

Lesson #1

Grades

1 and 2

Suggested Pacing

20+ min

Group Size

Teacher Led

Small Group



Lesson Slides

<https://tinyurl.com/hw39uvpf>

What You Need

From Lysol® Minilabs Module #1:

- 30 Student Minilab Journals
- 90 Microbe ID Cards

Optional Sourced Materials:

- Paper, Scissors, Tape

Digital Only Option

If you don't have the physical Lysol® Minilabs Science Kit, check out the "Digital Kit Implementation Guide" at the end of this lesson plan with links to free printables and list of materials you need to source.

Meet the Microbes

Overview

This lesson has two essential parts, (1) Read Together: Chapter 1 of a graphic novel that introduces students to two engaging characters, "E. coli" (the bad microbe) and Bacteriophage (the good microbe), and (2) A Hands-On Activity (either Beginner or Advanced) for students to learn more about microbes, where they come from, and how we might stop spreading them. In addition, you may implement some of the optional extensions and the optional section, titled, "Check Understanding."

Session Planning

- Lesson Difficulty: If you are teaching early readers/non-readers, we recommend you to implement "Beginner" level for the Hands-On Activity. For more advanced classrooms, you may implement both beginner and advanced prompts.
- Time Management: If you have 20-30min, we recommend focusing on "Read Together" and a limited number of prompts outlined in the "Hands-On Activity" section of the lesson. If you have 30min+, you can do the full lesson (Beginner or Advanced).

Learning Goals

- Understand that microbes can be seen under a microscope, but cannot be seen with the "naked" eye.
- Plan and conduct an investigation to describe and classify microbes by their observable properties and traits (good & bad).
- Learn where microbes live, how they might spread, and how we can stop their spread.

Key Vocabulary

- Scientific Tool: **Microscope**
- Science Concepts: **Microbe, Microorganism**
- Science Practices: **Investigate, Analyze, Describe, Collect data, Ask questions**

Standards

- **NGSS** 2-PS1-1. **NHES** 1.2.2, 1.2.3, 1.2.4, 1.2.6; 2.2.1, 2.2.2; 5.2.1, 5.2.3, 5.2.4; 6.2.1, 6.2.4; 7.2.1. **CCSS.ELA-Literacy.** RI.1.9, RI.2.1, RI.2.9, W.1.8, W.2.7, W.2.8, SL.1.1, L.2.4. **TEKS** S.1.1.A, S.1.1.D, S.1.1.F, S.1.2.B, S.1.6.A, S.2.1.A, S.2.1.D, S.2.1.F, S.2.2.B, S.2.6.A, ELA.1.1.A, ELA.1.1.C, ELA.1.1.D, ELA.1.2.D, ELA.1.6.B, ELA.2.1.A, ELA.2.1.C, ELA.2.1.D, ELA.2.1.E, ELA.2.6.B



Getting Ready



- Please review the student-facing slides, and get them ready to project on your classroom board. Please note that you may make a copy of the slides and edit based on your classroom's needs and lesson difficulty you choose (Beginner or Advanced).
- Have copies of the Student Minilabs Journals ready to pass along to students. Thirty (30) copies have been provided in your Lysol® Minilabs Science Module #1.
- Have copies of the Microbe ID Cards ready to pass along to students. Ninety (90) cards have been provided in your Lysol® Minilabs Science Module #1.
- **IMPORTANT:** Please remember to collect all student Minilabs Journals at the end of the session. They will need the journals for all lessons in the program.

Start Your Lesson

Suggested Time: 10min



Modification:

Two teachers or two students may read the story aloud, each voicing a different character (bad versus good microbe).

- Give one Minilabs Journal to each of your students.
- Go through lesson slides 8 to 16, which introduces students to the lesson, their Minilabs Journal, and encourages them to write their name on the cover page where it says "My Name".
- **READ TOGETHER:** Read through Chapter 1 of the graphic novel, shown on the lesson slides. Students can follow along on pages 3-8 of their Minilabs Journal.



Resource Alert:

Check out the Microbe ID Card video (linked in your lesson slides) to learn how to pronounce microbes' scientific names!

Selective Microbe Facts:

- Microbes belong to one of the four families: Bacteria, Virus, Fungi, or Protozoa.
- Bacteria can be found almost everywhere: in soil, water, plants, animals, radioactive waste, deep in the earth's crust, arctic ice, glaciers, hot springs, human bodies, and air.
- Fungi are found in just about any habitat, but most live in human bodies and on land, mainly in soil or on plant material rather than in water.
- Viruses aren't able to live on their own, and they always need a live host to survive!
- Protozoa are single-cell organisms, larger than bacteria. They prefer moist habitats.
- Some microbes are GOOD for us and some microbes are BAD.
- BAD microbes make us sick. GOOD microbes may help with digestion or even protecting our immune system.

