

The Hot Air Balloon - WHY? - Constance- 1S

What is it?

The hot air balloon is one of the oldest flight technologies that can carry human beings. It is carried by the wind and it reposes on three essential components:

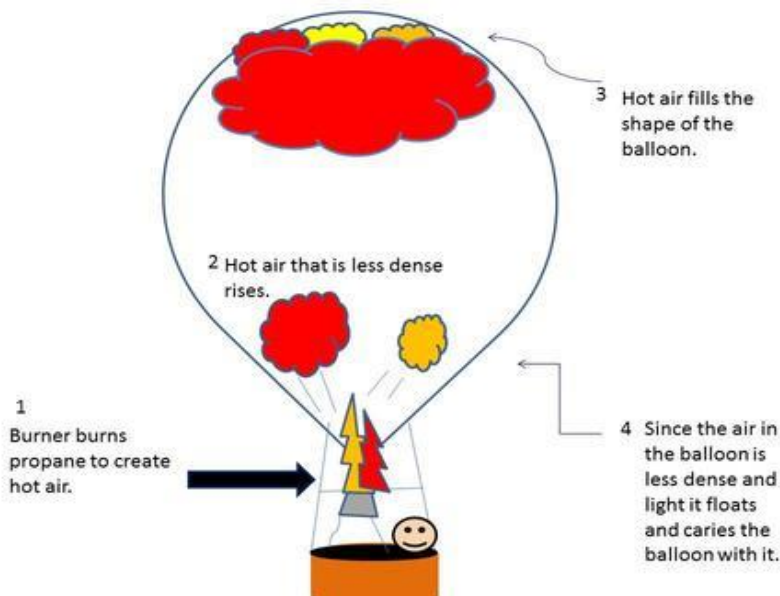
>The envelope which contains the hot air. In the past it used to be made of paper, but nowadays, it is made of synthetic fabrics such as ripstop nylon. The ability of a balloon to carry people depends on the volume of the envelope. Its volume goes from 250 m^3 for one person to 24000 m^3 for 45 people.

>The gondola, in which the people stand during the flight. It is often made of wicker or rattan because of their flexibility, which can be very useful when the landing is rough.

>The burner which is fixed to the gondola so that it is located in front of the mouth of the envelope. The liquid propane sent to it through rubber hoses allows it to produce a flame which can reach 6 m.



How does it work?



What is its history?

The hot air balloons were probably created in 1782 by the Montgolfier brothers who were French inventors. One year later it carried humans (Jean-Baptiste Réveillon, Jean-François Pilâtre de Rozier et Giroud de Villette) for the first time in Paris but the balloon was still attached to the ground for more safety.

The ability of the balloon to fly is linked to Archimedes thrust and to the characteristics of the different gases.

The density of the air contained in the balloon reduced because of the heat.

Hot air is lighter than cold air so the balloon can fly!