This passenger train in Shanghai, China, reaches speeds of 268 miles per hour.

FULL SPEED AHEAD

New technology is making trains faster than ever.
China has been using maglev trains to whisk people from the city of Shanghai to its airport.

**FAST FORWARD**

A train shoots from a tunnel and zips over a bridge. It passes in a blur over the farmland below. Blink, and you could miss it.

Japan is testing its new maglev bullet train. It’s the fastest train in the world. It reaches speeds of 375 miles per hour. That’s more than twice the top speed of the Acela Express, the fastest train in the United States.

Maglev is short for “magnetic levitation.” This train does not just run on wheels. It also floats. Powerful magnets in the train and rails lift the train four inches into the air. They also propel it. And since the train doesn’t touch the rails, there’s no friction. That means super speeds.

Japan hopes to have the maglev in use by 2027. Traveling won’t be the same. The country’s capital, Tokyo, is 218 miles from the city of Nagoya. The trip takes nearly five hours by car. The maglev will make it in 40 minutes.

Japan is not the first country to build a magnetic train. China has used one for years. But that one is slower. It goes between Shanghai and its airport at a top speed of 268 miles per hour.

**Next Stop**

Will magnetic trains make it to the U.S.? There’s a plan to build a maglev line between Baltimore, Maryland, and Washington, D.C. The project would cost billions of dollars. Some say the money should be used to build highways instead.

But supporters of maglev point to its benefits. It’s quiet. It needs little maintenance. And it will not derail.

The future of train travel is fast approaching. Are you on board?

—By Brian S. McGrath

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**SPEED RACE**

Life has sped up. People want to travel more quickly. High-speed trains make that possible. The most famous passenger-carrying maglev train is in China. Most high-speed trains rely on wheels. Check out these speeds.

- **Shanghai Maglev Train, China**: 268 miles per hour (M.P.H.)
- **Beijing-Shanghai High-Speed Train, China**: 217 M.P.H.
- **Bullet Train, Japan**: 200 M.P.H.
- **TGV, France**: 200 M.P.H.
- **Acela, United States**: 150 M.P.H.
FROM S-L-O-W TO FAST!

This time line shows how trains have changed over time.

1829 Robert Stephenson built the Rocket. It was a steam engine. It was built for a contest to show off the best engine. It reached 30 miles per hour. Many steam engines since have been modeled on the Rocket.

1934 The Burlington Zephyr was an early diesel-powered passenger train that was in service in America. It’s on display at Chicago’s Museum of Science and Industry.

1981 The TGV is a high-speed train in France. It runs on electric power. It connects the country’s capital, Paris, with other cities there. The TGV set a world record in 2007 for fastest wheeled train. In a test run, it went 357 miles per hour.

2006 In Asia, trains travel on the world’s highest railway. The Qinghai–Tibet railway reaches a maximum height of 16,640 feet. It’s hard to breathe at that height. Passengers are supplied with oxygen.