

The Coin Tower Challenge!



Supplies

Coins

Butter Knife

Procedure

Stack the coins into an even and straight tower.

Use the butter knife to swipe a coin out from the bottom of the tower.

See how many coins you can swipe out before the tower topples!

What Happened:

Two principles help explain why we can remove the bottom coin without toppling the whole tower: friction and inertia. Newton's first law of motion describes inertia, which means objects that are moving tend to keep moving and objects that are at rest tend to stay at rest unless something else affects them. This means the tower of coins "wants" to stay where it is.

Friction is when an object resists motion because of contact with another object or fluid. Friction is what will make our coins stop moving after we hit them, but it's also what will make our stack want to stay together. If we hit the bottom coin hard enough to overcome friction, we can launch it out but the friction between all the other coins will still hold the stack together.

**Parental supervision required. Recommended for ages 6+*