



High Speed Train Inspired by the Kingfisher

Vol. 1 (2025), Issue 6 (April)

The kingfisher is a bird that dives into water to catch its prey. It has a long, narrow pointed beak that allows it to enter the water while barely making a splash. The beak steadily increases in diameter from the tip to the head, which helps reduce impact when the bird hits the water.



In the 1990s, a Japanese bullet train encountered an unexpected problem as it entered and exited tunnels. It was pulling a huge mass of compressed air behind it, creating a deafening sonic boom that disturbed nearby passengers and residents.

This hurdle was a complex engineering challenge, but the solution came from an unlikely source: the kingfisher, a skilled hunter that dives quickly into water without creating a splash.

Inspired by the streamlined shape of the kingfisher's beak, the engineers designed the front of the train to dramatically reduce air resistance. Not only did the noise disappear, but the ride became smoother and more efficient, and energy consumption was reduced by 15%!

This technological leap wasn't just an improvement; it revolutionized the world of high-speed trains, making them more comfortable, quieter, and more environmentally friendly.

Glory be to the Creator, the Ingenious One who perfected everything He created.