

## Balancing Corks

Play with an object's centre of mass in this fun interactive trick.



### **What you need:**

- cork (a real one works best)
- two identical forks



### **What to do:**

1. Challenge your friend to balance a cork on its end on their nose.
2. After a few attempts, offer them the two forks. Can they balance the cork on its end on their nose with the help of the forks?
3. To succeed in this challenge you need to insert the forks into the side of the cork so that the handles hang below the bottom of the cork.
4. You should now be able to balance the cork on your nose or finger.

### **What is happening?**



The centre of mass (or centre of gravity) is a system's balancing point. The cork's centre of mass is approximately in the centre of the cork, so when we try to balance it on the base, the cork tips over. When you add the forks to the cork, you move the centre of mass of the cork+fork system to a spot below the base of the cork. Now it is much more stable and we can easily balance the cork on our nose.

### **Tips:**

You need to push the forks in quite firmly.