

American Inventors: Rocket Scientist Robert Goddard

20世紀初めのアメリカで、ロバート・ゴダードはロケットを使って、空のさらに先へ到達する可能性を研究していました。当時はまだ現実的とは思われなかったアイデアにも、科学的な方法で挑戦し続けた人物です。現在、ロケット技術は宇宙開発をはじめ、さまざまな分野につながっています。新しい発明や技術が未来を変えるためには、どのような発想や支えが必要だと思いますか。



1. Article

Read the following article aloud.

Today rocket launches and space missions are common. But in the early 1900s, space travel seemed like a dream.

One of the most influential people in the field of rocket science was American Robert Goddard.

The American space agency NASA describes Goddard as “the father of modern rocket [propulsion](#).”

Robert Goddard once said that “the dream of yesterday is the hope of today and the reality of tomorrow.” His scientific work gave hope to many dreams about space travel. He turned some of those dreams into reality.

More than one hundred years ago, Goddard carried out studies and tests of rocket engines.

He developed and flew many rockets that got their power from solid fuels: chemicals that formed a hard substance. In 1925, he made and tested the first rocket engine using a soft chemical fuel. The next year, he successfully launched the world's first liquid-fuel rocket.

Many historians consider liquid-fuel rocket flight to be as important as the first airplane flight by the American brothers Orville and Wilbur Wright.

Goddard's work proved that machines could travel outside of Earth's atmosphere and into space.

During his early research, he received money and support from the U.S. Smithsonian Institution. The Smithsonian published several reports about his efforts.

One [publication](#), called "A [Method](#) of Reaching Extreme Altitudes," wrote about his search for ways to send weather recording instruments higher than balloons could fly. It described how he developed the mathematical [theories](#) for rocket flight.

In that report, Goddard also suggested the [possibility](#) of a rocket someday reaching the moon. At the time, there was a big dispute in the press about this claim. Many people thought he was foolish for suggesting something that seemed so impossible.

Many of Goddard's ideas are still used in rocket development. So, in a way, every rocket that flies today could be considered a Goddard rocket.

Shirley Griffith reported on this story for VOA Learning English. Bryan Lynn adapted it.

2. Key phrases and vocabulary

First repeat after your tutor and then read aloud by yourself.

1. propulsion (n.) a way of moving something by pushing it with a force

JAXA is working on a new propulsion system for future space missions.

2. publication (n.) a book, report, or other work that is printed or published

When you hand in your report, please include a list of the publications you used.

3. method (n.) a particular way of doing something

Usually, it is possible to use more than one method to solve a math problem.

4. theory (n.) an idea that explains how or why something happens

The theory of gravity has changed from Newton's time, to Einstein's, to today.

5. possibility (n.) the situation that something that may happen or be true

The possibility of a large meteor hitting the Earth tomorrow is low, but it is not zero.

3. Questions

Read the questions aloud and answer them.

1. When did Goddard launch the world's first liquid-fuel rocket?

2. What was important about Goddard's work? What influences has it had on science and technology?

3. Who provided money and support during Goddard's early research?

4. In what ways has rocket propulsion technology affected your life?

5. Choose one recent invention. How will this invention change the lives of people in the future?