

Grade 10  
C-9 “The Mooring Mast”

Based on the excerpt, describe the obstacles the builders of the Empire State Building faced in attempting to allow dirigibles to dock there. Support your answer with relevant and specific information from the excerpt.

**Scoring Guide**

<b>Score</b>	<b>Description</b>
<b>4</b>	The response is a clear, complete, and accurate description of the obstacles the builders of the Empire State Building faced in attempting to allow dirigibles to dock there. The response includes relevant and specific information from the excerpt.
<b>3</b>	The response is a mostly clear, complete, and accurate description of the obstacles the builders of the Empire State Building faced in attempting to allow dirigibles to dock there. The response includes relevant but often general information from the excerpt.
<b>2</b>	The response is a partial description of the obstacles the builders of the Empire State Building faced in attempting to allow dirigibles to dock there. The response includes limited information from the excerpt and may include misinterpretations.
<b>1</b>	The response is a minimal description of the obstacles the builders of the Empire State Building faced in attempting to allow dirigibles to dock there. The response includes little or no information from the excerpt and may include misinterpretations. OR The response relates minimally to the task.
<b>0</b>	The response is totally incorrect or irrelevant, or contains insufficient evidence to demonstrate comprehension.
<b>Blank</b>	No response.

**Scoring Notes**

The obstacles to dirigible docking include:

- Building a mast on top of the building
- Meeting with engineers and dirigible engineers
- Transmitting the stress of the dirigible all the way down the building; the frame had to be shored up to the tune of \$60,000
- Housing the winches and other docking equipment
- Dealing with flammable gases
- Handling the violent air currents at the top of the building
- Confronting laws banning airships from the area
- Getting close enough to the building without puncturing

Other explanations will be accepted if supported by relevant evidence from the text.

Annotation:

4B

36. The builders of the Empire State Building faced many obstacles in attempting to allow dirigibles to dock there. One was that the mooring mast which needed to be constructed on the building in order for docking to be possible would cause the structure of the Empire State Building to "Have to be modified and strengthened to accommodate this new situation" (Lusted; paragraph 9). This is an obstacle that cost money and time ~~hurdle~~. Another obstacle the builders faced was that "The winds on top of the building were constantly shifting due to violent air currents" (Lusted; paragraph 14). This problem was one that was never truly fixed and is a main reason why a dirigible never successfully docked at the Empire State Building. A third obstacle that the builders faced was that there was a law against dirigibles approaching low altitudes over populated areas. As stated in the passage, there was a "Law against airships flying too low over urban areas" that would make it "Illegal for an airship to ever tie up to the building" (Lusted; paragraph 14). Lastly, the builders of the Empire State Building had to face the obstacle that there was a ~~safety~~ safety issue with attempting to land enormous combustible ships over New York, a highly populated city. This is described in the passage by the fact that "Most dirigibles from outside the United States used hydrogen rather than helium, and hydrogen is highly flammable" (Lusted; paragraph 13).

Annotation:

4C

36.

In the excerpt from The Mooring Mast by Marcia Amidon Lusted, there are many obstacles that the builders of the Empire State Building faced during the attempt to allow dirigibles to dock there. First, architects realized that, "A thousand-foot dirigible moored at the top of the building, held by a single cable tether, would add stress to the building's frame." The Empire State Building would not be stable enough to have a dirigible docked at the top. The second obstacle is that even if they were to find a stable way to moor the dirigible, the wind would blow it all over the place. There is no "practical nor safe" way to tie down the dirigible. Lastly, most foreign dirigibles used hydrogen rather than helium which was a problem because hydrogen is highly flammable. If a dirigible were to catch fire while moored to the Empire State Building, above a densely populated area, the accident would be catastrophic. In conclusion, the idea of mooring dirigibles at the top of the Empire State Building was a bad decision from the beginning because of the many obstacles.



