

# WHEN WILL I EVER USE THIS?

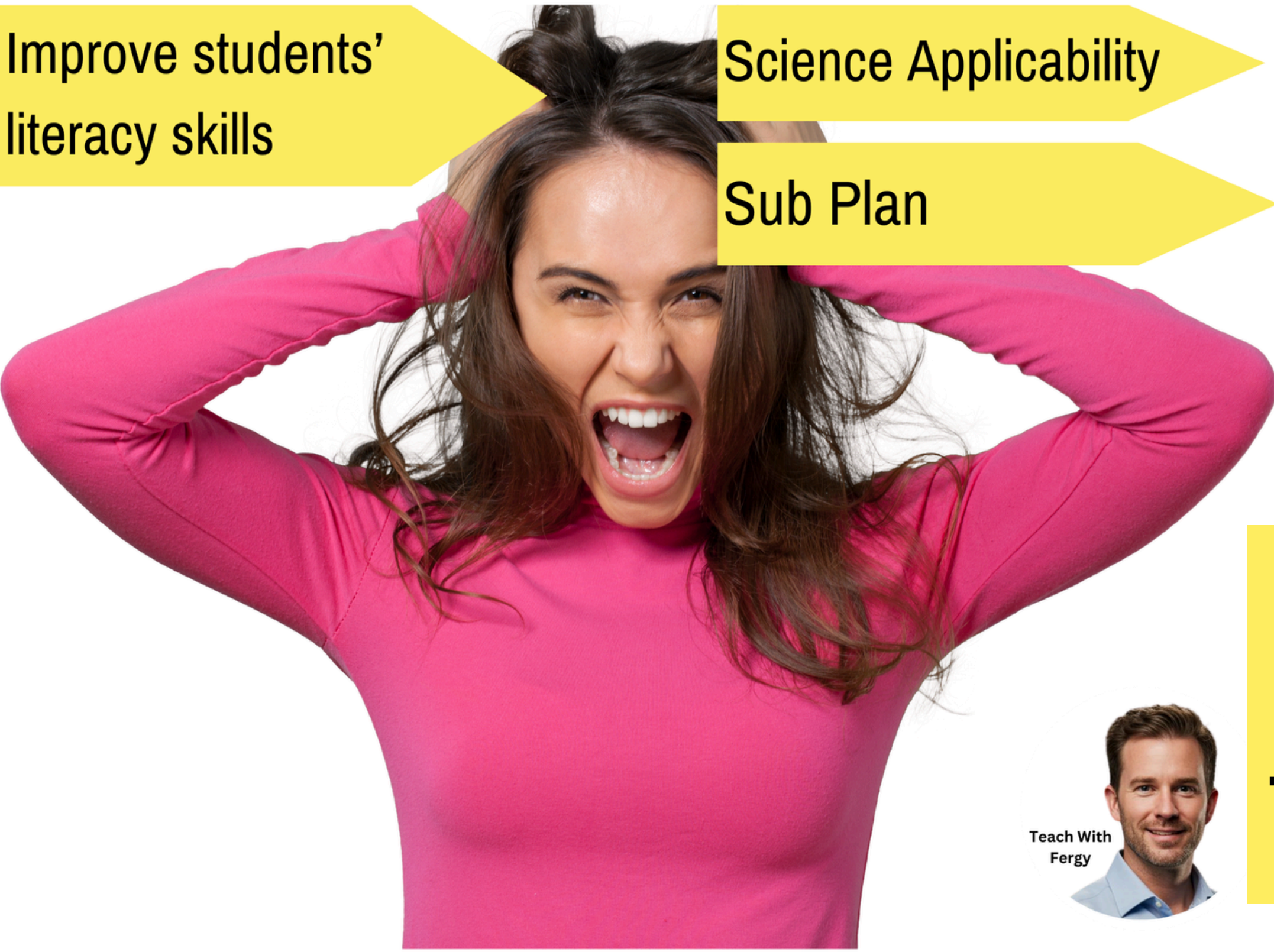
## SCIENCE READING

### GRADE 8 AND UP

Improve students' literacy skills

Science Applicability

Sub Plan



## Reading 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!

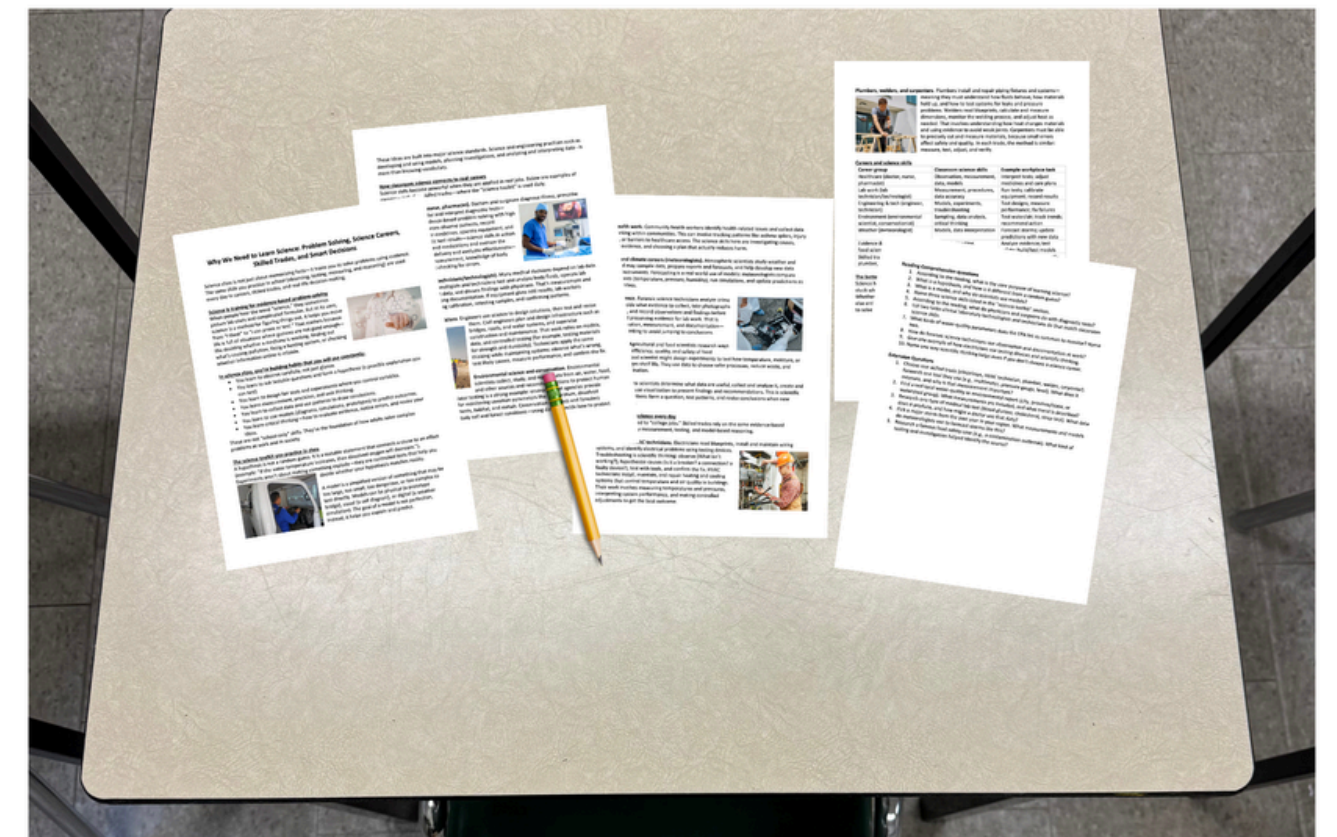


# THE PROBLEMS YOU FACE

- 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.

## 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.



# What Will Your Students Learn?

## READING COMPREHENSION ARTICLE & QUESTION BUNDLE

Article with  
Comprehension  
Questions

Grade 8 and Up

Print & Digital

- Scientific Thinking and Problem Solving
- The Scientific Method in Real Life
- Hypothesis vs. Guessing
- Modeling and Testing Ideas
- Observation, Measurement, and Data Collection
- Healthcare and Medical Careers
- Engineering and Technical Careers
- Environmental Science and Public Health
- Weather Forecasting and Modeling
- Forensic and Food Science
- Data Science and Evidence Analysis
- Skilled Trades and Applied Science

### Reading Comprehension questions

1. According to the reading, what is the core purpose of learning science?
2. What is a hypothesis, and how is it different from a random guess?
3. What is a model, and why do scientists use models?
4. Name three science skills listed in the "science toolkit" section.
5. According to the reading, what do physicians and surgeons do with diagnostic tests?
6. List three science skills that technicians do that match class skills.
7. What is the purpose of the "science toolkit" section?
8. What is the purpose of the "science toolkit" section?
9. What is the purpose of the "science toolkit" section?
10. What is the purpose of the "science toolkit" section?

