

RESOURCE LIBRARY | ACTIVITY : 2 HRS

Create a Microbe PSA

Students continue to collaborate in small groups to produce their public service announcement (PSA) on their focal microbe. They create a storyboard for their PSA, drawing from their analysis of design features and effectiveness of PSAs from the previous lesson, and research and evidenced-based argument from the *Research a Microbe and Develop an Argument about its Eradication* activity. Groups then use digital or other tools to create the PSA itself and receive feedback from another group to help strengthen their product.

GRADES

6, 7, 8

SUBJECTS

Biology, Health

CONTENTS

3 PDFs

OVERVIEW

Students continue to collaborate in small groups to produce their public service announcement (PSA) on their focal microbe. They create a storyboard for their PSA, drawing from their analysis of design features and effectiveness of PSAs from the previous lesson, and research and evidenced-based argument from the *Research a Microbe and Develop an Argument about its Eradication* activity. Groups then use digital or other tools to create the PSA itself and receive feedback from another group to help strengthen their product.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/create-microbe-psa/>

In collaboration with

DIRECTIONS

This activity is a part of the Misunderstood Microbes unit.

1. Project groups determine the key design features for their PSA.

- Review the design features in Misunderstood Microbes: PSA Rubric so students can ensure that their PSA will meet the project and assessment goals.
- Direct students to revisit the design squares on the PSA Design Analyzer from the *Microbes in and on Humans* lesson, on which they recorded notes about the design elements of the sample PSAs.
- In their project groups, students should discuss their ideas about the key design features of the sample PSAs. Prompt groups to record the elements that they agree should be part of their PSA in the blank design square on Part C of the Misunderstood Microbes PSA Project Builder.
- As groups discuss, circulate to help them come to a consensus. Emphasize that the notes that go in the square should relate to the design of the PSA, rather than the content (which will be addressed in Step 2).

2. Project groups determine which information to include in their PSA.

- After groups decide on the design elements for their PSA, they should use the Storyboard Template in Part C of their project builder to compile the key information, timing, text/audio, and visuals for each section of their PSA.
- Review each group's storyboard before they move on to the creation of their PSA.

3. Project groups collaborate to create their PSA.

- Encourage group members to take on different roles as they create their PSA. Roles can include fact checker, actor/narrator, video producer, animator/illustrator.
- Given the limited time that students have to create their PSA, emphasize execution over perfection. Ensure that they address each part of the storyboard to create a narrative arc that fits the PSA genre.

- Introduce and provide access to the options available to students for creating their PSA, including but not limited to: online animation tools, short live action films, a visual poster, or collaborative presentation.

4. Focus group feedback and finalize PSAs.

- Provide time for groups to share their PSA with a “focus group” who can provide feedback on the clarity of their message.
- The PSA Rubric can be used to evaluate the PSA at this time.
- Give groups time to edit, revise, or polish their PSA.

Informal Assessment

Part C of the Misunderstood Microbes Project Builder can be used to assess group progress on PSA creation, as well as their understanding of their microbe. Consider providing students with a collaboration rubric (such as [this one](#) from the Buck Institute for Education), to assess themselves and/or peers on their collaboration skills.

OBJECTIVES

Subjects & Disciplines

Biology

- Health

Learning Objectives

Students will:

- Collaborate to create a PSA about their group’s microbe and the importance of its eradication.

Teaching Approach

- Project-based learning

Teaching Methods

- Cooperative learning
- Discussions
- Writing

Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
 - Information, Media, and Technology Skills
 - Information Literacy
 - Media Literacy
 - Life and Career Skills
 - Leadership and Responsibility
 - Productivity and Accountability
- Science and Engineering Practices
 - Engaging in argument from evidence
 - Obtaining, evaluating, and communicating information

National Standards, Principles, and Practices

COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- CCSS.ELA-LITERACY.SL.7.5:

Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

- Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12:

Production and Distribution of Writing, WHST.6-8.4.

- Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12:

Production and Distribution of Writing, WHST.6-8.5.

- Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12:

Production and Distribution of Writing, WHST.6-8.6.

NEXT GENERATION SCIENCE STANDARDS

- **Crosscutting Concept 4:**

Systems and system models

- **Crosscutting Concepts: Cause and Effect:**

- **LS1.A: Structure and Function:**

In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions.

- **MS. From Molecules to Organisms: Structures and Processes:**

MS-LS1-3. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

- **Science and Engineering Practice 8:**

Obtaining, evaluating, and communicating information

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Printed handouts or digital access to student handouts

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, 1 computer per pair, Monitor/screen, Printer, Projector

PHYSICAL SPACE

- Classroom

SETUP

Depending on the options available to students for creating their PSA (including, but not limited to: online animation tools used in the example PSAs shown throughout the *Microbes in and On Humans* lesson, short live action films, a visual poster, or collaborative presentation), have the appropriate tools available.

GROUPING

- Small-group learning
- Small-group work

BACKGROUND & VOCABULARY

Background Information

Microbes are organisms that are too small to be seen by the human eye and include bacteria, archaea, protists, viruses, and fungi. Although some microbes cause disease, they are also crucial to the functioning of human bodies through processes such as digestion and aiding the immune system. The microbes found on a person's body are collectively known as a person's microbiome, especially those found in body organs and systems such as their skin, hair, and digestive system.

Most of microbes' interactions with humans are neutral or beneficial. However, they also can make us sick by acting as infectious agents. Microbes can cause disease through a variety of body organs and systems, which has cascading effects throughout the whole system and human body. Depending on the nature of their impacts on humans, the importance of eradicating particular microbes may vary.

Public service announcements (PSAs) are a way to communicate important information (often about a social issue or health concern) to a broad audience. A successful PSA is short, engaging, and contains a persuasive message for the viewer to act on in their everyday lives.

Prior Knowledge

["Relationship between structure and function","Human body organization as complex system","Systems thinking","Cause and effect"]

Recommended Prior Activities

- [Deep Dive into the Cell](#)
- [Harmful Microbes](#)

- [Helpful Microbes](#)
- [Introduction to Microbes and Human Body Systems](#)
- [Microbe Eradication Complications](#)
- [Microbes Across the Tree of Life](#)
- [Research a Microbe and Develop an Argument about its Eradication](#)
- [The Interconnected Systems of the Human Body](#)

Vocabulary

Term **Part of Speech** **Definition**

For Further Exploration

Articles & Profiles

- [Center for Digital Education: How to Create the Perfect Public Service Announcement](#)



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