

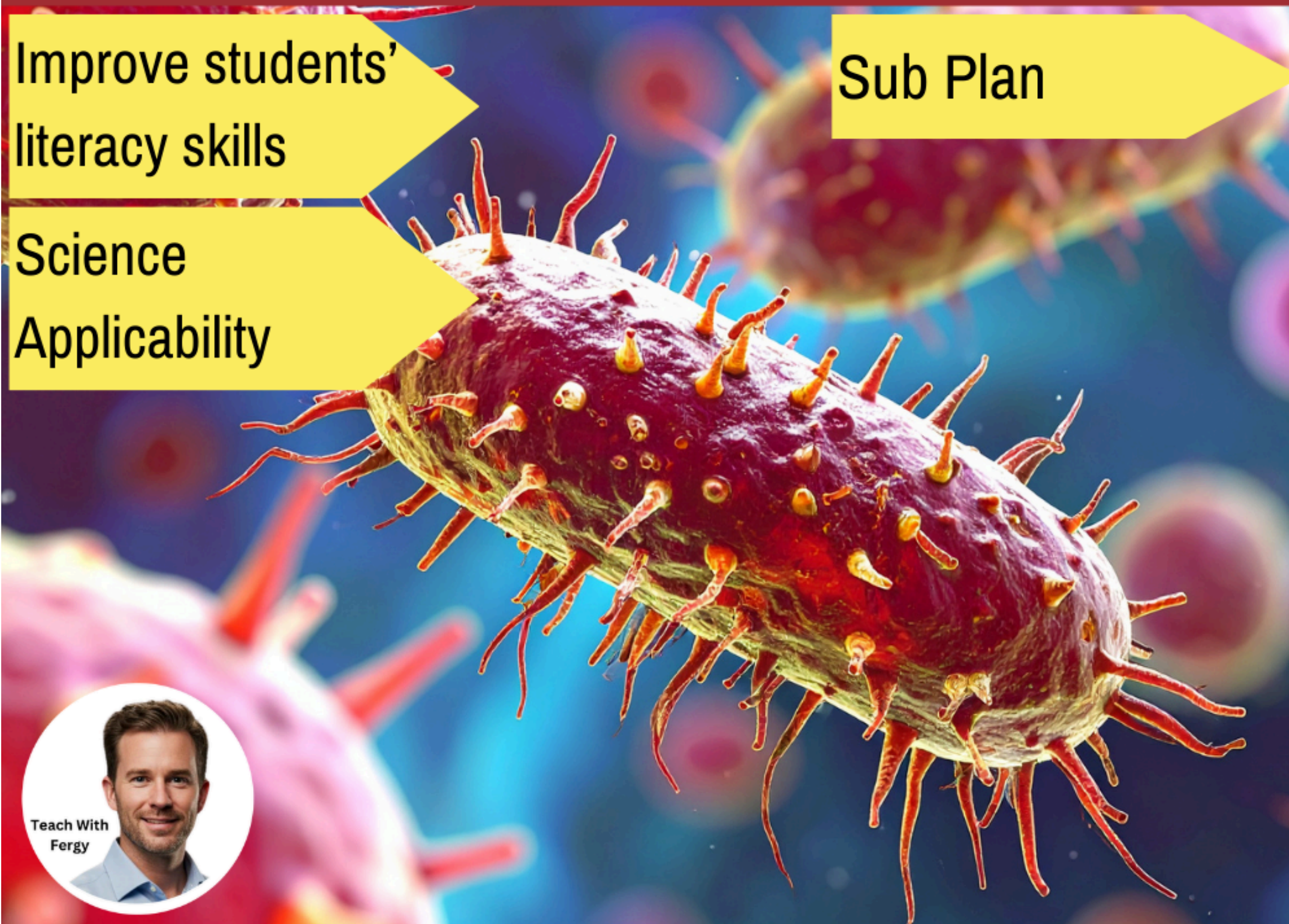
GERM THEORY READING

6TH, 7TH, 8TH GRADE

Improve students'
literacy skills

Science
Applicability

Sub Plan



Reading Buyer Comment

“

★★★★★ Extremely satisfied - Great resource to work on student reading comprehension and it tied into the topic I was teaching. My students have been struggling with reading and I've been incorporating more reading into my lessons. Thank you for the resource.

