its representation on a historic postcard. At the time, postcards were used to show important places and advertise them to visitors, even as they are today.

1. What does this postcard reveal about the location of the Empire State Building?

2. Based on your observations about the location and size of the building, as well as what you know about the Midtown Manhattan area from the other documents and your understanding of the economy in 1931, discuss whether or not you think the Empire State Building was a profitable investment.

6

example responses

The Empire State Building appears to be far taller than the other buildings near it. It is difficult to say if this is because the Empire State Building was dramatically taller than the other buildings in the area, or if it is because there were very few tall buildings nearby.

The Empire State Building appears to have been far larger than the other buildings near it, and to have been in a neighborhood with few tall buildings. The Percent Occupancy Chart indicates that Midtown was not as developed an area as some of the business districts in Lower Manhattan. Given the fact that the Empire State Building opened in 1931, just when the Great Depression was beginning to set in, I predict that this building did not generate a lot of profit for its investors.

6 DOCUMENT 6. EMPIRE STATE BUILDING FLOOR PLANS (1929)

The Architectural Forum
Volume LII, June 1930

WHAT IS IT?

These floor plans illustrate the amount of rentable office space available on various floors of the Empire State Building. The Empire State Building was a speculative real estate venture, designed to attract tenants who would pay premium rates to have office space in the tallest building in the world. The Empire State Building contained 2.1 million square feet of rentable space, far more than its nearest competitor, the Chrysler Building, which had 850,000 square feet.

****This DBQ document is also available in The Skyscraper Museum web project, VIVA 2.*

WHAT DOES IT SHOW?

- The floor plans for the Empire State Building show how the building was designed to maximize the space it contained, in order to generate the highest possible income. As such, offices typically line the perimeter of a given floor, while the center, or core, contains non-rentable space such as elevator shafts, restrooms, and maintenance closets.

- The floor plans indirectly illustrate that offices with windows were more highly valued. Windows afforded tenants more natural light and, in the days before air conditioning, the ventilation provided by windows was crucial. The view from a window could increase the rental income of an office as well.

- Some students may wonder why, if rental income was the driving force behind the design and construction of the Empire State Building, floor plans become smaller as the building's height grows. The square feet available on each floor was largely the result of the zoning laws of the time, which required that buildings of a certain height be set back from the sidewalk according to precise proportions. As such, all of the tall buildings constructed after New York's first zoning laws were passed in 1916, including those built in the 1920s and 1930s, are characterized by a "setback" or "wedding cake" style of architecture that students should have no trouble identifying.

WHAT CAN WE LEARN FROM THIS DOCUMENT?

Students should gain a concrete understanding of the meaning of real estate speculation from this document. For each floor shown, the building has been designed to maximize the amount of rentable office space. Students should be able to do a cursory calculation, using the samples provided and the 86 floors of the building (as seen in the Empire State Building blueprint, in the Tower Tube), to find that the Empire State Building contained over 1,000 offices. Were all of these offices to be leased at premium rates, a hefty amount of income would be generated for the building's investors.

6 DOCUMENT 6. EMPIRE STATE BUILDING FLOOR PLANS (1929)

The Architectural Forum
Volume LII, June 1930

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

This will be a very challenging document for many students, especially since it demands that they imagine the documents in 3-D, stacked on top of one another. help students to do visualization by having them cut out each floor and hold them one above the other. They can then tape the floor in the appropriate place next to the tall blueprint of the Empire State Building in your Tower Tube, to get a sense of when the floors changed shape and why.

If students continue to struggle, select the second floor only and talk about its key features: the core, the windows, the relationship of the windows to the office space. Then do the same thing with each of the other floors. Only when you have looked at all of the floors independently should you attempt to help the student synthesize the floors and answer the questions.

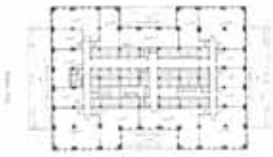
THE SKYSCRAPER MUSEUM

2 NAME_____

DATE_____

6 **DOCUMENT 6. EMPIRE STATE BUILDING FLOOR PLANS (1929)**

The Architectural Forum
Volume LII, June 1930

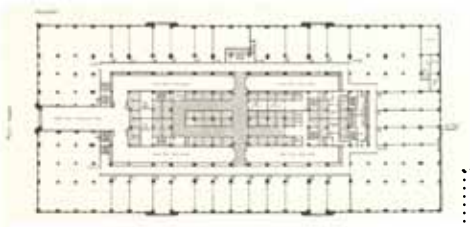


These are sample floor plans for the Empire State Building. The Empire State Building was built in a "setback" or "wedding cake" style that was common at the time due to New York City zoning laws. When completed, the building was estimated to have over two million square feet of rentable office space. The enormous volume of the building derived in part from the large size of the lot, which was nearly two acres. The first five floors almost covered the full site, then stepped back in stages as the tower rose and as elevator banks and shafts were eliminated.

