You may not know but forces are everyday life movements. By reading a book, talking, running and writing on a page you are applying a force. They cause objects to move or stay stationary. There are two types of forces, there is contact forces (forces that touch when applied) and there is non-contact forces (forces that don’t touch when applied). Motion is just a technical word for types of movement. Motion can only be applied if there is a push or pull force.

Forces are everyday life movements. Without forces we couldn’t live. If you push or pull on an object a force is being applied. Forces can also make objects stay where they are (stationary).
Different Types Of Forces

There are two types of forces they are contact forces and non-contact forces. Contact forces are forces that are applied when physically touching. Non-contact forces are forces that don’t physically touch when applied. Some examples for contact forces are a person throwing a ball or writing on paper. The contact forces are push, pull and friction. Some examples for non-contact forces are a magnet and a paperclip and the moon’s gravity and the earth’s tides. The two non-contact forces are magnetism and gravity.

Contact Forces

There are many different types of contact forces. In fact there is four.

The first one is normal force. It is when nothing is happening to an object. The upwards force of the table is normal force. Here is an example a book resting on a table, gravity pulling down and the table resisting.
The second one is applied force. It happens when a push or pull motion moves an object.

The third one is tension force. Tension force happens to a cable or wire, it pulls equally at both ends of a cable.

The final one is spring force, it is applied when the spring is compressed or stretched. They can either push or pull.

Friction is also a contact force. It occurs when two objects rub against each other. Do you know the heavier the object the more friction it has. For example compare a toy train to a real train. Friction can be helpful or not helpful. It can be helpful by allowing you to walk properly (give you grip) or it can...
be unhelpful by giving you too much grip and allowing you not to walk or make things wear out (carpet skin)

There are four types of friction. They are, static friction (friction that acts upon unmoving objects), sliding fiction (friction that occurs between two objects sliding past each other), fluid friction (is the force that resists motion when fluid is involved) and the last one is rolling friction (the force between a rolling object and a surface).

The first type of friction is static friction. Once a force is greater than static friction it is no longer applied. Static friction describes a fixed or stationary object.

The second type of friction is sliding friction. Sliding friction also slows things down. Sliding friction is when bumps on a surface stick together or break apart and reform in different places. If you want to overcome sliding friction a force must be constantly applied. Sliding friction is less than static friction (it means easier to move)
The third type of friction is fluid friction. It resists motion when fluid is involved.

The last type of friction rolling friction. Rolling friction is much less than sliding friction it also depends on the type of wheel used.

Do you know air resistance is a type of friction. It can slow things down or speed things up in the air.

Inertia

Inertia is not a force but is important. Inertia is the property of all things due to mass, the more mass it has the more inertia it has, it also makes things harder or easier to move. Moving objects stay moving, stationary objects stay stationary.
There are two types of non-contact forces. The first one is gravity. Without gravity we would be floating in space and just keep going up. The theory of gravity was discovered by Sir Isaac Newton when an apple fell from a tree. Gravity also makes things stay on the ground and keeps the moon in orbit around the earth. Two hundred and fifty years later a new scientist was studying light and it lead to the theory of gravity. The new scientist name was Albert Einstein. It took him nearly ten years to figure gravity out.

The second non-contact force is magnetism. Magnetism attracts two magnets together or makes them push each other apart. Most metals like are not attracted to magnets like copper, silver, gold, magnesium, platinum and more. But these metals are attracted to magnets like iron, nickel, and cobalt. Magnetic fields are invisible to the human eye.
Motion

Motion is just a technical word for movement. It makes things go round or move. Motion is the changing of position, but to do so it need to have a force. Velocity is also a part of motion. It is the speed of an object in one direction. If the direction changes the velocity changes also. Acceleration is also a part of motion it is how quickly things speed up.

Important people

Einstein and Newton are the most important people when understanding forces and motion. Einstein is the most famous scientist. He refined some of Newtons theory’s through the theory of relativity.

Newton was the greatest English mathematician. Can you believe an apple caused all this. Newton also invented three laws of motion. The first one is for
every action there is a reaction. The second one is a force on an object will change speed or direction sometimes both. The final law is if something is moving it will keep moving.

In conclusion all forces are important. Without one we could not live. Some of the most important forces are gravity, friction and motion. Forces are in our everyday lives even though we may not know it.

By Reuben