

CHAPTER
8

GUIDED READING *Science and Urban Life*

Section 1

A. As you read about how technological changes at the turn of the 20th century affected American life, write notes in the appropriate boxes. Leave the shaded boxes blank.

	1. Who was involved in its development?	2. What other inventions helped make this one possible?	3. How did this invention or development affect Americans' lives?
Skyscraper			
Electric transit			
Suspension bridge			
Urban planning			
Airmail			
Web-perfecting press			
Kodak camera			

B. On the back of this paper, explain how **Central Park** can be considered an achievement in science.

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Section 1

RETEACHING ACTIVITY *Science and Urban Life*

Evaluating

A. Write *T* in the blank if the statement is true. If the statement is false, write *F* in the blank and then write the corrected statement on the line below.

_____ 1. By the turn of the twentieth century about nine out of ten Americans made their homes in cities.

_____ 2. “Make no little plans. They have no magic to stir man’s blood” was the motto of urban designer Daniel Burnham.

_____ 3. The first successful flight took place in Omaha, Nebraska.

_____ 4. The “Emerald Necklace” refers to the city of Chicago’s park system.

_____ 5. The development of an easy-to-use camera helped to develop the field of photojournalism.

Summarizing

B. On the line next to each person list the field in which they made a notable achievement.

_____ 1. Louis Sullivan

_____ 2. Frederick Law Olmsted

_____ 3. Daniel Burnham

_____ 4. Orville and Wilbur Wright

_____ 5. George Eastman

CHAPTER
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GEOGRAPHY APPLICATION: HUMAN-ENVIRONMENT INTERACTION

New York's Central Park

Section 1

Directions: Read the paragraphs below and study the drawings and map carefully. Then answer the questions that follow.

During the 1800s, Frederick Law Olmsted pioneered the use of natural landscaping in urban parks. He designed more than 80 public parks in Boston, Chicago, and other cities. In addition, Olmsted designed the grounds around the Capitol building in Washington, D.C.


Olmsted's lasting contribution, though, was the setting aside of natural areas in crowded cities. These areas gave urban residents places for recreation. To Olmsted, recreation meant walking in a pleasant environment. As he once said:

The main object and justification [of the park] is simply to produce a certain influence in the minds of people, and through this to make life in the city healthier and happier. The char-

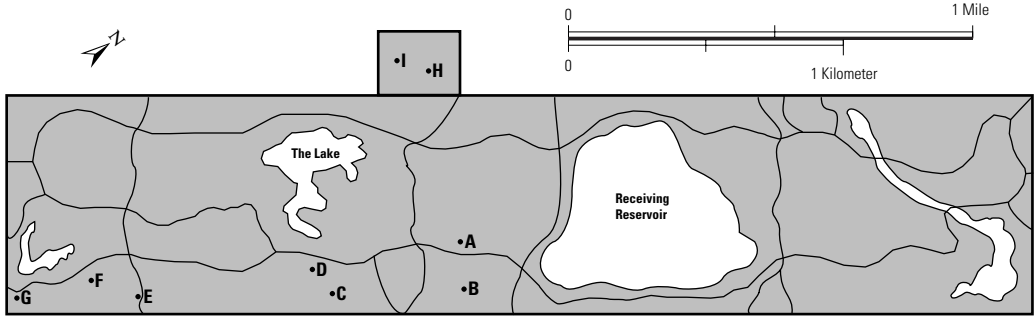
acter of this influence is a poetic one and it is to be produced by means of scenes.

In 1858, Olmsted and the architect Calvert Vaux won a prize for their design of Central Park, an 843-acre oblong area in the center of Manhattan in New York City. Their design was unique for city parks in the United States. Rural scenery was the theme of the design. A screen of trees and shrubs around the park blocked the city from view. Traffic was routed through underground passes. A few small lakes were created. Avenues for carriages, bridle paths for horses, and an elaborate system of footpaths laced the park grounds. Central Park today remains an oasis amid concrete sprawl.

New York's Central Park



Park Construction, 1860 Central Park, 1894 Central Park, today



- A Cleopatra's Needle
- B Metropolitan Museum of Art
- C Alice in Wonderland Statue
- D Hans Christian Andersen Statue
- E Children's Zoo
- F Zoo
- G General Sherman Statue
- H Hayden Planetarium
- I American Museum of Natural History

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Interpreting Text and Visuals

1. What did Olmsted believe was the purpose of parks? _____

2. Why do you think Olmsted is called the father of urban planning? _____

3. Using the pictures and text for reference, describe what was done to create the Central Park of today.

4. Categorize the types of attractions found in the park. _____

5. What are the dimensions of Central Park—not including the small section with locations H and I?

6. A person walking from locations D to A moves in what direction? _____

7. What legacy has Olmsted given to Americans? _____

8. What do you think is one thing that could be added to or taken away from Olmsted's Central Park plan that would improve the park?

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Section 1

PRIMARY SOURCE *from Orville Wright's Diary*

On December 17, 1903, Orville and Wilbur Wright made the first airplane flight at Kitty Hawk, North Carolina. As you read this excerpt from Orville's diary, think about the challenges as well as the historical significance of this event.