### Extended questions

1. Science is training for evidence-based problem-solving. When people hear the word "science," they sometimes picture lab coats and complicated formulas. But at its core, science is a method for figuring things out. It helps you move from "I think" to "I can prove or test." That matters because life is full of situations where guesses are not good enough—like deciding whether a medicine is working, finding out what's causing pollution, fixing a heating system, or checking whether information online is reliable.
2. In science class, you're building habits that you will use constantly:

- You learn to observe carefully, not just glance.
- You learn to ask testable questions and form a hypothesis (a possible explanation you can test).
- You learn to design fair tests and experiments where you control variables.
- You learn measurement, precision, and unit thinking.
- You learn to collect data and use patterns to draw conclusions.
- You learn to use models (diagrams, simulations, prototypes) to predict outcomes.
- You learn critical thinking—how to evaluate evidence, notice errors, and revise your ideas.

These are not "school-only" skills. They're the foundation of how adults solve complex problems at work and in society.

### The science toolkit you practice in class

A hypothesis is not a random guess. It is a testable statement that connects a problem to a possible solution. (example: "If the water temperature increases, then the rate of oxygen production will decrease.")

Experiment: A model of a bridge is too large to test directly. Instead, it is simulated using a computer program.

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# Your Reading

## Why We Need to Learn Science: Problem Solving, Skilled Trades, and Smart Ideas

Science class is not just about memorizing facts—it trains you. The same skills you practice in school (observing, testing, measuring) are used every day in careers, skilled trades, and real-life decision-making.

### Science is training for evidence-based problem-solving

When people hear the word “science,” they sometimes picture lab coats and complicated formulas. But at its core, science is a method for figuring things out. It helps you move from “I think” to “I can prove or test.” That matters because life is full of situations where guesses are not good enough—like deciding whether a medicine is working, finding out what’s causing pollution, fixing a heating system, or checking whether information online is reliable.

### In science class, you’re building habits that you will use every day

- You learn to observe carefully, not just glance.
- You learn to ask testable questions and form a hypothesis (can test).
- You learn to design fair tests and experiments where you can measure.
- You learn measurement, precision, and unit thinking.
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- You learn critical thinking—how to evaluate evidence and make decisions.

These are not “school-only” skills. They’re the foundation of solving problems at work and in society.

### The science toolkit you practice in class

A hypothesis is not a random guess. It is a testable statement (example: “If the water temperature increases, then dissolved oxygen levels will decrease”). Experiments aren’t about making something explode—they’re about testing ideas.



A model is a simplified representation of something too large, too small, too fast, or too slow to test directly. Models can be physical (like a bridge), visual (like a cell diagram), or mathematical (like a simulation). The goal is to understand a system better, not to replace it. Instead, it helps you make predictions and test them.

These ideas are built into major science standards. Science and engineering practices such as developing and using models, planning investigations, and analyzing and interpreting data - is more than knowing vocabulary.

### How classroom science connects to real careers

Science skills become powerful when they are applied in real jobs. Below are examples of careers—including skilled trades—where the “science toolkit” is used daily.

**Healthcare (doctor, nurse, pharmacist).** Doctors and surgeons diagnose illness, prescribe medications, and order and interpret diagnostic tests—which is basically evidence-based problem-solving with high stakes. Registered nurses observe patients, record symptoms, administer medicines, operate equipment, and help analyze diagnostic test results—science skills in action. Pharmacists recommend medications and oversee the dosage and timing of delivery and evaluate effectiveness—this requires careful measurement, knowledge of body systems, and constant checking for errors.



**Clinical lab work (lab technicians/technologists).** Many medical decisions depend on lab data. Clinical laboratory technologists and technicians test and analyze body fluids, operate lab equipment, record test data, and discuss findings with physicians. That’s measurement and data analysis—plus strong documentation. If equipment gives odd results, lab workers troubleshoot by checking calibration, retesting samples, and confirming patterns.

**Engineering and technicians.** Engineers use science to design solutions, then test and revise them. Civil engineers plan and design infrastructure such as bridges, roads, and water systems, and supervise construction and maintenance. That work relies on models, data, and controlled testing (for example, testing materials for strength and durability). Technicians apply the same thinking while maintaining systems: observe what’s wrong, test likely causes, measure performance, and confirm the fix.