This diagram stacks typical floor plans from various levels one above the other to illustrate how the circulation core (containing elevators, stairs, areas for mechanical systems) shrinks as the building rises, while the perimeter ring of office space, a standard 28 feet deep, remains constant. This maximum depth from the windows to the internal public corridors ensured that natural light would illuminate the entire office area.

1. How have the floor plans been designed to maximize the amount of rentable office space on each floor?

2. Describe your observations about the role elevators and other non-rentable spaces played in the design of each floor.



example responses

The floor plans show all of the space that cannot be rented, such as the elevators, stairs, service closets, and bathrooms, clustered together in the center of the building. The offices line the building's perimeter, and each one has a window, so the work spaces have excellent light, as well as views. There doesn't appear to be much wasted space.

In the second floor drawing, the elevators, stairs, and other non-rentable spaces take up a lot of area in the center of the floor. By the 69th floor, though, they take up less space. They are still at the center because only a few elevators are needed to serve those upper floors, but the floor itself is smaller as well. By putting these things in the middle of the floor, the architects minimized the amount of space they occupied, and used the full perimeter for well-lit work spaces.

7 DOCUMENT 7. EMPIRE STATE BUILDING STOCK CERTIFICATE

The Skyscraper Museum Collection

WHAT IS IT?

This stock certificate, issued by the Empire State Building Corporation, was typical of the certificates issued in order to raise funds for construction ventures. This particular stock certificate does not have any of its blanks filled: no names, dates, signatures, or amounts are given.

WHAT DOES IT SHOW?

The certificate is filled with small-print, legal jargon. It does not need to be fully understood by the student or the teacher to have relevance for this Dossier. It, like all stock certificates, is merely meant as a representation of a kind of ownership. If you own shares in a company that is publicly traded the stock market or shares in a co-op building, you own stock in the same way shown here. An investor would receive this certificate as proof of their investment and as a legal document showing the terms by which their investment would be repaid by the company.

In the 1920s, it was not uncommon for real estate speculators with very little money to use a system such as this one to raise money to finance the construction of tall buildings and skyscrapers. In much the way that the selling of mortgage-backed securities led to the boom-and-bust cycle of the early 2000s, so the selling of these kinds of stocks led to a boom real estate market that rapidly went bust in the onslaught of the Great Depression.

WHAT CAN WE LEARN FROM THIS DOCUMENT?

Students are likely to learn more from the introductory explanation of the document than the document itself. It is important for students to learn to recognize what they can and cannot understand when they first encounter an unfamiliar text, and this document affords them the opportunity to sort important details from unimportant ones.

In the overall context of this Dossier, this document helps students to make the connection between the boom economy of the stock market and the boom real estate economy in the 1920s. They can see that investing in real estate would have been just as risky as investing in the stock market, and that building construction was largely a profit-driven enterprise. It was not, as is commonly claimed, a publicity-driven maneuver for corporations, nor was it a necessity because of limited space on Manhattan island.

HOW CAN I SUPPORT STUDENTS WHO STRUGGLE TO UNDERSTAND THIS DOCUMENT?

Students are going to attempt to read the entire document and make sense of the text. highlight the relevant text for these students, or black out irrelevant parts of the stock certificate.

THE SKYSCRAPER MUSEUM

2 NAME_____
DATE_____

7 DOCUMENT 7. EMPIRE STATE BUILDING STOCK CERTIFICATE
The Skyscraper Museum Collection

This stock certificate, issued by the Empire State Building Corporation, was typical of the certificates issued in order to raise funds for construction ventures. The term "debenture," used below, refers to a type of debt that is not guaranteed by collateral. In other words, the Empire State Building Corporation needed to raise money to fund the construction of its skyscraper. A person (or a banking or investment institution) would buy stock in the company, which meant that they would be issued a certificate such as this one, promising later payments based on the expected profit of the building. If profitable, the Empire State Corporation would pay the stock holders a percent of their investment, as specified in this certificate. If these payments were all made, the investor would make a generous profit. However, if the building were not profitable, it is possible that none of the payments would be made and the investor's money would be lost.

1. In what way could investing money into a construction project be a risky venture?

2. Do you think that all construction investors made their money back, as the certificate suggests? Why?

END OF DBQ DOSSIER 2 DOCUMENTS

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example responses

If the construction project did not turn out to be profitable, the holder of the stock certificate might not get anything in return for his investment or might get less in return for the investment.

No, I am sure that some buildings were not profitable. As other documents in this Dossier suggest, some buildings had difficulty filling all of their available office spaces, especially during the Depression.