

Hot-air balloons

Man has always wanted to fly, and through the years attempts to copy birds by attaching “wings” to the arms as well as hypothetical flying machines based on Archimede’s principle were experienced without success. Nothing really got off¹ the ground until 1782 with the discovery of two brothers, **Joseph and Etienne Montgolfier**: they found out that hot air was lighter than cold air, and proved it by filling a silk bag with hot air which lifted the bag to the high ceiling of their house. On 19 September 1783 the Montgolfier brothers, together with **Pilâtre de Rozier**, launched the first hot air balloon, called “Aerostat Reveillon”, with a duck, a sheep and a chicken as passengers. After a eight-minute flight the balloon landed at the presence of Louis XVI himself, who could witness that the animals were still alive. Two months later, on 21 November 1783, in the Bois de Boulogne in Paris, the Montgolfier brothers launched a balloon carrying Pilâtre de Roziers and the Marquis d’Arlandes: they became the first human beings to fly. The flight lasted twenty-eight minutes, during which the two men fed a fire placed in the middle of the basket. Eventually the balloon landed a few miles away in some vineyards. Local farmers, frightened by

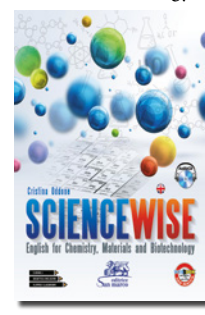
Joseph-Michel (1740-1810) and **Jacques-Etienne** (1745-1799) **Montgolfier** invented the montgolfière-style hot air balloon, or *globe aérostatique* in French. They came from a family of paper manufacturers in Annonay, in Ardèche, France. In 1783, following their achievement, King Louis XVI elevated their father Pierre to the nobility and hereditary appellation of *de Montgolfière*. Jean-François **Pilâtre de Rozier** (1754-1785) was a French chemistry and physics teacher. He was the protagonist of the first manned free balloon flight with the Marquis d’Arlandes. He and Pierre Romain died during an attempt to fly across the English Channel: they were the first known fatalities in an air crash. It seems that the modern word “pilot” derives from his name.

this strange object coming from the sky, tried to attack it with pitchforks². The two passengers explained everything and offered them a bottle of champagne. That is why even today champagne is often drunk after a hot air balloon ride. In the same year the French chemist Jacques Charles invented a type of balloon which used hydrogen instead of hot air. These gas balloons competed with hot air balloons

GLOSSARY

- 1 to depart
- 2 a long-handled fork with three long curved tines for tossing hay





for many years. Unfortunately, in 1785 Pilâtre de Rozier died during an attempt to cross the English Channel: the balloon exploded because of the experimental use of a hydrogen balloon and a hot air balloon tied together. The English Channel was actually crossed by the French Jean Pierre Blanchard in the same year. Blanchard also conducted the first balloon flight in the United States, in Philadelphia on 9 January 1793, with George Washington witnessing the launch. Very few technological advances were made for about

150 years. Traditional hot air balloons experienced a renaissance in the 1960s. The first balloon crossed the Atlantic Ocean in 1978, while the Pacific Ocean was crossed for the first time three years later. These balloons used helium for the filling. It was in 1987 that a traditional hot air balloon, rather than a helium filled balloon, managed to cross the Atlantic Ocean; for the Pacific Ocean the crossing happened in 1991. In 1999 the first world flight was completed, starting in Switzerland and landing in Africa.

ACTIVITIES

1 Decide if the following sentences are true or false, and then correct the false ones.

- 1 The Montgolfier brothers discovered that cold air was lighter than hot air.
- 2 The first hot air balloon had some animals as passengers.
- 3 At the time of the first hot air balloon the French king was Louis XIV.
- 4 The first human beings to fly were British.
- 5 Jacques Charles invented a balloon using hydrogen.
- 6 Pilâtre de Rozier was the first man to cross the English Channel.
- 7 Hot air balloons crossed the Atlantic Ocean and the Pacific Ocean in the 19th century.
- 8 The first world flight in a hot air balloon left from Switzerland.

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2 Answer the following questions.

- 1 Who invented the hot air balloon?
- 2 What was the name of the first hot air balloon?
- 3 When did the first human beings fly in a hot air balloon?
- 4 How long did the first manned flight last?
- 5 Why is champagne often drunk after a hot air balloon flight?
- 6 How did Pilâtre de Rozier die?
- 7 Who witnessed the first balloon flight in the USA?
- 8 What type of balloons first crossed the Atlantic Ocean and the Pacific Ocean?

3 Read the text again and look for words or expressions having the following Italian meaning.

- 1 Tentativo
- 2 Macchina volante
- 3 Soffitto
- 4 Atterrare
- 5 Testimoniare
- 6 Durare
- 7 Cesto
- 8 Vigna
- 9 Legare
- 10 Riempimento

4 Write a summary of the text and then prepare a multimedia presentation.

5 Surf the web and find out about other scientific discoveries involving animals as protagonists.

