

Passage 4

1- A 600 years ago, roller coaster pioneers never would have imagined the advancements that have been made to create the roller coasters of today. The tallest and fastest roller coaster in the world is the Kingda Ka, a coaster in New Jersey that launches its passengers from zero to 128 miles per hour in 3.5 seconds (most sports cars take over four seconds to get to just 60 miles per hour). It then heaves its riders skyward at a 90-degree angle (straight up) until it reaches a height of 456 feet, over one and a half football fields, above the ground, before dropping another 418 feet (Coaster Grotto “Kingda Ka”). With that said, roller coasters are about more than just speed and height, they are about the creativity of the designers that build them, each coaster having its own unique way of producing intense thrills at a lesser risk than the average car ride. Roller coasters have evolved drastically over the years, from their primitive beginnings as Russian ice slides, to the metal monsters of today. Their combination of creativity and structural elements make them one of the purest forms of architecture. At first glance, a roller coaster is something like a passenger train. It consists of a series of connected cars that move on tracks. But unlike a passenger train, a roller coaster has no engine or power source of its own. For most of the ride, the train is moved by gravity and momentum.

2- C Roller coasters have a long, fascinating history. The direct ancestors of roller coasters were monumental ice slides – long, steep wooden-slides covered in ice, some as high as 70 feet – that were popular in Russia in the 16th and 17th centuries. Riders shot down the slope in sleds made out of wood or blocks of ice, crash-landing in a sand pile. Coaster historians diverge on the exact evolution of these ice slides into actual rolling carts. The most widespread account is that a few entrepreneurial Frenchmen imported the ice slide idea to France. The warmer climate of France tended to melt the ice, so the French started building waxed slides instead, eventually adding wheels to the sleds. In 1817, the Russes a Belleville (Russian Mountains of Belleville) became the first roller coaster where the train was attached to the track. The French continued to expand on this idea, coming up with more complex track layouts, with multiple cars and all sorts of twists and turns.

Q1: What does “ancestors” mean?

- A. predecessors
- B. the new generations
- C. grandchildren
- D. slides

Q2: What's the relation between roller coasters and physics?

- A. Both are fast and fun.
- B. They are built based on physics’ fundamental principles.
- C. There is no relationship between them at all.
- D. Physics is the science of ice.

Q3: Why didn't the French use ice and used wax, instead?

- A. Because France is warmer than Russia.
- B. Ice suits France's weather better.
- C. Wax is cheaper.
- D. Ice would break into pieces.

Q4: What is the main idea of the passage?

- A. It talks about the invention of roller coasters.
- B. It describes the use of roller coasters in the harsh weather of Russia.
- C. It talks about their dangers and potential risks.
- D. It talks about the development of the roller coaster industry.