

RESOURCE LIBRARY  
ACTIVITY : 20 MINS

## Make Your Own Waves

Students use an interactive tool to create their own waves.

### GRADES

1, 2

### SUBJECTS

*Earth Science, Geography, Physical Geography*

### CONTENTS

1 Resource

## OVERVIEW

Students use an interactive tool to create their own waves.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/make-your-own-waves/>

## DIRECTIONS

### 1. Provide students with a key.

Write the following key on the board for students to refer to as they complete the activity:

crest = top of wave

wave trough = lowest point between each crest

wave height = distance between crest and trough

wavelength = distance from crest to crest or trough to trough

### 2. Have students experiment with creating waves of different sizes.

Have students use the Wave Simulator interactive to shape waves and see how they affect a boat at rest, in an area with no current. Model for students how to adjust the wave height,

wavelength, and wave period and how to recognize how those changes affect the waves and boat. Then have students use the interactive in pairs.

### 3. Have students reflect on their experience.

First, ask pairs to describe how they used the interactive. Then ask: *What did you have to change to make the waves bigger? Smaller? Faster? Slower? What did you have to change to make lots of waves? A few?*

## OBJECTIVES

## Subjects & Disciplines

Earth Science

Geography

- [Physical Geography](#)

## Learning Objectives

Students will:

- use an interactive tool to create waves
- reflect on their experience

## Teaching Approach

- Learning-for-use

## Teaching Methods

- Simulations and games
- Visual instruction

## Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
  - Applying
  - Remembering
  - Understanding

# National Standards, Principles, and Practices

## NATIONAL GEOGRAPHY STANDARDS

- Standard 7:

The physical processes that shape the patterns of Earth's surface

## NATIONAL SCIENCE EDUCATION STANDARDS

- (K-4) Standard D-1:

Properties of earth materials

### Preparation

### What You'll Need

## REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per small group
- Plug-Ins: Flash

## GROUPING

- Small-group instruction

## BACKGROUND & VOCABULARY

# Background Information

Waves are the movement of water. Watching the movement of waves helps you to understand their patterns.

# Prior Knowledge

## Recommended Prior Activities

- [Introduction to Waves](#)
- [Parts and Sizes of Waves](#)

## Vocabulary

<b>Term</b>	<b>Part of Speech</b>	<b>Definition</b>
<b>crest</b>	<i>noun</i>	the top of a wave.
<b>current</b>	<i>noun</i>	steady, predictable flow of fluid within a larger body of that fluid.
<b>wave</b>	<i>noun</i>	moving swell on the surface of water.
<b>wave height</b>	<i>noun</i>	the distance between a wave's trough and crest.
<b>wavelength</b>	<i>noun</i>	the distance between the crests of two waves.
<b>wave trough</b>	<i>noun</i>	the lowest part of a wave.

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## For Further Exploration

### Websites

- [NOAA: Homepage](#)