**Environmental science and conservation.** Environmental scientists collect, study, and report data from air, water, food, and other sources and recommend actions to protect human health and ecosystems. Water testing is a strong example: environmental agencies provide training-ready factsheets for monitoring common parameters like temperature, dissolved oxygen, pH, turbidity, nutrients, habitat, and metals. Conservation scientists and foresters manage land quality and study soil and forest conditions—using data to decide how to protect resources over time.

**Community health workers.** Community health workers identify health-related issues and collect data within communities. This can involve tracking patterns like asthma spikes or barriers to healthcare access. The science skills here are investigating causes, analyzing data, and choosing a plan that actually reduces harm.

**Climate careers (meteorologists).** Atmospheric scientists study weather patterns, compile data, prepare reports and forecasts, and help develop new data. Forecasting is a real-world use of models: meteorologists compile data (temperature, pressure, humidity), run simulations, and update predictions.

**Forensic science.** Forensic science technicians analyze crime scenes, collect evidence, and record observations and findings before preserving evidence for lab work. That is measurement, documentation, and critical thinking to avoid jumping to conclusions.



**Agricultural and food scientists.** Agricultural and food scientists research ways to improve efficiency, quality, and safety of food. A food scientist might design experiments to test how temperature, moisture, and pH affect shelf life. They use data to choose safer processes, reduce waste, and improve food safety.

**Data scientists.** Data scientists determine what data are useful, collect and analyze it, create visualizations to present findings and recommendations. This is science: form a question, test patterns, and revise conclusions when new data arrive.

### Use science every day

Science is not limited to “college jobs.” Skilled trades rely on the same evidence-based science: measurement, testing, and model-based reasoning.

**HVAC technicians.** Electricians read blueprints, install and maintain wiring, and identify electrical problems using testing devices. Heating is scientific thinking: observe (What isn’t working?), hypothesize causes (Is it a breaker? a connection? a leak?), test with tools, and confirm the fix. HVAC technicians install, maintain, and repair heating and cooling systems to control temperature and air quality in buildings. This involves measuring temperatures and pressures, testing system performance, and making controlled changes to get the best outcome.



**Plumbers, welders, and carpenters.** Plumbers install and repair piping fixtures and systems—meaning they must understand how fluids behave, how materials hold up, and how to test systems for leaks and pressure problems. Welders read blueprints, calculate and measure dimensions, monitor the welding process, and adjust heat as needed. That involves understanding how heat changes materials and using evidence to avoid weak joints. Carpenters must be able to precisely cut and measure materials, because small errors affect safety and quality. In each trade, the method is similar: measure, test, adjust, and verify.



### Careers and science skills

| Career group                                                   | Classroom science skills                     | Example workplace task                            |
|----------------------------------------------------------------|----------------------------------------------|---------------------------------------------------|
| Healthcare (doctor, nurse, pharmacist)                         | Observation, measurement, data, models       | Interpret tests; adjust medicines and care plans  |
| Lab work (lab technician/technologist)                         | Measurement, procedures, data accuracy       | Run tests; calibrate equipment; record results    |
| Engineering & tech (engineer, technician)                      | Models, experiments, troubleshooting         | Test designs; measure performance; fix failures   |
| Environment (environmental scientist, conservationist)         | Sampling, data analysis, critical thinking   | Test water/air; track trends; recommend action    |
| Weather (meteorologist)                                        | Models, data interpretation                  | Forecast storms; update predictions with new data |
| Evidence & products (forensic, food science, data science)     | Controlled testing, documentation, reasoning | Analyze evidence; test safety; build/test models  |
| Skilled trades (electrician, HVAC, plumber, welder, carpenter) | Measurement, testing, systems thinking       | Diagnose problems; verify repairs; ensure safety  |

### The bottom line: science makes you capable

Science helps you become the kind of person who can handle uncertainty. Instead of being stuck when something is confusing, you learn to test, measure, and reason your way forward. Whether you become a nurse, electrician, environmental scientist, data scientist, or something else entirely, scientific thinking makes you more accurate, more confident, and more prepared to solve real problems.



### Comprehension questions

According to the reading, what is the core purpose of learning science? Is it a hypothesis, and how is it different from a random guess? Is it a model, and why do scientists use models? List three science skills listed in the “science toolkit” section. According to the reading, what do physicians and surgeons do with diagnostic tests? What tasks do clinical laboratory technologists and technicians do that match classroom science skills? What kinds of water-quality parameters does the EPA list as common to monitor? Name one.

