

# SCIENCE AND CIRCUSES

If you've ever seen a circus act, you might have seen trapeze artists or tightrope walkers do things that seem impossible. Believe it or not, they use **science** to help them perform their circus acts! Keep reading to find out more about the science of **motion**, or **physics**!

## What is gravity and how does it affect our balance?



Have you ever tried standing on one foot for a long time? It's hard to do without your other foot dropping! This is because **gravity**, an invisible force that pulls everything down to Earth, pulls your foot down. When we stand on both feet, we are **balanced** and stand steady because our **weight** is spread out **evenly**. The point of our bodies (or any object) where the weight is **even** is called the **center of gravity**.

When you stand, your center of gravity is in the middle of your body, near your bellybutton. Every time you move, it also moves! For example, when you walk, you naturally move your arms, head, and shoulders along with your legs to change your center of gravity and keep yourself from falling over! **Tightrope walkers** or **high wire performers** have to keep their center of gravity very steady **directly over the wire** while walking. This is very hard because the **wire constantly moves**!