”

SCROLL
to take a look inside!

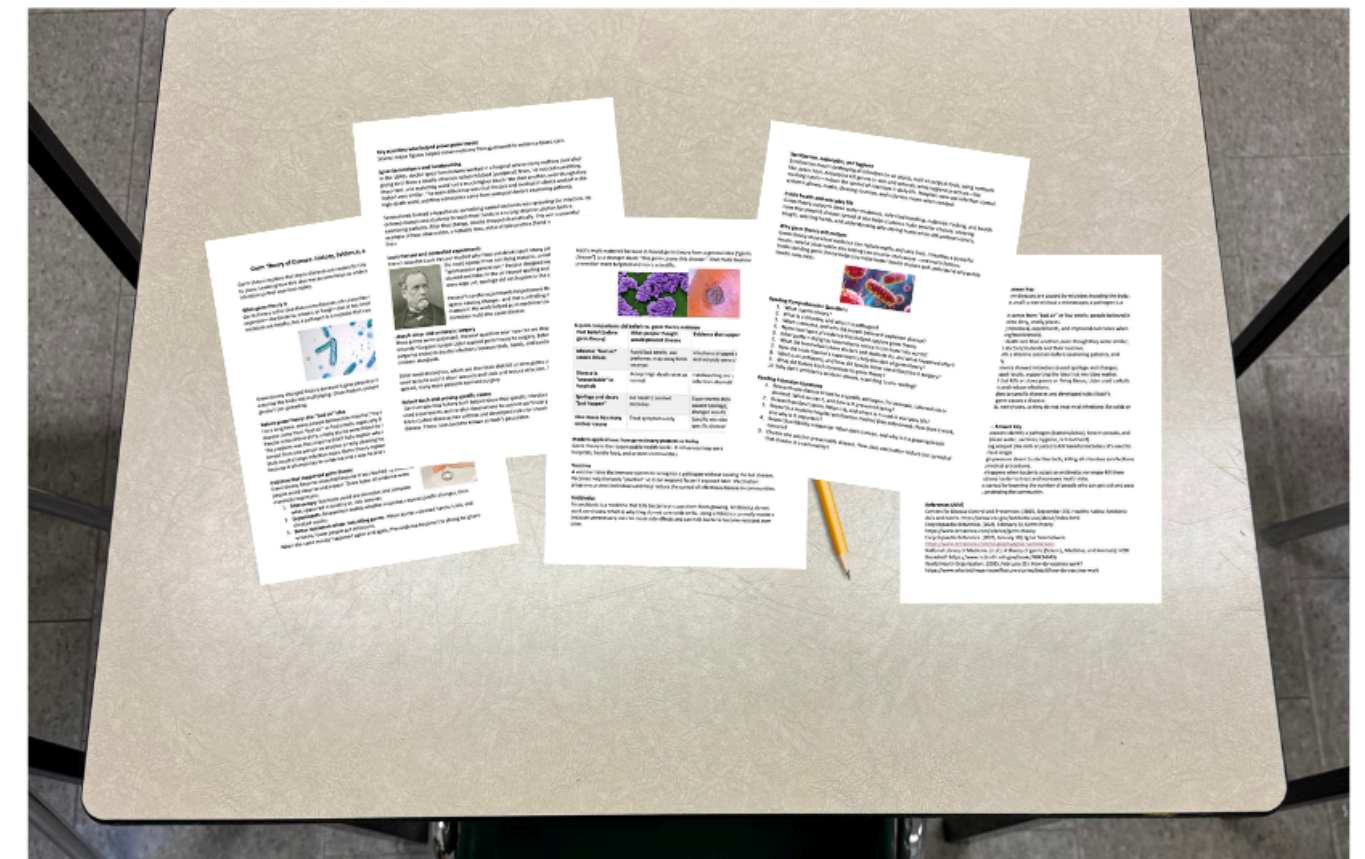


THE PROBLEMS YOU FACE

- Limited time to teach scientific literacy and strengthen students' reading and analysis skills.
- Need meaningful extension activities to engage fast-moving learners.
- Difficulty creating effective last-minute sub plans that still support student learning.

