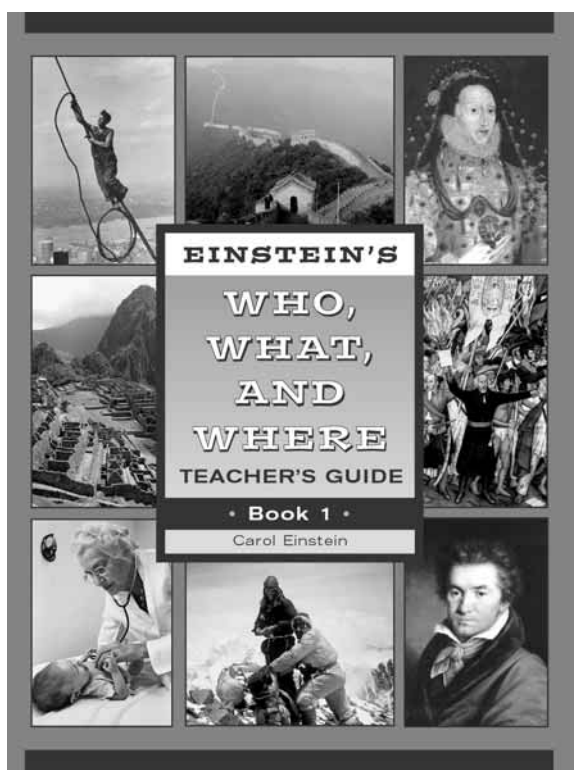


EINSTEIN'S WHO, WHAT, AND WHERE

Teacher's Guide Book I

sample lesson featuring
the Empire State Building



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THE EMPIRE STATE BUILDING

LOOKING BACK AT WHAT YOU HAVE READ

Ask tourists who have visited New York City what one must see, and they will tell you the Empire State Building. People marvel at its beautiful design and its breathtaking views. Yet too few know the amazing story of how the Empire State Building was built.

John J. Raskob and Alfred E. Smith were close friends, and in 1929 both were out of work. Raskob had been a vice president of General Motors, the car company, and was very rich. Smith had been the governor of New York. When he ran for president of the United States in 1928, Raskob left his job to help his friend win the election. But Smith was defeated, so both men were looking for work. **1**

New York needed more office space, but there was only so much land. Smith, a New Yorker, knew that more and more skyscrapers were being built in the city. These tall buildings, whose weight was supported by frames of steel, seemed to be a solution. The New York City skyline with its skyscrapers had replaced the Statue of Liberty as the **symbol** of the city. Smith suggested that Raskob use his money to build one of these giants. Smith, with his New York connections, would be president of the building. Raskob liked the idea and quickly agreed to Smith's plan.

The first drawings showed the Empire State Building with sixty-five stories. Raskob, however, was not satisfied because it was too low. He said that a taller building would make the news and receive lots of free advertising. Either Raskob or the building's architect, William Lamb, pulled out a big pencil, stuck it up in the air, and said that this is what the building should look like.

Raskob had a second reason for wanting the building to be taller. Walter Chrysler, a **rival** in the automobile business, was almost finished with building his own skyscraper in New York City, the Chrysler Building. Raskob wanted to be sure his building was taller than Chrysler's. So Smith announced that their skyscraper would be eighty stories tall and one thousand feet high. This would make it the tallest building in the world.

When Chrysler heard this news, he told his architect to increase the height of his building. In 1930, a stainless steel **spire** was added at the top. It rose like a giant needle into the air, making it 1,048 feet tall. But this was the highest it could go. Nothing more could be added. Raskob was pleased because his building was not yet finished. He could now make his skyscraper taller. The Empire State Building's final height was 1,250 feet, 202 feet taller than the tip of the spire on the Chrysler Building. It had 102 floors with an observation deck on the eighty-sixth floor from which people could see for forty miles. **3**

