

Inside Reading Level 3
Unit 6 Skill Review: Skimming and Making Predictions

Name: _____

Date: _____

The Unit 6 Review Skill asks you to skim Reading 1 to answer the question “What are some things that engineers need to think about when they build something that will hold people?”

A. First identify words that are important to the question you’ll be answering. Underline some words or phrases in the question above that are key to answering it.

B. Now brainstorm some ideas before reading. Consider the picture and the title of the Reading, “A Whale of a Wheel.” Think about what could go wrong if the Ferris wheel wasn’t designed properly. List some ideas to answer the question above in your notebook.



C. Now skim the following paragraphs. Look for ideas you’ve listed and other key words that relate to the question and the phrases you’ve underlined.

Ferris proposed building a gigantic wheel that people could ride on as it turned. Burnham rejected Ferris’s proposal. He could not believe that such a thing could be safe. It must violate the laws of physics. Its own weight would surely distort the metal beams, causing it to turn irregularly and eventually collapse. Despite Burnham’s fears, Ferris knew his design was sound. He knew that equal pressure applied to every spot on the wheel would balance the forces acting on it. Physics was on his side.

The wheel was supported by two 140-foot (43-meter) steel towers. The 45-foot (14-meter) axle was the largest single piece of forged steel at the time in the world. The wheel itself had a diameter of 250 feet (72 meters), a circumference of 825 feet (251 meters), and a maximum height of 264 feet (80 meters). Between the two rims of the wheel, Ferris hung 36 wooden carriages, like railroad cars, that could hold 60 people each.

D. Were any of the ideas that you listed above in the text? What additional ideas did you find in the excerpt? List them below:

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Answer Key

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The structure needs to be strong enough to support the weight of maybe a hundred people at one time. Beams that support each carriage need to be able to hold the weight of several people. The carriages need to be supported but also need to be able to rotate.

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D. Were any of the ideas that you listed above in the text? What additional ideas did you find in the excerpt? List them below:

It cannot violate the laws of physics. The weight of the structure itself could cause it to collapse. Steel needs to be used in order to support the weight. The axle was the largest piece of forged steel at that time, meaning that there needs to be structures big enough to support such a giant wheel. The carriages are made of wood (maybe because wood is lighter than steel.)