NO-PREP - PRINT/UPLOAD

- Questions and Answer Key
- **No Prep, Ready-to-Use:** Print or assign digitally with Google Docs, Microsoft Word, and PDF formats for flexible classroom use
- **Includes Varied Question Types:** Knowledge, thinking, connecting, application, and open-ended questions.



What Will Your Students Learn?

READING COMPREHENSION ARTICLE & QUESTIONS

- What Is Germ Theory?
- Key Scientists: Pasteur, Koch, and Others
- How Germ Theory Changed Public Health
- The Role of Handwashing, Sterilization, and Vaccination
- Germs and the Immune System
- Fighting Disease with Science and Evidence
- Why Germ Theory Still Matters Today

Reading Comprehension Questions

1. What is germ theory?
2. What is a microbe, and what is a pathogen?
3. What is miasma, and why did people believe it explained disease?
4. Name two types of evidence that helped support germ theory.
5. What pattern did Ignaz Semmelweis notice in the maternity wards?
6. What do doctors and students do, and what happened after?
7. How did germ theory change public health?
8. What role did handwashing play in germ theory?
9. What role did sterilization play in germ theory?
10. Why does germ theory still matter today?

Reading Ex

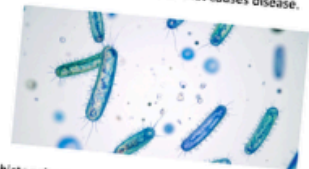
1. Res
2. Res
3. Res
4. Res
5. C

Germ Theory of Disease: History, Evidence, and Modern Applications

Germ theory explains that many diseases are caused by tiny living things that spread from place to place. Learning how this idea was proven helps us understand why hygiene, vaccines, and infection control save lives today.

What germ theory is

Germ theory is the idea that many diseases are caused by microbes. A microbe is a tiny living organism—like bacteria, viruses, or fungi—that is too small to see without a microscope. Some microbes are helpful, but a pathogen is a microbe that causes disease.



Germ theory changed history because it gave people a clear cause for many illnesses: germs entering the body and multiplying. Once doctors understood this, they could focus on stopping germs from spreading.

Before germ theory: the "bad air" idea

For a long time, many people believed in miasma ("my-AZ-muh"). Miasma was the idea that disease came from "bad air" or foul smells, especially from sewage, swamps, or rotting trash. People noticed that dirty, smelly places were linked to illness, so the belief seemed to fit. The problem was that miasma didn't fully explain why disease spread from one person to another or why cleaning hands and tools could change infection rates. Germ theory replaced miasma because it offered clearer evidence and a way to test ideas.



Evidence that supported germ theory

Germ theory became accepted because it was backed by evidence people could observe and repeat. Three types of evidence were especially important:

1. **Microscopy:** Scientists could see microbes with microscopes.

Google Access

Thank you for your purchase. Clicking the link below will take you to the Google Drive link where you can access the document. Please click the link and then into the correct file and repeat the process.

Click here to place a copy directly into your Google Drive Account

Article with
Comprehension
Questions

6th, 7th, 8th Grade

Print & Digital

PDF



Your Reading

Germ Theory of Disease: History, Evidence, and Modern Applications

Germ theory explains that many diseases are caused by tiny living things that spread from place to place. Learning how this idea was proven helps us understand why hygiene, vaccines, and infection control save lives today.

What germ theory is

Germ theory is the idea that many diseases are caused by tiny organisms—like bacteria, viruses, or fungi—that invade the body. Microbes are helpful, but a pathogen is a microbe that causes disease.



Germ theory changed history because it gave people a way to prevent disease by keeping germs out of the body and multiplying. Once doctors understood germs, they could prevent them from spreading.