Not only did the Empire State Building set a record for height, it was also built in record time. When the construction began in March 1930, the country was at the beginning of the Great Depression. Many people were out of work. Workers were eager for any job. About 2,500 people worked on the building each day. From the time the construction began, the frame of the building rose at an average of four-and-a-half floors per week. Once, the workers completed fourteen-and-a-half floors in ten working days. **5**

Cranes lifted big bundles of steel **beams** high up to the top of the unfinished building. To move one of the beams into place, a man stood on it as the crane swung it in the air. With his feet spread apart, the man gripped a steel rope for support. While the beam was in the air, the worker turned it with his feet until the steel unit was at just the right angle. Then the crane lowered it into place. People on the street below stood three and four deep, watching the steelworkers construct the building. They said that the men reminded them of acrobats. A magazine writer compared the workers to little spiders spinning a fabric of steel against the sky.

As the building rose story by story, a tiny railroad was built on each level to carry needed supplies. At its busiest, there were about three thousand men working at one time. When the workers complained that they were late getting back from lunch because they could not find a place to eat, movable cafeterias were built on the scaffolding. As the building increased in height, more were added. Finally, cafeterias were on the third, the ninth, the twenty-fourth, the forty-seventh, and the sixty-fourth floors. For forty cents, a worker could buy a hot meal or a couple of sandwiches, something to drink, and a piece of pie. Ten miles of water pipes carried drinking water to the workers. **5**

In the early 1930s, there was little safety equipment. Since the work was so dangerous, a nurse worked full-time, and a doctor visited several times a day. An entrance to the building site was always kept free in case an ambulance was needed.

The building took one year and forty-five days to build. This is still a record for building a skyscraper of such a height. As soon as the Empire State Building went up, people loved it. From the time it opened, many tourists visited the observation decks and were thrilled by the marvelous views. The building became an instant symbol of New York City. Many people believe it is the city's and the world's greatest skyscraper.

1. Smith suggested it because both men were looking for work. He knew that New York needed more office space, and since there was only so much land, skyscrapers were being built.
2. Raskob wanted his building to be the tallest because he thought that it would make news and would get lots of free advertising. Also, he wanted his building to be higher than the building that his rival, Walter Chrysler, was constructing.
3. It is 1,250 feet high.
4. A large crowd this may have watched because the workers were doing unusual and difficult things at great heights. This would be interesting.
5. When the Empire State Building was built, many people were out of work so they were glad to get a job. Students may also include that the workers were treated well.
6. Answers will vary but may include: the Sears Tower in Chicago, the Transamerica Building in San Francisco, the John Hancock Tower in Boston, and the Chrysler Building in New York.

WORKING WITH WORDS

Answers will vary but may include:

marvel	connections	beams
symbol	spire	scaffolding

Proverbs

The Empire State Building was built in record time because there were many workers completing their jobs every day.

After losing the election, instead of feeling sorry for himself, Smith began working on a new project.

Words with more than one meaning

Close means having affection for each other.

Close also means near, without fresh air, almost equal, giving careful attention.

Rose means having reached or extended upward.

Rose also means having stood up, having moved from a lower to a higher place, and having gone upward in position, rank, or importance. It is the name of a plant with thorns and sweet-smelling flowers.

Tip means the end part or point.

Tip also means a piece of useful information or an extra sum of money that is given as a way of thanking someone for good service.

WRITING SKILLS

In this section, you will find examples of student work rated as excellent, acceptable, limited, and poor. The following are suggested criteria for evaluating the students' writing.

The response is excellent when it

- shows a thorough understanding of the story and/or task
- fulfills all parts of the assignment
- shows excellent organization
- shows insights and makes connections
- is written in complete sentences
- uses varied sentence structure and challenging vocabulary
- has correct punctuation

The response is acceptable when it

- shows a clear attempt at organization
- answers most of the requirements of the assignment or task
- is adequately developed
- mainly uses simple sentences and basic vocabulary
- has correct punctuation, for the most part
- has few spelling errors

The response is limited when it

- shows little understanding of the story and/or task
- answers only a few parts of the assignment
- focuses on unimportant details
- shows little if any organization
- has errors in spelling, punctuation, and/or grammar
- has limited vocabulary

The response is poor when it

- shows no evidence of organization
- shows no understanding of the story and/or assignment

Exercise directions: Write a summary of the story. Do not forget to include the important events. After you have written your summary, be sure to proofread it. Check your spelling, grammar, punctuation, and capitalization. Then meet in a group with other students and share your summaries.

