Tufts University | School of Engineering
Center for Engineering Education and Outreach

LEGO education

Silly Walks

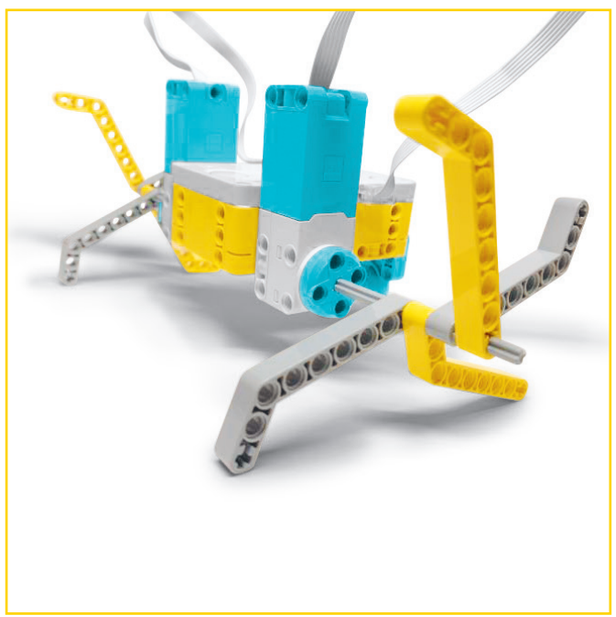
Build a robot that moves forward — without using wheels!

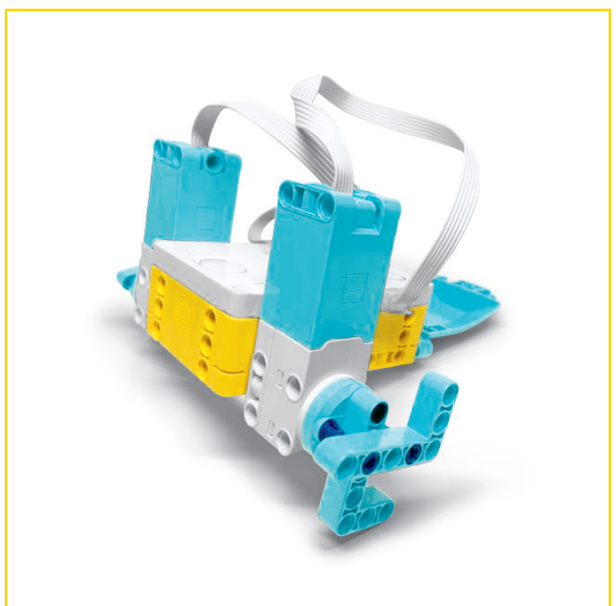
Think Like an Engineer:
How can you propel your robot forward without wheels?

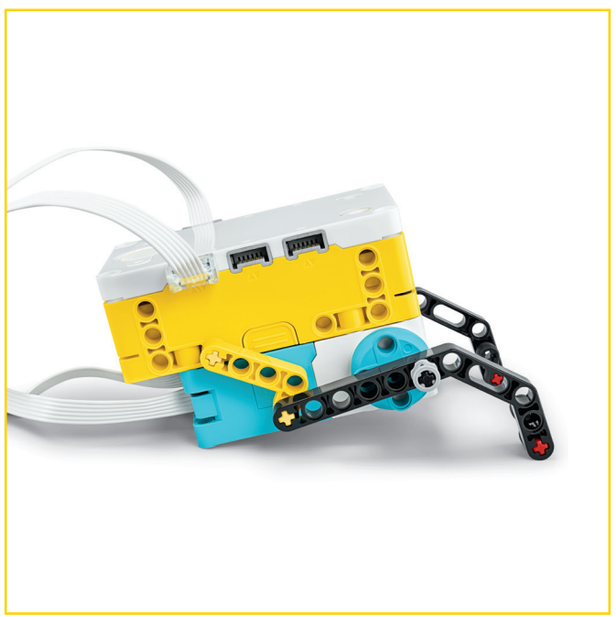
Think Like a Physicist:
How will the length of your robot's legs affect its motion?

Example Ideas

What are different ways you can attach the "legs" to the motor?







● Beginner All Skills Mechanics & Movement

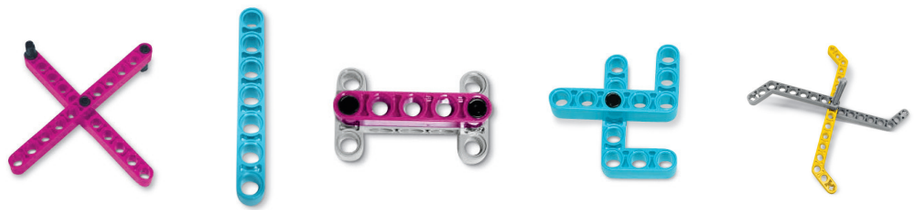
Flip over for more details!

Made in collaboration with Tufts Center for Engineering Education and Outreach http://ceeo.tufts.edu

Build It!

LEGO pieces are versatile! Be creative about what pieces you use and don't be afraid to think outside the box!

You can use these as legs:



You can use these as stabilizers or supports:

Code It!

Try making your robot stop in between rotations. How fast do you want your robot to move?

```
1 from spike import MotorPair
2 motor_pair = MotorPair('B','A')
3 for i in  range (10):
4     motor_pair.move_tank(5, 'cm', left_speed=50, right_speed=50)
5     wait_for_seconds(1)
```

Try to Modify It:
Use a sensor to keep your robot from hitting a wall.
Do you want your motors to move together or alternate?

Challenge Yourself!

Try to build a silly walks robot with only one motor.