

HOW DO **PUSHES AND PULLS** AFFECT **MOTION?**



by Lisa M. Bolt Simons



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Words in **bold** are in the glossary.

A PUSH AND PULL INVESTIGATION

You're at the park. You sit on a swing but don't move. You ask a friend to push you. Maybe you want one push. Maybe you want several pushes.

As long as your friend pushes you, the swing changes **position**. Now you have **motion**. You and the swing are moving. When you're done swinging, you drag your toes. The motion stops.



A swing needs a push to start motion. A swing needs something to stop the motion. How do other objects get motion? How do other objects stop motion?

Let's do an **investigation**. Look at the photos on page 7. The person in each photo is moving something.

On a piece of paper, draw a line down the middle. On one side write, "How the object moves." On the other side write, "How the object stops."

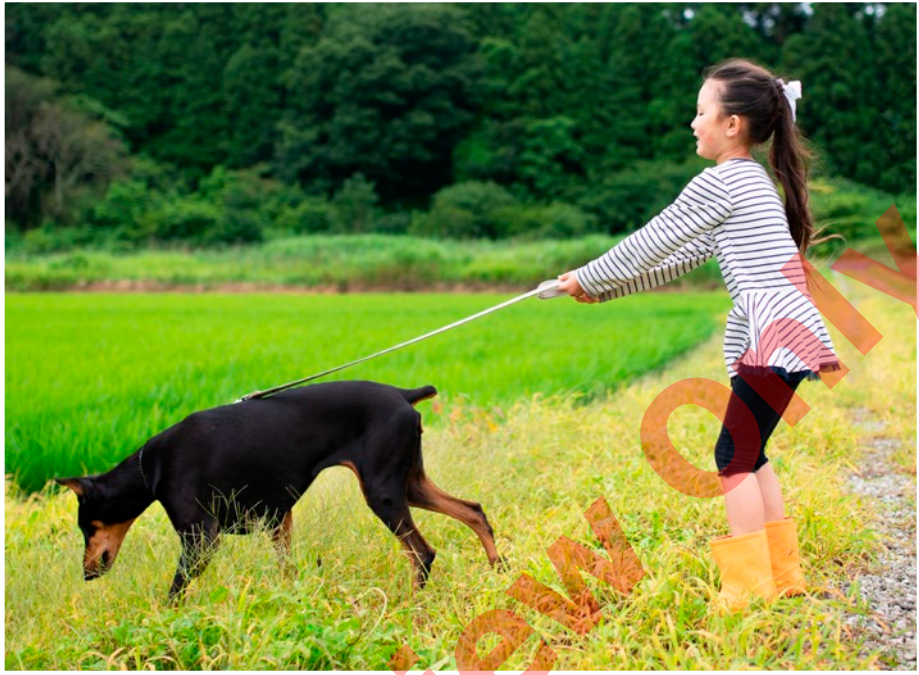
Make **observations**. Gather information. How do you open a door? How do you close a door? How do you move a bike? How do you stop a bike from moving? How do you move a cart? How do you stop the cart?



WHAT IS FORCE?

Pushes and pulls are two types of **forces**. A force gives an object motion from where it's resting.





To push is to move an object away from you. To pull is to bring an object toward you. An object can start moving if it's pushed or pulled. An object can stop moving if the pushing or pulling stops. An object can also stop moving if it is pushed or pulled in the opposite direction.