Annotation:

3A

36. In the excerpt from "The Mooring Mast" by Marcia Amidon Lusted there are many obstacles the builders faced in attempting to allow dirigibles to dock on the Empire State Building. "Most dirigibles from outside the United States used hydrogen rather than helium, and hydrogen is highly flammable (paragraph 13)." This poses a huge problem because if the dirigible were to explode while docked on the Mooring Mast, then there would be a grave amount of casualties and even if it didn't explode danger is imminent. "The winds on top of the building were constantly shifting due to violent air currents (paragraph 14)." This would lead the back of the dirigible to keep spinning, thus not allow any passengers to board or leave the ship. "an existing law against airships flying too low over urban areas (paragraph 15)." This would make it impossible to fly the dirigibles to the docks because 1,000 feet is too close to the ground to fly over an urban area especially.

Annotation:

3B

36. In the excerpt from, "The Mooring Mast", by Marcia Amidon Lusted, the builders of the Empire State Building experienced obstacles in attempting to allow dirigibles to dock there. One of these problems was safety. Some dirigibles from outside the U.S. use hydrogen, not helium, which is highly flammable and would not be safe to have in New York City. Another problem that was experienced was the winds on the top of the buildings always changed so the dirigibles would bump into each other and possibly break. Last, there is a law stating airships can not fly too low over urban areas. This would make it illegal for a ship to dock at the building. These are reasons in the excerpt from, "The Mooring Mast" the builders of the Empire State Building experienced obstacles in attempting to allow dirigibles to dock there.

Annotation:

3C

36. The builders of the Empire State Building faced many obstacles in allowing the dirigibles to dock there. One of these problems was being able to keep the building stable. The author writes, "A thousand-foot dirigible moored at the top of the building, held by a single cable tether, would add stress to the building's frame." They needed to be able to support the building, because if it collapsed, it would be devastating.

Another obstacle that the builders faced was keeping the pedestrians safe. The dirigibles would be weighed down, but the author writes, "they would be dangling high above pedestrians on the street." This would be very dangerous because if it were to fall it would cause very much damage and kill many people. The builders faced this challenge because there would be no other way to land the dirigibles.

Annotation:

2A

36. The Obstacles the builders faced were how to put the mast on, Nature, and how they did not install the mooring equipment. The builders could not put a mooring mast on the top. It would create stress on the building and something may happen. They had to modify the frame of the building so it could withstand the dirigible. Nature also caused problems. When the dirigible was tied down, it would shift around the mast, making it unsafe to dock. Towards the end of the project, the builders could not install the mooring equipment in time. Irving Clavan of the building's architectural office said that they would install the landing gear later. They never did and the idea went away.



Annotation:

2B

36. Even with this great idea of docking dirigibles to the roof of The Empire State Building there come some obstacles. For example in paragraph 9 it says, "A thousand-foot dirigible moored at the top of the building, held by a single cable tether, would add stress to the building's frame." That means that it would rip part of the building off because it would not be stable. Another problem would be in paragraph 14 it says, "... the back of the ship swivel around and around the mooring mast." Which states that they need to secure the back or it is unsafe for people to board.



Annotation:

2C

36. The builders faced many obstacles when trying to allow dirigibles to dock at The Empire State building. One of the main reasons was docking would "add stress to the building's frame." So they would have to find a way to send the stress eleven hundred feet down to the foundation. Also it is illegal for air ships to fly that low.

Annotation:

1A

36.

Allowing the dirigibles to dock on the top of the Empire State Building was a big mistake. The Empire State Building wanted to show it was the best and could handle anything. The stand was very small to dock it on, heavy winds would make it move from side to side, also the blimps were very flammable also so could cause a very bad accident.

Annotation:

1B

36.

The obstacles were the stress of the dirigible's load and the wind pressure would have to be transmitted all the way to the building's foundation and something about the steel frame over 60 thousand dollars.

Annotation:

36. The constructors had a problem because they needed to find away to build the mast at the top of the building

1C



Annotation:

0

36. The obstacles the Empire State building had for dirigible to dock there was for people to be transported. Also, they docked there to refuel and service and to let passengers on or off.