When we got up, a wind of between 20 and 25 miles was blowing from the north. We got the machine out early and put out the signal for the men at the station. Before we were quite ready, John T. Daniels, W. S. Dough, A. D. Etheridge, W. C. Brinkley of Manteo, and Johnny Moore of Nag's Head arrived. After running the engine and propellers a few minutes to get them in working order, I got on the machine at 10:35 for the first trial. The wind according to our anemometer [instrument for indicating and measuring wind force and velocity] at this time was blowing a little over 20 miles (corrected) 27 miles according to the Government anemometer at Kitty Hawk. On slipping the rope the machine started off increasing in speed to probably 7 or 8 miles. The machine lifted from the truck just as it was entering on the fourth rail. Mr. Daniels took a picture just as it left the trucks. [The trucks were a primitive sort of wheel assembly, which enabled the plane to take off along a track made from two-by-fours. When the plane took off, it left the truck on the ground and hence flew without any landing gear.]

I found the control of the front rudder quite difficult on account of its being balanced too near the center and thus had a tendency to turn itself when started so that the rudder was turned too far on one side and then too far on the other. As a result the machine would rise suddenly to about 10 feet and then as suddenly, on turning the rudder, dart for the ground. A sudden dart when out about 100 feet from the end of the track ended the flight. Time about 12 seconds (not known exactly as watch was not promptly stopped). The flight lever for throwing off the engine was broken, and the skid under the rudder cracked.

After repairs, at 20 minutes after 11 o'clock Will [Orville's brother Wilbur] made the second trial. The course was about like mine, up and down but a little longer . . . over the ground though about the same in time. Distance not measured but about 175 feet. Wind speed not quite so strong.

With the aid of the station men present, we picked the machine up and carried it back to the starting ways. At about 20 minutes till 12 o'clock I

made the third trial. When out about the same distance as Will's, I met with a strong gust from the left which raised the left wing and sidled the machine off to the right in a lively manner. I immediately turned the rudder to bring the machine down and then worked the end control. Much to our surprise, on reaching the ground the left wing struck first, showing the lateral control of this machine much more effective than on any of our former ones. At the time of its sidling it had raised to a height of probably 12 to 14 feet.

At just 12 o'clock Will started on the fourth and last trip. The machine started off with its ups and downs as it had before, but by the time he had gone three or four hundred feet he had it under much better control, and was traveling on a fairly even course. It proceeded in this manner till it reached a small hummock out about 800 feet from the starting ways, when it began its pitching again and suddenly darted into the ground. The front rudder frame was badly broken up, but the main frame suffered none at all. The distance over the ground was 852 feet in 59 seconds. . . .

After removing the front rudder, we carried the machine back to camp. We set the machine down a few feet west of the building, and while standing about discussing the last flight, a sudden gust of wind struck the machine and started to turn it over. All rushed to stop it. Will, who was near the end, ran to the front, but too late to do any good. Mr. Daniels and myself seized spars at the rear, but to no purpose. The machine gradually turned over on us.

from Richard B. Morris and James Woodress, eds., Voices from America's Past, Vol. 2, Backwoods Democracy to World Power (New York: Dutton, 1963), 293–295.

Discussion Questions

1. How many trial runs did the Wright brothers make on December 17?
2. What was the longest powered flight the Wright brothers made on this day?
3. What kinds of difficulties did the Wright brothers encounter during these trials?

CHAPTER

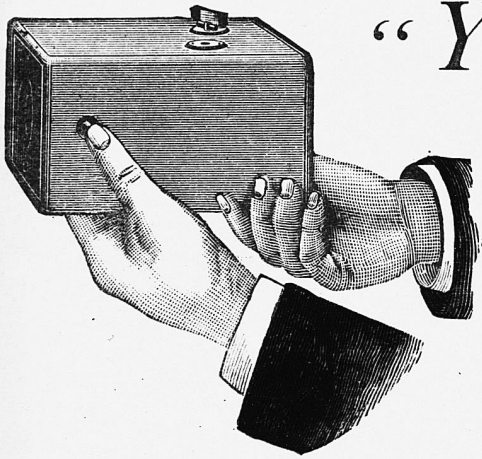
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Section 1

PRIMARY SOURCE *Advertisement*

George Eastman invented the Kodak camera in 1888. After a photographer snapped a roll of film, he or she shipped the film for processing—and the camera for reloading—to the Eastman factory. To learn more about the Kodak camera and its features, examine this early advertisement.

The Kodak Camera



*“You press the button,
we do the rest.”*

OR YOU CAN DO IT YOURSELF.

The only camera that anybody can use without instructions. As convenient to carry as an ordinary field glass World-wide success.

The Kodak is for sale by all Photo stock dealers.

Send for the Primer, free.

The Eastman Dry Plate & Film Co.

Price, \$25.00 — Loaded for 100 Pictures.

ROCHESTER, N. Y.

Re-loading, \$2.00.

Corbis-Bettmann

Activity Options

1. Find camera ads in an advertising circular or a current newspaper or magazine. Then make a Venn diagram in which you compare and contrast the features and prices of today's cameras with those of this Kodak camera.
2. Imagine you are an amateur photographer in the early 1900s. Write a letter to George Eastman in which you express your opinion of his Kodak camera.
3. Using this ad as a model, design your own ad for an early Kodak camera. Before you begin, refer to your textbook (page 281) for additional information.