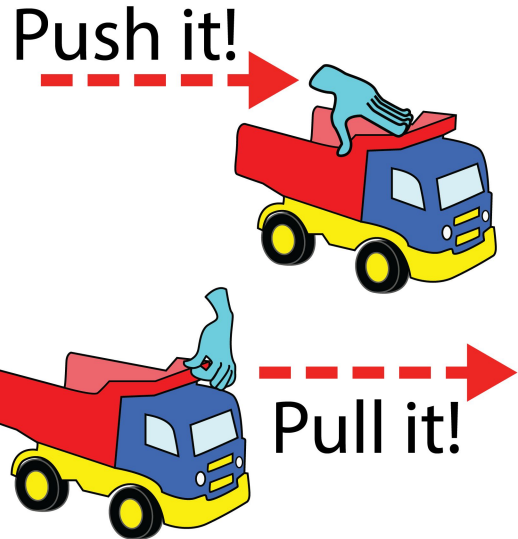


## Reflect

### How can you move an object?

How can you move this toy? A **force**, such as a push or a pull, is needed to move an object.

**force** – a push or pull



Pushing or pulling can change motion in several ways:

- Speeding up
- Slowing down
- Changing **direction**

**direction** – the way something is headed



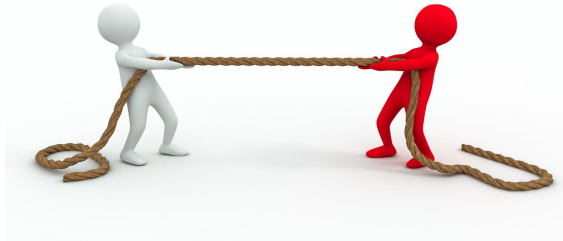
Pulling on the wagon moves it in a *different direction*.



Pushing the sled *speeds it up*.

## Try Now

Pushes and pulls can have different strengths and directions. When you play tug-of-war, you and the other person are pulling in opposite directions.



A bigger push makes things speed up more. A soft push would make the marble roll slowly. A big push would make the marble roll fast!



A bigger pull can make things slow down more quickly. When the woman pulled her dog's leash, he slowed down.



## Look Out!

Which requires more strength?

**strength** – how big the push or pull is on an object

You can use different amounts of **strength** to push or pull an object to change its motion or direction.

Pushing a real car would take a lot of strength. It would move slowly, because it is so heavy.



Pushing a toy car would not take a lot of strength to make it move forward. What do you think would happen if you used a lot of strength to push it? You would push it really fast!



## What Do You Think?

Remember, if you throw, shove, or kick an object to make it move away, that is called *pushing*. If you yank on something to bring it closer or tug it along behind you, that is called *pulling*.

### Pushing or Pulling?

You have to use force to play some fun games. You can pull or push on an object in a game, such as pushing a bowling ball or pulling a yo-yo string. Can you think of other games that use pushing and pulling?

