

▶ **Standard:** Assess Point of View & Purpose ▶ **Skill:** Analyze Points of View

Thrill Seekers

Pair this passage with
“The Science of Roller Coasters.”

- ① You are flying through the air at what feels like a thousand miles per hour, screaming your head off. Riding on a fast, looping roller coaster is scaring you silly. And you are loving every minute of it. Or, are you?

Safely Facing Danger

- ② Some people are terrified of the death-defying machines known as roller coasters. But other people live for the thrill of extreme rides. They want to experience the latest and greatest coasters that test the laws of physics. They yearn to reach higher heights and faster speeds. What causes people to love roller coasters when they seem so dangerous?
- ③ That inherent danger is part of what makes roller coasters so exciting for some people. Riders can experience the thrill of facing danger without being in any real trouble. As a coaster spins, turns, and plummets down steep hills, riders feel the rush of flying and falling all while being securely strapped into their seats.
- ④ The design of roller coasters adds to riders’ rush of emotions. When a coaster ascends its first big hill, riders anticipate what will follow. Their hearts beat faster and their breaths get shorter. These physical responses are similar to the symptoms people feel when they are under stress.

Most large roller coasters have height restrictions for safety, but young children can ride less extreme roller coasters designed for families to enjoy together.



An Adrenaline Rush

- ⑤ Scientists attribute these responses to a hormone called adrenaline. The hormone is a critical part of what scientists call the “fight-or-flight response.” When faced with danger and a threat to one’s life, a person may either fight and take on the danger, or take flight and flee the situation. This survival instinct dates back to the early days of man. Humans faced frightening situations on a daily basis, and their quick responses helped them stay alive.

It’s All in the Genes

- ⑥ People’s genes also help determine whether they love or hate roller coasters. Genes are made up of DNA, a special material in the body that affects a person’s traits. Genes determine characteristics such as hair color, height, and even certain behavior patterns. Parents pass on genes to their children.
- ⑦ Some people’s genes make them more likely to experience motion sickness. So, a soaring, twisting roller coaster causes them to feel physically ill. Other people’s genes make them more sensitive to anxiety. So, the thought of riding a roller coaster is terrifying for them.
- ⑧ On the other hand, some people’s genes cause them to seek out adventure. Scientists have learned that many people who take more risks than others have a gene called DRD4. Long ago, people with DRD4 might have been more likely to travel long distances to live in new places. Today, people with this gene may be more likely to love thrill rides such as roller coasters.
- ⑨ Whatever the reason, many people love roller coasters and will continue to seek out the most extreme rides, no matter how scary they may seem.



Many roller coaster riders scream at the top of their lungs during the ride. Some scream out of sheer terror, and others scream just for the fun of it.

“Thrill Seekers” Pair with “The Science of Roller Coasters”

Standard: Assess Point of View & Purpose **Skill:** Analyze Points of View

Name _____

1. Complete the *Compare and Contrast Chart* on page 197. Explain how the points of view of “Thrill Seekers” and “The Science of Roller Coasters” are alike and different.

Answer questions 2–6.

2. Which question about roller coasters does the author of “Thrill Seekers” seek to answer?
 - A. How does gravity affect a roller coaster’s movement?
 - B. Why do some people feel sick after riding a roller coaster?
 - C. What factors lead some people to really love riding roller coasters?
 - D. How have roller coasters changed since the first coaster opened in 1884?
3. Which statement from “The Science of Roller Coasters” BEST supports the information given in “Thrill Seekers”?
 - A. “Yes, the two coasters were vastly different, in regards to design, structure, and intensity.”
 - B. “With roller coasters, gravity is part of the reason why the rides are able to move at fast speeds without any engine present.”
 - C. “Kinetic energy keeps the ride cars ‘coasting’ along the track.”
 - D. “All of these forces acting on riders are partly what make roller coasters so fun.”

4. Describe the information “Thrill Seekers” and “The Science of Roller Coasters” include about the first big hill of a roller coaster. How does the point of view of each passage affect the information provided? Use evidence from each passage to support your answer.

5. The author of “Thrill Seekers” says that people who enjoy roller coasters want to ride the latest extreme rides that “test the laws of physics.” What does the author mean by this? Use information from “The Science of Roller Coasters” to help you explain your answer.

6. Compare and contrast how the authors of “Thrill Seekers” and “The Science of Roller Coasters” each use scientific principles to explain ideas related to roller coasters.

“Thrill Seekers” Pair with “The Science of Roller Coasters”

Answer Key

1. Possible responses: Alike: Both give facts about roller coasters and the experience of riding them.
Different: “Thrill Seekers” explains why some people enjoy riding a roller coaster and others do not. In “The Science of Roller Coasters,” the author explains the physics of how roller coasters work.
2. C
3. D
4. Possible response: “Thrill Seekers” says that the first hill adds to riders’ excitement because the anticipation of the big drop makes riders’ hearts beat faster. This relates to why people enjoy roller coasters. “The Science of Roller Coasters” says the first hill is called “the lift hill.” A chain pulls the ride car up the hill and gravity pulls it down. These ideas relate to the physics of how a roller coaster works.
5. Possible response: The author means that extreme rides test, or push the limits of, the laws of physics. Extreme rides use special mechanisms to launch ride cars and make them go very fast. Looping coasters test the laws of physics because they are designed so that forces keep riders in their seats even when the coaster is upside down.
6. Possible response: Both authors use science to support ideas related to the experience of riding a roller coaster. The author of “Thrill Seekers” explains how adrenaline and genes can affect how riders feel. The author of “The Science of Roller Coasters” uses physics to explain how coasters work.