Before germ theory: the “bad air” idea

For a long time, many people believed in miasma—the idea that disease came from “bad air” or foul smells, especially in crowded, dirty places. People noticed that dirty, smelly places were linked to disease. The problem was that miasma didn’t fully explain how disease spread from one person to another or why cleaning and using tools could change infection rates. Germ theory replaced miasma because it offered clearer evidence and a way to test ideas.

Evidence that supported germ theory

Germ theory became accepted because it was backed by evidence that people could observe and repeat. Three types of evidence were especially important:

- Microscopy:** Scientists could see microbes in what appeared in healthy vs. sick samples.
- Experiments:** Researchers tested whether germs caused disease by checking results.
- Better outcomes when controlling germs:** When the same results happened again and again,

When the same results happened again and again,

Key scientists who helped prove germ theory

Several major figures helped move medicine from guesswork to evidence-based practice.

Ignaz Semmelweis and handwashing

In the 1840s, doctor Ignaz Semmelweis worked in a hospital where many mothers died giving birth from a deadly infection called childbed (puerperal) fever. He noticed that one maternity ward had a much higher death rate than another, even though the doctors looked very similar. The main difference was that doctors and medical students in the high-death ward, and they sometimes came from autopsies before examining patients.

Semmelweis formed a hypothesis: something carried on hands was spreading the infection. He ordered doctors and students to wash their hands in a strong chlorine solution before examining patients. After that change, deaths dropped dramatically. This was an example of how observation, a testable idea, and a simple practice (hand hygiene) can save lives.

Louis Pasteur and controlled experiments

French scientist Louis Pasteur studied why food and drinks spoil. Many people believed that life could appear from non-living material, a mistake called “spontaneous generation.” Pasteur designed experiments that showed microbes in the air caused spoiling and decay. When the air was kept out, spoilage did not happen in the same way.



Pasteur’s careful experiments helped prove that microbes caused change—and that controlling microbes could also cause disease.

Joseph Lister and antiseptic surgery

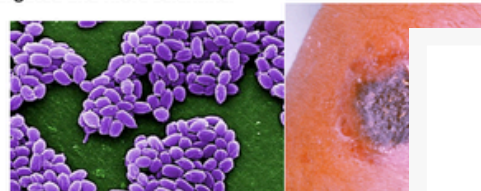
Once germs were suspected, the next question was: how can we stop them from spreading? Surgeon Joseph Lister applied germ theory to surgery. Before antiseptic surgeries ended in deadly infections because tools, hands, and bandages were not cleaned. Lister used antiseptics, which are chemicals that kill or slow germs on living tissue.

Lister used antiseptics, which are chemicals that kill or slow germs on living tissue. He used carbolic acid to clean wounds and tools and reduce infection. After antiseptic surgery, many more patients survived surgery.

Robert Koch and proving specific causes

German scientist Robert Koch helped show that specific microbes cause specific diseases. He used experiments and careful observations to connect particular germs to particular illnesses. Koch studied diseases like anthrax and developed rules for showing that one germ causes one disease. These rules became known as Koch’s postulates.

Koch’s work mattered because it moved germ theory from a general idea (“germs cause disease”) to a stronger claim: “this germ causes this disease.” That made treatment and prevention more targeted and more scientific.



A quick comparison: old beliefs vs. germ theory evidence

Past belief (before germ theory)	What people thought would prevent disease	Evidence that supported germ theory
Miasma: “bad air” causes illness	Avoid bad smells; use perfumes; stay away from swamps	Infections died away when people moved to new places
Disease is “unavoidable” in hospitals	Accept high death rates as normal	Handwashing reduced infections in hospitals
Spoilage and decay “just happen”	No need to control microbes	Experiment: spoiled food changed results when air was kept out
One illness has many unclear causes	Treat symptoms only	Specific microbes caused specific diseases

Modern applications: how germ theory protects us today

Germ theory is the reason public health works. It influences how we handle hospitals, handle food, and protect communities.

