01 - Gravity

Key Learnings

1. Sir Isaac Newton didn't discover gravity, but he figured out that gravity is an invisible force that pulls objects towards one another.

2. The larger the object, the larger its gravitational force, and the closer two objects are to each other, the more gravitational force there is between them.

3. Weight is a measure of gravitational force, so when you jump in the air (momentarily escaping earth's gravity) technically, you are considered weightless!

Cool additional facts for you to share:

To escape earth's gravitational pull entirely, an object must travel 7 miles per SECOND - that's 25,200 MPH!

Fish have tiny calcium deposits in their heads (called "stones") that tell them which way is up, by feeling gravity's pull.

Want to get taller quickly? Go to space - the lack of gravity causes astronauts to grow 2 inches! Unfortunately, you go back to your regular height when you get back to earth.

Fun home exercise:

Try standing on one leg. If you're like most people, you'll wiggle and wobble & almost fall over - or maybe you DID fall over! So, why is it so hard? Well for starters, it's not that you "lost your balance" but rather that you gave gravity the advantage to pull you down. By standing on ONE leg, the mass of your body is now centered unevenly. Also, your leg muscles are designed to each hold half your weight -- only now, one leg is being asked to hold ALL your weight. So unless you're able to quickly shift your balance -- gravity is going to get you!

If you're unable to stand on one leg - try picturing an upside-down pyramid or someone balancing a bowling ball on one finger! It's pretty obvious it's going to fall down. Why? Because of GRAVITY![1]

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[1] This activity guide is for the Who Smarted? podcast www.WhoSmarted.com