

**RESOURCE LIBRARY**  
ACTIVITY : 50 MINS

## Turning Knowledge into Power

In this activity, teams finalize their *Call to Action* for inclusion in their magazine to convince their target audience to become a part of the global solution to the plastics crisis. Teams also begin working on their front and back covers, which will hook their readers' interest with carefully chosen imagery about the plastics crisis.

**GRADES**

6 - 8

**SUBJECTS**

*Arts and Music, Conservation, English Language Arts, Experiential Learning, Social Studies, Civics, Economics*

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3 PDFs

## OVERVIEW

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For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/turning-knowledge-power/>

## In collaboration with

# DIRECTIONS

**Plastics: From Pollution to Solutions unit driving question:** *How can humans solve our plastic problem in the ocean?*

**Knowledge + Action = Power lesson driving question:** *How can your publishing team maximize positive impact on your community and the environment?*

## 1. Lead students from knowledge into action, using their expertise to help solve a problem.

- On the board, write the words “Knowledge = Power.” Ask students if they have heard this saying before, and whether or not they agree with it.
  - After time for discussion of various viewpoints, write a different sentence: “Knowledge + Action = Power.” Ask students how these words compare to the other words, and whether or not they agree with them.
- Tell students they have gained a lot of knowledge about plastics, and now it is time to turn that knowledge into power through action by completing the final elements of their magazines, namely, their final *Call to Action* and the front and back covers.
- Prompt teams to take out previously distributed materials:
  - Call to Action Graphic Organizer, which was completed in the previous activity, Choosing an Audience
  - Final Project Checklist and Rubric
- Ask teams to identify the relevant sections of the rubric that will guide their work today.

## 2. Guide teams to finalize their *Call to Action* for inclusion in their magazines.

- Distribute the Call to Action for Readers handout and introduce the task to teams. This handout will help teams draft the text for their *Call to Action*.
- Guide teams to fill out the first page of the *Call to Action for Readers*, including *Who?* (the target audience), *What?* (the desired future action), and these additional sections:
  - *How?* Teams provide some details about how the change can take place. This could include addressing obstacles to acceptance and implementation of their solution.
  - *When?* Teams should create a timeline for the action that is ambitious, but reasonable. Remind students to balance the urgency of the crisis with the knowledge that real change does not happen overnight.

- *Why?* Teams explain the negative impacts of plastics as well as the benefits of their proposed solution. They should make a convincing argument supported by data and evidence they have learned during this unit.
- For the second page of the *Call to Action for Readers* handout, instruct teams to sketch engaging images to represent before and after their desired action takes place. Remind them to sketch their drafts lightly in pencil, because they may decide to modify their images after receiving peer feedback in the following activity.
  - The purpose of these images is to help the target audience visualize the differences made by following the *Call to Action*.
  - The “before” image: This should include the current behaviors of the target audience with respect to the target plastic. For example, this image could show people drinking out of single-use plastic water bottles and littering them or putting them in the trash instead of recycling them.
  - The “after” image: This should include the desired future behavior of the target audience with respect to the target plastic. For example, this image could show people drinking out of reusable bottles and refilling them from safe drinking water sources.

### 3. Explore *National Geographic* covers that are compelling and informative.

- Display the website [Five Irresistible National Geographic Cover Photos](#) and [National Geographic Comes Up With An Iconic Cover To Raise Awareness About Plastic Pollution](#), about a cover that focuses on the problem of ocean plastics.
- Remind teams that their goal is to create a cover that is both compelling and informative. Clarify that the cover must be original visual artwork: It can be a drawing, painting, photograph, or collage, but it must be created by the publishing team and not copied from an external source.
- Ask: *What does it mean for a cover to be compelling?*
  - Possible answers:
    - It makes the reader want to open the cover and learn more.
    - It makes the reader feel a strong emotional reaction.
- Scroll to each of the five images on the website and discuss with students.
- Ask: *What makes this cover compelling? What makes this cover informative?*
  - Possible responses:

- *Inside Animal Minds* is compelling because the dog is looking straight at the reader. It is informative because the dog looks inquisitive and relatable, which connects to the main idea of the story about animals with “a world-class vocabulary.”
  - *Yellowstone Supervolcano* is compelling because it is a colorful and unfamiliar image with a teaser line about “what lies beneath the park.” It is informative because you can see people if you look closely, which tells readers about the scale of the image.
  - The cover with the Afghan refugee is compelling because the girl’s story is mysterious, and the reader may want to know why she is a refugee and what she fears. It is informative because it tells the reader where she comes from and that she is fleeing some type of conflict.
- Explain that in addition to the front cover, teams will also create a back cover of their magazine.
    - The back cover does not need to be illustrated, but should contain basic information for their target audience about who created this magazine and why.
    - Basic information may include their school, grade level, and some type of contact information. The purpose of contact information is so that their target audience can reach out with questions or comments.
    - You may prefer to list contact information for the school, or for a shared class email account, if students are not comfortable sharing personal contact information.
  - Provide time for teams to draft their front and back covers.
  - Teams will have time to finalize these drafts in the next activity, but they should have at least a working draft of both by the end of this activity.
  - At the end of class, share draft cover designs with a gallery walk.