Vaccines

A vaccine trains the immune system to recognize a pathogen without causing disease. Vaccines help the body “practice” so it can respond faster if exposed to the real pathogen. Vaccines protect individuals and help reduce the spread of infectious diseases.

Antibiotics

An antibiotic is a medicine that kills bacteria or stops them from growing. They work on viruses, which is why they do not cure colds or flu. Using antibiotics because unnecessary use can cause side effects and can help bacteria become resistant.

Sterilization, antiseptics, and hygiene

Sterilization means destroying all microbes on an object, such as surgical tools, using methods like steam heat. Antiseptics kill germs on skin and wounds, while hygiene practices—like washing hands—reduce the spread of microbes in daily life. Hospitals now use infection control systems: gloves, masks, cleaning routines, and isolation rooms when needed.

Public health and everyday life

Germ theory supports clean water treatment, safe food handling, outbreak tracking, and health rules that prevent disease spread. It also helps students make smarter choices: covering coughs, washing hands, and understanding why staying home when sick protects others.

Why germ theory still matters

Germ theory shows how evidence can replace myths and save lives. It teaches a powerful lesson: careful observation plus testing can uncover real causes—and real solutions. Understanding germ theory helps you make better health choices and understand why public health rules exist.



Reading Comprehension Questions

- What is germ theory?
- What is a microbe, and what is a pathogen?
- What is miasma, and why did people believe it explained disease?
- Name two types of evidence that helped support germ theory.
- What pattern did Ignaz Semmelweis notice in the maternity wards?
- What did Semmelweis have doctors and students do, and what happened after?
- How did Louis Pasteur’s experiments help the idea of germ theory?
- What is an antiseptic, and how did Joseph Lister use antiseptics in surgery?
- What did Robert Koch contribute to germ theory?
- Why don’t antibiotics work on viruses, according to the reading?

Extension Questions

- Research one disease linked to a specific pathogen (for example, tuberculosis or cholera). What causes it, and how is it prevented today?
- Research pasteurization. What is it, and where is it used in everyday life?
- Research a modern hospital sterilization method (like autoclaves). How does it work, and why is it important?
- Research antibiotic resistance. What does it mean, and why is it a growing health concern?
- Choose one vaccine-preventable disease. How does vaccination reduce the spread of that disease in a community?

Reading Comprehension Questions - Answer Key

- Germ theory is the idea that many diseases are caused by microbes invading the body.
- A microbe is a tiny organism too small to see without a microscope; a pathogen is a microbe that causes disease.

Miasma is the idea that disease comes from “bad air” or foul smells; people believed it because illness was often linked to dirty, smelly places.

Examples: microscopy (seeing microbes), experiments, and improved outcomes when controlling germs (handwashing/sterilization).

One ward had a much higher death rate than another, even though they were similar; the main difference involved doctors/students and their routines.

He required handwashing with a chlorine solution before examining patients, and deaths dropped dramatically.

Pasteur’s controlled experiments showed microbes caused spoilage and changes; keeping microbes out changed results, supporting the idea that microbes matter.

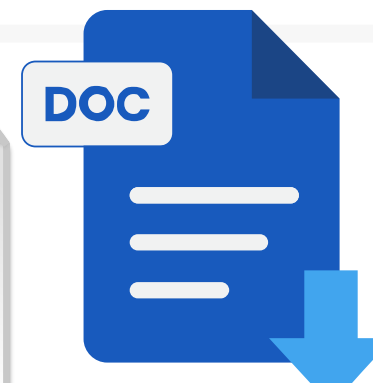
An antiseptic is a chemical that kills or slows germs on living tissue; Lister used carbolic acid to clean wounds/tools and reduce infections.

Koch linked specific microbes to specific diseases and developed rules (Koch’s postulates) for proving a germ causes a disease.

