

Physical & Life Science Article Bundle GRADE 8 AND UP READINGS

Improve students'
literacy skills

Sub Plan

Science Applicability
Across 30 Readings



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!

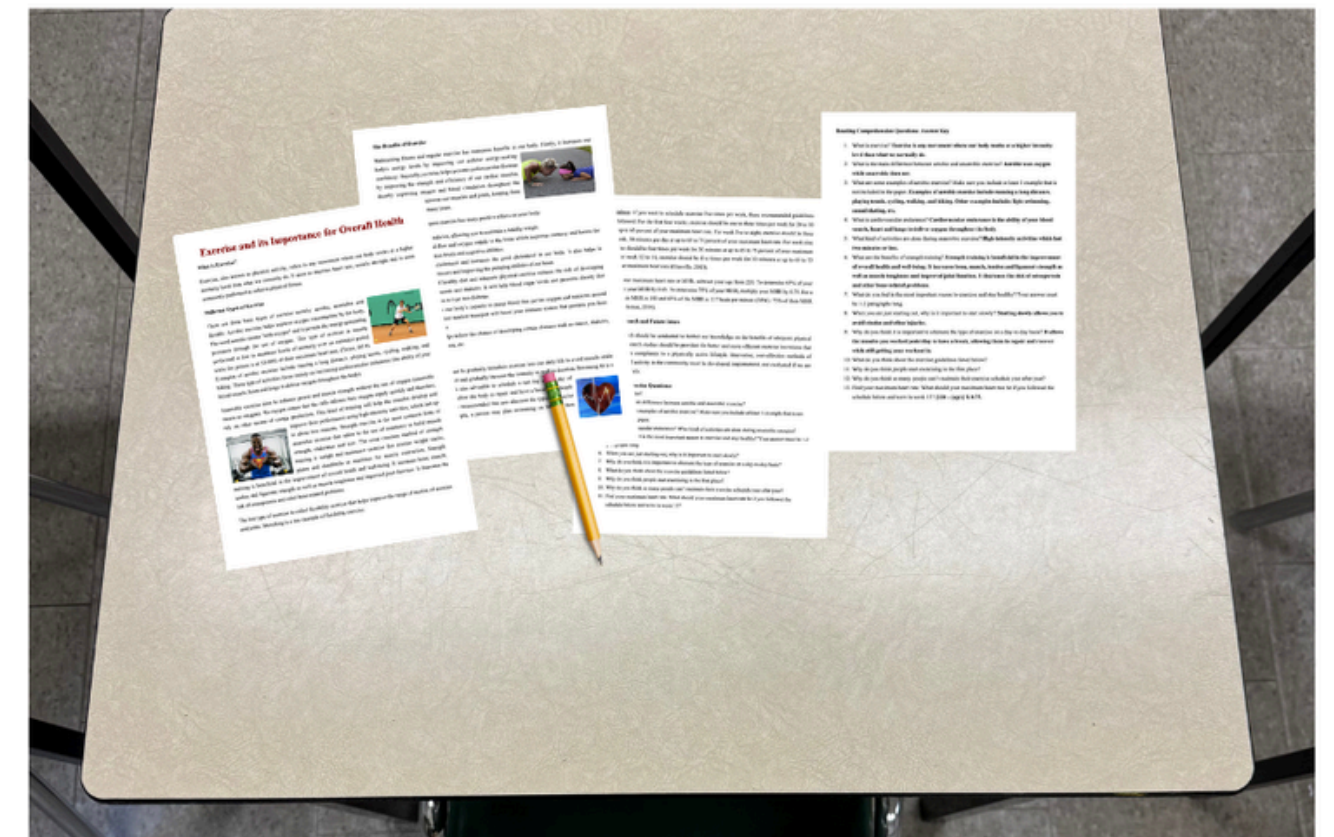


THE PROBLEMS YOU FACE

- 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.

