

# Tug-of-War Challenge

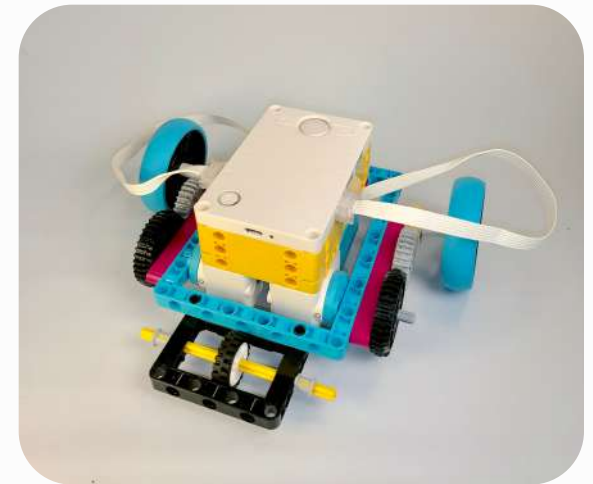
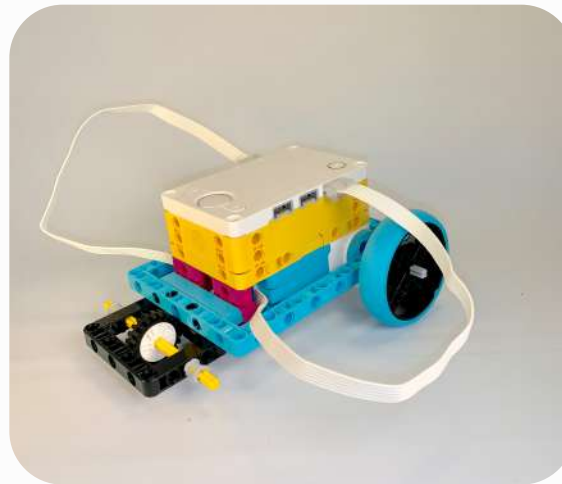
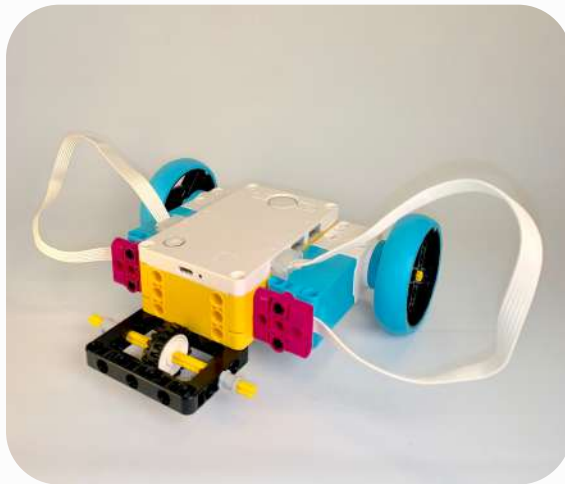
Design a car that will have 30 seconds to try and pull another car over a line. Cars will be attached with a LEGO brick.

**Engineering Learning Objectives:**  
Gearing and Design

**Physics Learning Objectives:**  
Forces and Torques

## SAMPLE IDEAS

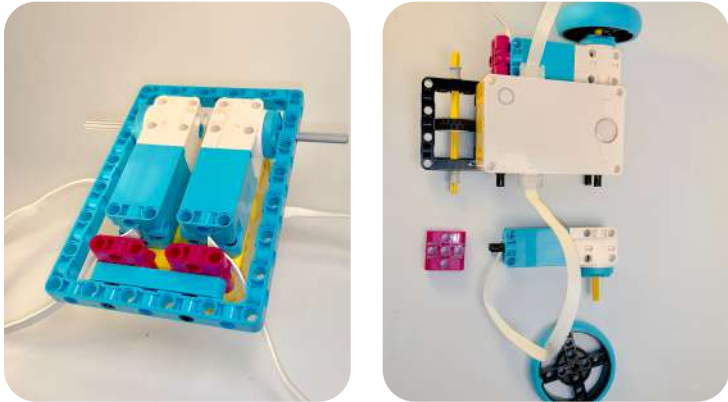
Feel free to come up with something completely different!



Flip over for more details

## BUILD IT

Create a chassis



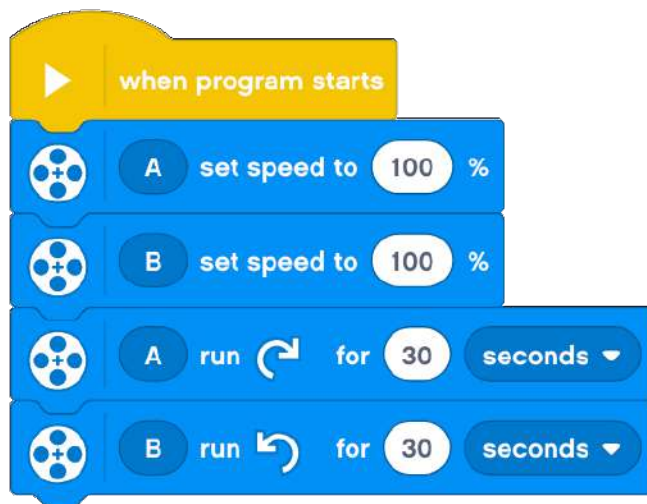
Add front wheel



Create a gear train



## CODE IT



To get the car to move forward, the motors need to rotate in opposite directions since they are facing away from each other.

Experiment with motor speed. How will that impact your tugging ability?