Mars in a Minute: How Do You Get to Mars?

(music)

How do you get to Mars?

If you want to send a spacecraft all the way to Mars, first you'll need a fast rocket to escape the pull of Earth's gravity.

The heavier your spacecraft, the more powerful your rocket needs to be to lift off.

Next, make sure you launch at the right time.

Mars and Earth orbit the Sun at different speeds and distances.

Sometimes they're really far apart; and other times they come closer together.

About every two years, the two planets are in perfect positions to get to Mars with the least amount of rocket fuel.

That's important. The total trip is over 300 million miles!

Finally, make sure your aim is right. You can't shoot for where Mars is at launch time.

You have to aim for where it will be when you get there.

It's a lot like how a quarterback passes a football.

Also, you may need a few thrusts to correct your direction along the way so you don't miss Mars.

If all goes well, you'll get to the red planet in about seven or eight months.

Then, if you actually want to land on Mars - well, that's a whole other challenge!

(music)

NASA Jet Propulsion Laboratory, California Institute of Technology