



## STEM

# Engineering Solutions

### Grades

4th / 5th / 6th

### Environment

Small groups (Maximum 3 students per iPad)

### Materials

Osmo base + Newton for Osmo app + iPad 2 or higher

A variety of objects from the classroom

### Objective

Students will discuss properties of Newton and work collaboratively to solve engineering puzzles.

## Activity

### Part 1

1. Demonstrate Newton for Osmo. Students will gather around 1 Osmo and iPad station, or you can use a projector to demo the game.
2. Set up multiple stations of Newton and form groups of students.
3. Groups will be instructed to choose objects from around the classroom for their classmates to try and solve Newton puzzles. Ideas: math tangibles like base 10 blocks; paper and scissors to make cut out shapes; tangram pieces.
4. Using a piece of paper, students will write down why they chose the items they chose, and rate the difficulty of using this object on a scale of 1-5. (Will set this aside for later.)

### Part 2

1. Students rotate through each station, playing the game using tangible objects that were chosen by classmates.
2. After each station, the students also rate the difficulty on a scale of 1-5.
3. Once rotations are complete, have a class discussion about why they chose the objects they did and the perceived difficulty level. Bonus: Students can brainstorm possible objects to use for a subsequent lesson.