## Informal Assessment

The *Call to Action for Readers* and magazine cover provide evidence of students’ ability to tailor their message to a target audience and to apply their scientific knowledge to solve a complex global problem.

## Extending the Learning

Consider coordinating efforts with a social studies, visual art, and/or language arts teacher to prepare students to share their magazines with the broader community.

# OBJECTIVES

## Subjects & Disciplines

- Arts and Music
- Conservation
- English Language Arts
- Experiential Learning
- **Social Studies**
  - Civics
  - Economics

## Learning Objectives

Students will:

- Synthesize learning about the plastics problem and possible solutions in a Call to Action that persuades a target audience.
- Create a compelling and informative cover to interest their target audience.

## Teaching Approach

- Project-based learning

## Teaching Methods

- Cooperative learning
- Multimedia instruction
- Writing

## Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes

- Learning and Innovation Skills
  - Communication and Collaboration
  - Creativity and Innovation
  - Critical Thinking and Problem Solving
- Life and Career Skills
  - Initiative and Self-Direction
  - Leadership and Responsibility
  - Social and Cross-Cultural Skills
- 21st Century Themes
  - Civic Literacy
  - Environmental Literacy
  - Global Awareness
- Critical Thinking Skills
  - Applying
  - Creating
- Science and Engineering Practices
  - Constructing explanations (for science) and designing solutions (for engineering)

# National Standards, Principles, and Practices

## NATIONAL GEOGRAPHY STANDARDS

### • Standard 14:

How human actions modify the physical environment

## COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

### • WHST.6-8.4:

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

## NEXT GENERATION SCIENCE STANDARDS

### • Science and Engineering Practice 7:

Engaging in argument from evidence

### • Science and Engineering Practice 8:

Obtaining, evaluating, and communicating information.

## **Preparation**

### **What You'll Need**

#### **REQUIRED TECHNOLOGY**

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector

#### **PHYSICAL SPACE**

- Classroom

#### **SETUP**

If students will use the template for the *Call to Action for Readers* handout in their final publication, print it single-sided on two separate sheets of paper, so the two pages can face each other in the published magazine. As in all previous activities, all drafts should be completed in pencil so that revisions can be completed neatly after the peer editing phase in the next activity, *Magazine Design Workshop III*.

#### **GROUPING**

- Small-group work

## **BACKGROUND & VOCABULARY**

### **Background Information**

Science, technology, engineering, and math have long held a special place in education. Ever since Sputnik and the Space Race of the 1950s, and probably long before that as well, careers that involve science, technology, engineering, and mathematics (STEM) have sparked inspiration and innovation in students and professionals. STEM fields promise lucrative job opportunities and also allow students to make a difference in the world. However, in recent years, some teachers and education advocates have argued that STEM is not enough. Adding the arts and communication studies to the mix reminds us that science and mathematics are

fundamentally human endeavors that exist in social contexts and have enormous social consequences. The real world is multidisciplinary, and 21st-century project-based learning is as well.

Art and STEM are natural allies, as this activity shows. Science and mathematics can help us understand the patterns of the natural world, but art allows us to envision and appreciate its beauty. Science and math can help us design solutions to pressing global crises like plastic pollution, but art allows us to inspire one another and to imagine better futures.

Raising awareness about problems is important, but it is not enough. In order to create change, people—individuals, communities, businesses, and governments—must act. Research suggests that the most effective calls to action are highly targeted, with a unique audience, specific place, and observable action.

# Prior Knowledge

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## Recommended Prior Activities

- [Autopsy of an Albatross](#)
- [Choosing an Audience](#)
- [Follow the Friendly Floatees](#)
- [Magazine Design Workshop I](#)
- [Magazine Design Workshop II](#)
- [Plastics Aplenty](#)
- [Seaworthy Solutions](#)
- [The Life Cycle of Plastics](#)
- [The Ocean Plastics Pollution Solutions Contest](#)

# Vocabulary

Term	Part of Speech	Definition
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Term	Part of Speech	Definition
<b>argument</b>	<i>noun</i>	reason or set of reasons given with the aim of persuading others that an action or idea is right or wrong.
<b>audience</b>	<i>noun</i>	observers or listeners of an event or production.
<b>compelling</b>	<i>adjective</i>	forceful or persuasive.
<b>crisis</b>	<i>noun</i>	event or situation leading to dramatic change.
<b>obstacle</b>	<i>noun</i>	something that slows or stops progress.



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