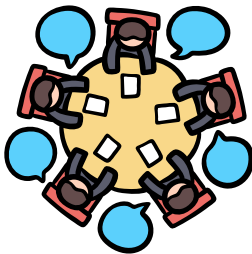
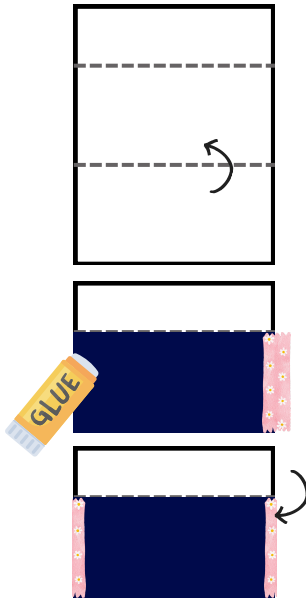
Hands-On Activity

Suggested Time: 10 to 20min

- **Give each of your students three (3) random Microbe ID Cards, provided in your Lysol® Minilabs Science Module #1.**
- **Once all students have their cards, continue the lesson slides and introduce the Microbe ID Cards to your students.**
- **As a class, get ready to study, analyze, and collect data like scientists. The lesson slides provide a set of prompt suggestions for Beginner and Advanced students. The Beginner prompts are designed for non-readers and early readers. The Advanced prompts are designed for students who can read, comprehend, and infer from text. You may choose from these slides, add, and adopt based on what works best for your classroom. As you go through the prompt slides, talk about the two types (good and bad) microbes, their names and nicknames, shapes, special powers, and potential busters or boosters:**
 - **What shapes do they have?**
 - **What are their colors?**
 - **What are their special powers?**
 - **Are they good or bad?**
 - **Which microbes can be busted by hand washing?**
 - **How many of a certain card are there in the whole deck?** (Hint: E. coli is the most common germ in the card deck and Baker's Yeast is the rarest!)
- **Finally, invite your students to ask their own questions, play with and trade their cards, and think of them as "collectibles."**



Optional Extensions



- (10–30min activity) **MAKE AN ENVELOPE for their Microbe ID Cards for students to keep in their Minilabs Journals.**
 - Invite your students to grab a piece of paper, fold the bottom part horizontally while leaving some space left at the top.
 - Tape or glue the sides of the bottom portion.
 - Fold the extra piece at the top over to create a flap. They may add designs on their envelope to make it unique!
 - On the lesson slides, you may find more ways to make an envelope, including an origami technique that doesn't need tape or glue!
- (15–20min activity) **FORM A SCIENCE COMMITTEE:** Divide students in groups to form a “science committee.” Within their committee, invite them to analyze and collect the following data:
 - Types of microbes they have
 - Their microbes’ shapes and colors, special powers, boosters, and busters
- (10–20min activity) **GAME PLAY:** Students and teachers can play a variety of games with their cards like:
 - A variation of “Guess who?” game
 - Memory game

Bonus

- **PUBLISH YOUR CLASSROOM’S WORK:** Submit photos of your students’ projects, and we’ll turn them into books, trading cards, and more!
www.thegiantroom.com/giant-remix-minilabs



Check Understanding

Suggested Time: 5 - 10min



- **TRUE-FALSE:** Go through lesson slides with a set of true-false questions, with your whole class. These questions are designed to help reinforce learning.
- **REFLECT TOGETHER:** Optionally, you may review definition of keywords with your students, challenge them to define the words, or draw a diagram in their journal (Appendix) to further define their meaning.

Lesson Glossary

Below is a glossary of all keywords covered in Lesson #1. Please note that students can go to the Appendix of their Minilabs Journals to check out the glossary and add diagrams and models to illustrate these keywords.

MICROSCOPE

A tool that scientists use to zoom in and see things that are REALLY tiny.

MICROBE

Short for microorganism, which is a small living thing - too small to see without a microscope.

ORGANISM

Any living thing like humans, plants, animals, or microbes.

SCIENTIST

A person who makes a hypothesis and tests their hypothesis in an experiment so that they learn new things about the world around us.

BACTERIA

A type of microbe that can live on its own in many different places, including on skin and inside the body.

VIRUS

A type of microbe that cannot live on its own and needs to live inside other living cells to grow and multiply.

FUNGUS

A type of microbe that includes molds and yeasts; can cause infections.

PROTOZOA

A type of microbe that is a single-cell organism, but larger than bacteria.

Digital Kit Implementation Guide

If you don't have the physical box, you can still implement the Lysol® Minilabs Science Kit! Here are links to free printables and a list of materials you need to source.



FREE PRINTABLES

Student Journal

<https://tinyurl.com/42f3yn54>

Chapter 1 Only

<https://tinyurl.com/4v7wm44w>

Microbe ID Cards

<https://tinyurl.com/2p9s42yr>



MATERIALS TO SOURCE

- **Paper** (Optional)
- **Scissors** (Optional)
- **Tape** (Optional)

Check out page 7 for all the Online Resources for this lesson.

Online Resources



SLIDES: LESSON #1

<https://tinyurl.com/hw39uvpf>



SCHOOL-HOME COMMUNICATION PACK

<https://tinyurl.com/fyku2u29>



VIDEO: READ & WATCH CHAPTER 1

<https://tinyurl.com/39ww934r>

VIDEO: PRONOUNCING MICROBE NAMES

<https://tinyurl.com/2hphepht>



E-BOOK: STUDENT JOURNAL

<https://tinyurl.com/ywt6drah>

E-BOOK: CHAPTER 1 ONLY

<https://tinyurl.com/4nb42e83>

E-DECK: MICROBE ID CARDS

<https://tinyurl.com/5avcfrwx>



PRINTABLE: STUDENT JOURNAL

<https://tinyurl.com/42f3yn54>

PRINTABLE: CHAPTER 1 ONLY

<https://tinyurl.com/4v7wm44w>

PRINTABLE: MICROBE ID CARDS

<https://tinyurl.com/2p9s42yr>