How do forensic science technicians use observation and documentation at work? Give one example of how electricians use testing devices and scientific thinking. In what way does scientific thinking help even if you don’t choose a science career?

### Extension questions

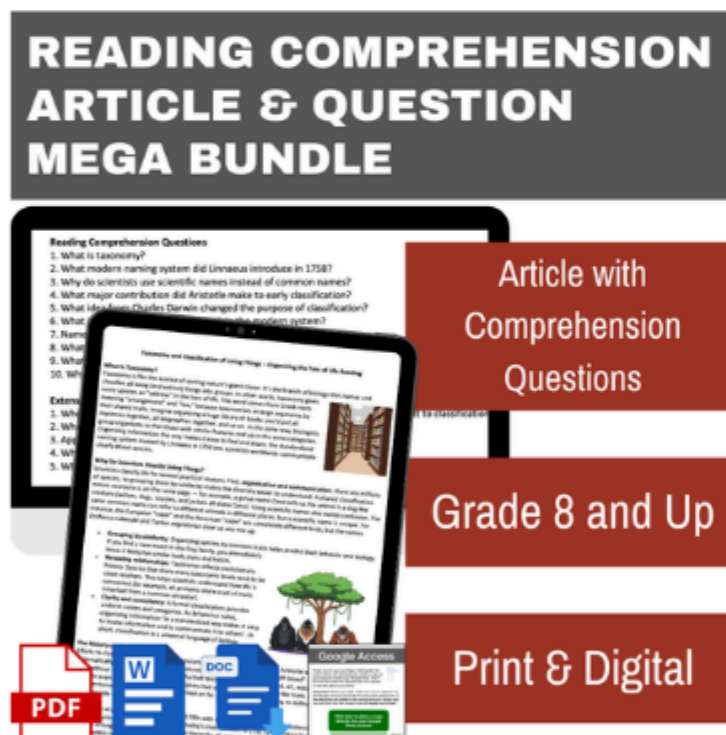
Choose one skilled trade (electrician, HVAC technician, plumber, welder, carpenter). Research one tool they use (e.g., multimeter, pressure gauge, level). What does it measure, and why is that measurement important? Research a real local water-quality or environmental report (city, province/state, or watershed group). What measurements are included, and what trend is described? Research one type of medical lab test (blood glucose, cholesterol, strep test). What data is produced, and how might a doctor use that data? Research a major storm from the past year in your region. What measurements and models do meteorologists use to forecast storms like this? Research a famous food safety case (e.g., a contamination outbreak). What kind of science and investigation helped identify the source?

## Comprehension and Extension Questions



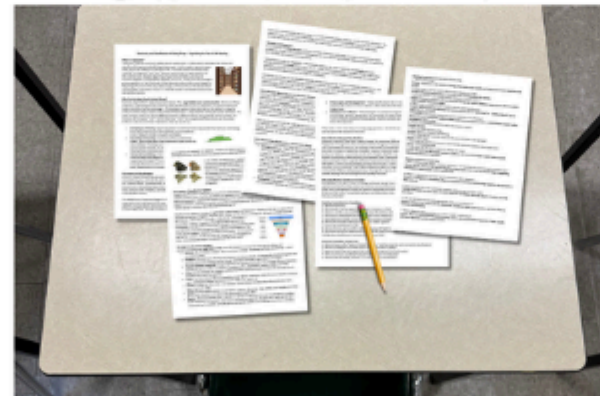
# Upgrade to the Grade 8 and Up Reading Mega Bundle

Includes over 130 readings for students in grades 8 and up. The bundle covers all science topics and will save you over 75%.



## CLASSROOM READY

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- **Includes Varied Question Types:** Knowledge, thinking, connecting, application, and open-ended questions.



★★★★★ Extremely satisfied - It is a good supplemental activity either for review and at the same time introducing some concept. I also use this for sub plan. It is well presented, organized and interesting.

★★★★★ Extremely satisfied - This a great resource. I used this for a sub plan. It was fun and engaging for my students.

## Grade 8 and Up Scientific Reading Comprehension Article Mega Bundle

ALL my current and future grade 8 and up readings, covering the following subject areas:

**Biology**  
**Chemistry**  
**Earth and Space**  
**Ecology and the Environment**  
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