

## Q-BA-MAZE

### OBJECTIVES

- Explore Newton's Laws of Motion\* •Recognize gravity •Use creativity to build a functioning maze •Observing position & motion\* •Use trial and error\*

\*Indicates STEM and/or Common Core objectives

### GRADES

3-5

### ESTIMATED TIME

Flexible—typically allow about an hour



### MATERIALS NEEDED

- [Q-Ba-Maze pieces and steel marbles](#)
- Timers (optional)

### SETTING THE STAGE

Discuss the following as a class to help students start thinking about how objects move:

- What happens when you drop an object from high up?
- How to you make something go faster or slower?
- How do you make something stop moving?

### PROCEDURE

Provide students with various Q-Ba-Maze parts and marbles.

Students work in small groups to build a Q-Ba-Maze structure and observe how the marbles flow through the maze.

Challenge students to build the following:

- Use all their parts to make the marble go the fastest through the maze.
- Build a maze that the marble stays in the longest.
- Build a maze where colored pieces are not more than two of the same color in a row.

## Q-BA-MAZE

### FOLLOW UP

- What makes the marble moved through the maze?
- What happens when the marble reaches the end of the maze?
  - How do you change the direction of the marble?
- If there was never an end to your maze, would the marble stop?