



BricQ\_Motion Essential

# Train to Win

This unit will give your students an understanding of forces and motion as they plan and conduct investigations about the cause and effect of push and pull forces.

These seven lessons will introduce students to the process of asking and answering questions, data analysis, and how to present their ideas. They'll work toward determining whether design solutions work as they were intended to change the speed or direction of an object with a push or a pull.

 PreK-2

**STEAM**

 Hybrid

Science, STEAM

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## Lessons

### **Dog Obstacle Course**

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Hybrid

Build an obstacle course for dogs! Describe the push and pull forces that are at work. This lesson will help familiarize your students with the contents of the LEGO® Education BricQ\_Motion Essential Set. We recommend taking some time before the lesson to show your students what's beneath the white tray, and to explain that the bricks are sorted by color. Students will find the building instructions books under the tray. They'll only need book "A" for this unit.



Science, STEAM

30-45 min. Beginner PreK-2

Hybrid

## Get Up and Dance

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Get up and dance! Explore how different gears push each other and change the dancers' spinning speed in a fun dance competition.



Science, STEAM

30-45 min. Beginner PreK-2

Hybrid

## Hockey Practice

Build a hockey player and goalie! Explore how different push and pull forces help make and block penalty shots.

Science, STEAM

30-45 min. Intermed. PreK-2



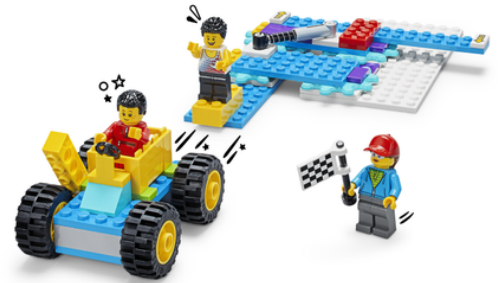
## Push Car Derby

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Build a spring launcher and a car with a removable brake to explore push and pull forces, and the effects of friction.

Science, STEAM

30-45 min. Intermed. PreK-2



## Tightrope Walker

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Build a tightrope and help the tightrope walker keep her center of gravity, so she doesn't fall.

Science, STEAM

30-45 min. Intermed. PreK-2

## Sail Car

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Ahoy! Build a sail car and explore an invisible push force. Which sail design will catch the most wind and make your sail car go the farthest?

Science, STEAM

30-45 min. Intermed. PreK-2

## Relay Race

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Design, build, and test mechanisms that can pass objects to a teammate, creating a fun and exciting relay race!

Science, STEAM

45-90 min. Advanced PreK-2