Antibiotics target bacteria, not viruses, so they do not treat viral infections like colds or

Answer Key Included Office, Google, & PDF Versions

Health Organization. (2023, February 23). How do vaccines work? www.who.int/news-room/feature-stories/detail/how-do-vaccines-work

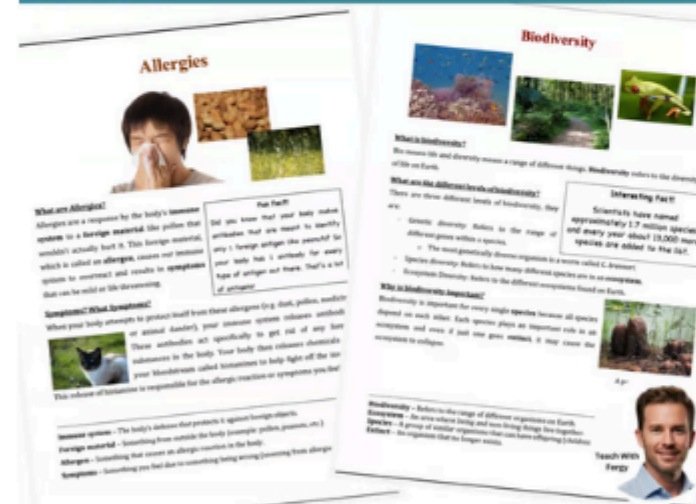


Comprehension and Extension Questions

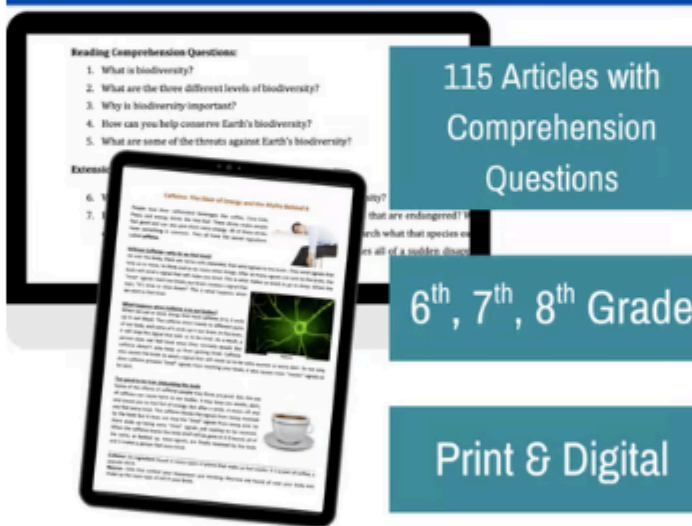
Upgrade to the 6th, 7th, and 8th Grade Reading Mega Bundle

Includes over 115 readings for students in grades 6, 7, and 8. The bundle covers all science topics and will save you over 75%.

READING COMPREHENSION ARTICLE & QUESTION MEGA BUNDLE 6TH, 7TH, 8TH GRADE



READING COMPREHENSION ARTICLE & QUESTION MEGA BUNDLE



CLASSROOM READY

- Questions and Answer Key
- **No Prep, Ready-to-Use:** Print or assign digitally with Google Docs, Microsoft Word, and PDF formats for flexible classroom use
- **Includes Varied Question Types:** Knowledge, thinking, connecting, application, and open-ended questions.



115 Articles with
Comprehension
Questions

6th, 7th, 8th Grade

Print & Digital



★★★★★ Extremely satisfied - So many comprehensive readings for all science fields. PDF and DOCX versions included so they can be edited if needed. Each one includes short answer questions at the end, the first set are easy to find the answers to in the readings, the second set require a bit more critical thinking. Includes an answer key. Great to use to fill in time or for sub plans.

6th, 7th, 8th Grade Reading Mega Bundle

Reading Comprehension Passage & Questions

- ✓ Over 115 Readings! Covers all Science Topics
- ✓ No Prep, Ready-to-Use Resource in Google and Office Format
- ✓ Includes Comprehension and Extension Questions



**Click to
learn more!**

Thanks
**for your interest
in this resource!**

I am a real person and if
you have any questions,
suggestions, or concerns,
please reach out.



devon@teachwithfergy.com

TWF

Teach With Fergy

*Let's
Connect!*

