# FROMHERE TOTHERE



# **PLANNING**

Here's a suggested schedule for this kit! The activities are designed to be completed in order, but you can decide when to do them over time. The time required for each lesson may vary.

ACTIVITY INFORMATION	SECTION(S)	TIME REQUIRED	DAY/ LESSON
ACTIVITY I: THEY SEE ME ROLLIN' Use a ramp to move a marble down. Time required: 30 min	□ Marble Ramp	30 minutes	Day 1
ACTIVITY 2: ZIPPING DOWN Build and test a zipline. Time required: 1 h	☐ Zipline Fun	30 minutes	Day 2
	☐ Planes, Trains, and Automobiles	30 minutes	Day 3
ACTIVITY 3: GOING UP! Move an object up with a pulley. Time required: 1 h	☐ Pulley Power	30 minutes	Day 4
	☐ Direction of Travel	30 minutes	Day 5
ACTIVITY 4: THE CLAAAAW! Try out two claw types to see which works best. Time required: 1 h 15 min	☐ Grabbers	30 minutes	Day 6
	☐ Claw Comparisons	45 minutes	Day 7
ACTIVITY 5: MAKING YOUR OWN SIMPLE MACHINE Design and test a simple machine of your design. Time required: 2 h	☐ Make a Plan	30 minutes	Day 8
	☐ Build Your Simple Machine	30 minutes	Day 9
	☐ Test Your Simple Machine	30 minutes	Day 10
	☐ Reflect and Revise	30 minutes	Day 11
ACTIVITY 6: MORE MOVEMENT Use any or all of these fun extensions to keep the learning going.  Time required: 30+ min	☐ Park Play	30 minutes	Day 12
	Changing Direction	30 minutes	Day 13
	☐ Roller Coaster Ride	30 minutes	Day 14
	☐ Zippy Zipline	30 minutes	Day 15

**Total time: 6+ hours** 



# THEY SEE ME ROLLIN'

Encourage your student to think of a time when they could not reach something they wanted. What did they do?

### MARBLE RAMP '



**WARNING! CHOKING HAZARD** - Small parts. Not for children under 3 years. **WARNING!** An adult should help with steps that need scissors. Always cut away from your body.

### PREPARATION AND SUPERVISION

- Students will record the length of the marble run they make and the amount of time it takes their marble to reach the bottom. This information will be used in comparison to the zipline they make in Activity 2.
- Students can use a watch, clock, or stopwatch to measure time. Because the time will be short, they can also verbally count the seconds.
- The length of your student's marble run will be determined by how they tape their channels together. Each channel is 11in long, but the channels need to nest within one another so they stay together.
- The extension called "Changing Direction" can enhance and deepen your student's understanding of what they saw in this section.

#### REFLECT

- **Question 1: What are two things you noticed about the marble run? Answer:** Answers will vary.
- **Question 1: What are two questions you have about the marble run? Answer:** Answers will vary.

#### How to Help:

- If your student is struggling to think of questions they have about their marble run, encourage them to think about the things they wrote down in Question 1 and what they wonder about those things.
- If students have built or used a marble run before, encourage them to think about how this marble run is different to help them think of questions they have.



The marble run moved a marble from one location to a lower one. Encourage students to think about how else they might move objects from one height to a lower height.



#### **LEARNING GOALS:**

- I can ask questions, make observations, and gather information to define a problem that can be solved.
- I can analyze tests of two objects to compare strengths and weaknesses for solving a problem.



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