The following is an excellent response.

In 1929, two friends, John Raskob and Alfred Smith, were out of work. Smith, a New Yorker, realized that New York needed more office space and suggested to his rich friend Raskob that they build a skyscraper. In the beginning, the Empire State Building was only going to be 65 stories, but a taller building would get lots of free publicity. Because Raskob wanted his building to be taller than the one his rival, Walter Chrysler, was building, the Empire State Building ended up being 1,250 feet. It has 102 floors. At the time it was built it was the tallest building in the world. It was the time of the Great Depression, and many people were out of work. Workers wanted to work on the building. They had jobs, and they were able to buy cheap, good food from movable cafeterias. The Empire State Building was constructed in record time. It took only 1 year and 45 days to build. From the moment it opened, people loved the building.

The following is an acceptable response.

The Empire State Building was built in 1929. Al Smith suggested to his rich friend John Raskob that they build a skyscraper. At first the building was only going to be 65 stories. Then Raskob heard his rival Walter Chrysler was also building a skyscraper. Raskob wanted his building to be taller. The Empire State Building ended up having 102 floors. The workers worked hard and the building was finished very quickly

The following is a limited response.

Raskob and Smith were close friends. Smith was governor Raskob was a vice president of a car company. Smith suggested that his friend build a skyscraper. Workers bought hot lunches for forty cents. Walter Chrysler must have been angry that his building was not the tallest.

The following is a poor response.

I like New York. I wood like to visit it. The Empire State Building is very tall.

Exercise directions: Pretend you are John Raskob. You are writing in your diary, describing the opening of the Empire State Building. Write down what you did on that day and what you thought. When you have finished your writing, proofread it. Check it for correct spelling, grammar, capitalization, and punctuation.

The following is an excellent response.

Dear Diary,

It has been a great day. After much hard work, the Empire State Building was opened today. I made sure that everyone who worked on the building was invited to the opening. As I got ready to make my speech, I thought about how great the workers were. They finished the building quickly, and I wondered how many of them would find jobs. The governor and the mayor came, and there were lots of speeches. In my speech, I thanked everyone who had helped. Then I told the crowd that the building was now open. I'm really proud of it, and I hope it is a success.

The following is an acceptable response.

Dear Diary,

The Empire State Building opened today. I greeted all the people. I think the building will be a big success. I'm glad Smith suggested that I build the building. I am very happy.

The following is a limited response.

Dear Diary,

Got up early. I feel happy about the Empire State Building opening. Many people have come to the terrace to look down at the people.

The following is a poor response.

Dear Diary,

I want a new mitt. I hope I get it soon.

EXTENDED ACTIVITIES

Divide the class into three groups. Give each group one activity.

- Ask students to brainstorm a list of adjectives that describe the Empire State Building. Have them write these on a large poster. Next, working in pairs, the students will choose a topic and then write a paragraph using five of the adjectives. Ask them to read their paragraphs to their classmates. Display the poster in your classroom. It will help students when they are trying to think of adjectives.
- Ask students in this group to create a page about the Empire State Building for a guidebook of New York City. Half of the group can work on a description of the Empire State Building. The other half will draw or paint a picture to go with the written description. For more information, suggest that they use the library or the Internet. Let the group choose two members who will present the page and drawing to the rest of the class.
- Each student in this group will design a building of the future. They may draw it on paper or on lightweight cardboard, before painting it and cutting it out. Have students paste their buildings on a background of black paper. Ask students to explain their buildings to the rest of the class.