



BricQ\_Motion Prime

# Science of Sports

This unit will challenge your students to apply their scientific inquiry skills to provide evidence of the change in an object's motion based on its force and mass. They'll apply Newton's three laws of motion as they design, develop, and optimize a solution involving the collision of two objects. Throughout these lessons, they'll strengthen their oral communication skills in collaborative discussions, presenting and analyzing their solutions.

 Grades 6–8

STEAM

 Hybrid

Science, STEAM

## Lessons

### Pass the Ball

BricQ\_Motion Prime

How well can you work together to pass a ball

Hybrid

across a sports field? Can your team score the winning goal?

This lesson will help familiarize your students with the LEGO® Education BricQ Motion Prime Set. We recommend taking some time before the lesson to show your students how the elements are sorted, and to establish some ground rules for keeping the sets neat and organized.



Science, STEAM

30-45 min. Beginner Grades 6-8

Hybrid

## Gymnast

BricQ Motion Prime

What's cooler than a gymnast's horizontal bar? A horizontal bar on a car! Let's make a gymnast-powered car.



Science, STEAM

30-45 min. Beginner Grades 6-8

## Ski Slope

BricQ\_Motion Prime

It's time to hit the slopes, and race! What does it take to go from the bunny slope to being a downhill pro?



Science, STEAM

30-45 min. Intermed. Grades 6-8

Hybrid

## Free Kick

BricQ\_Motion Prime

The referee blows the whistle... Foul! The player gets a free kick. What does it take to be able to score every time?

Science, STEAM

30-45 min. Intermed. Grades 6-8

## Land Yacht

BricQ\_Motion Prime

Can a land yacht sail into the wind? Investigate how invisible forces can change an object's motion and how this force acts from a distance.

Science, STEAM  
30-45 min. Intermed. Grades 6-8

## Propeller Car

BricQ\_Motion Prime

Although a sailboat or land yacht can't easily sail upwind, it's possible to make it happen with clever engineering. Investigate how mechanical forces can change an object's motion and how these forces can act from a distance.

Science, STEAM

30-45 min. Advanced Grades 6-8

## Strike the Ball

BricQ\_Motion Prime

One way to get better at sports is to understand the science behind them. It's time to apply your understanding of forces and interactions to build a tabletop ball-striking game.

Science, STEAM

45-90 min. Advanced Grades 6-8