# **Barnyard Ballooning**

Did you know that the first passengers on a hot air balloon weren't humans at all, but barnyard animals? In September of 1783 two brothers named Joseph and Ettienne Montgolfier launched a balloon with three very special passengers: a duck, sheep, and rooster. The animals were in the air for eight minutes before returning safely to the ground!

#### **The Challenge**

Recreate this historic flight, but instead of using real animals, use three raw eggs as stand-ins for the duck, sheep, and rooster. Can you create a balloon basket that protects the egg animals when they land? But, there's a catch! You can only use the materials listed below.

## Collect

- · 3 raw eggs in a sealed zip-top bag\*
- 1 balloon
- 2 paper cups
- 4 rubber bands
- 1 sheet of paper
- String
- 1 bonus item!

\*If you don't want to practice with a real egg first, try filling a plastic egg or small sock with rice or a few pennies!

#### **Look Out Below!**

- 1. Build your balloon basket and attach it to the balloon.
- 2. Drop your balloon and egg passengers from a small height. An outside deck, stair landing, or ladder work well.
- 3. Modify your designs for an even better landing!

### **Take it further!**

There are lots of different ways to solve a challenge. Our first designs didn't work, but we figured out what went wrong and then redesigned our

system. It worked! Can you come up with another way to get the egg animals safely to the ground?