NO-PREP - PRINT/UPLOAD

- **CLASSROOM READY - No Prep, Ready-to-Use:** Print or assign digitally with Google Docs, Microsoft Word, and PDF formats for flexible classroom use
- **Questions and Answer Key**
- **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

- How ecology, health, energy, chemistry, physics, and natural disasters connect to real-world science
- How human activities can affect ecosystems, biodiversity, and the environment
- How major health topics relate to the human body, disease, genetics, and wellness
- How different energy sources work and how they impact society and the environment
- How chemistry explains everyday materials, reactions, and innovations
- How physics helps explain forces, magnets, electromagnets, and the challenges of space travel
- How natural disasters form and how they can affect both people and the environment
- How to strengthen science literacy, vocabulary, reading comprehension, and critical thinking across a wide range of science topics

Reading Comprehension Questions:

1. What is exercise?
2. What is the main difference between aerobic and anaerobic exercise?
3. What are some examples of aerobic exercise? Make sure you include at least 1 example that is not included in the paper.
4. What is cardiovascular endurance? What kind of activities are done during anaerobic exercise?
5. What do you think is the most important reason to exercise and stay healthy? Your answer must be 1-2 paragraphs.
6. When is the best time to exercise?
7. Why is exercise important for overall health?
8. What are some benefits of exercise?
9. Why is it important to stay active?
10. Why is it important to stay healthy?
11. Find a quote from the article that you like.

Exercise and its Importance for Overall Health

What is Exercise?

Exercise, also known as physical activity, refers to any movement where our body works at a higher intensity level than what we normally do. It aims to improve heart rate, muscle strength and is most commonly performed to achieve physical fitness.

Different Types of Exercise

There are three basic types of exercise namely: aerobic, anaerobic and flexible. Aerobic exercise helps improve oxygen consumption by the body. The word aerobic means "with oxygen" and it permits the energy-generating processes through the use of oxygen. This type of exercise is usually performed at low to moderate levels of intensity over an extended period while the person is at 50-80% of their maximum heart rate, (Tocco, 2014). Examples of aerobic exercise include running a long distance, playing tennis, cycling, walking, and hiking. These type of activities focus mainly on increasing cardiovascular endurance (the ability of your blood vessels, heart and lungs to deliver oxygen throughout the body).

Anaerobic exercise aims to enhance power and muscle strength without the use of oxygen (anaerobic means no oxygen). No oxygen means that the cells exhaust their oxygen supply quickly and therefore, rely on other means of energy production. This kind of training will help the muscles develop and to about two minutes. Strength exercise is the most common form of anaerobic exercise that refers to the use of resistance training.

The most common type of strength training is weightlifting. It involves lifting heavy weights to improve their performance using high-intensity activities, which last up to about two minutes. Strength exercise is the most common form of anaerobic exercise that refers to the use of resistance training.

Flexibility exercise is a type of exercise that involves stretching the muscles to improve their range of motion. It is a type of exercise that involves stretching the muscles to improve their range of motion. It is a type of exercise that involves stretching the muscles to improve their range of motion.

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Your Reading

Invasive Species

What is an invasive species?

An invasive species is any living organism: bacteria, fungus, plant or animal; that is NOT originally from a specific location and is thought to cause it harm. This may not appear to be a serious problem, but invasive species are considered to be one of the most severe threats to wildlife, human health and economies around the world, costing billions of dollars each year.

What makes a species invasive?

Invasive species are biological invaders that have a rapid and aggressive rate of growth and reproduction and spread soon after introduction, potentially causing damage. It's generally thought that invasive species need to come from distant places such as other countries or continents, but in actuality, any distance that separates one ecosystem from another can be sufficient. A fish originally from a big lake can be considered an invasive species in a nearby smaller one because it competes with species of fish that are native to that area. Generally speaking, invasive species lack any natural predators, competitors and/or pathogens that would normally regulate their population. These lack of restrictions allow them to prosper and grow at the expense of native species and the ecosystem.

How does an invasive species spread?

Most invasive species are spread unintentionally as a consequence of human activities. The increasing global movement of people and exportation of products, facilitate the movement of species around the world quickly in shipments of food, household goods, animal and plant products, containers, packaging materials and in/on the human body. Here is lists of examples of how invasive species spread:

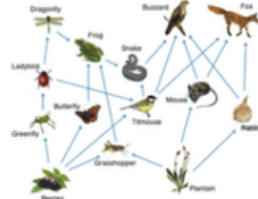


- ✓ Aquatic Transportation: Ships can carry aquatic organisms in their ballast water.
- ✓ Wood made products: insects can hide in small compartments found in wood.
- ✓ Decorative plants: Some plants can escape into the wild and become invasive.
- ✓ Pet trade and transportation: Some invasive species are intentionally or accidentally released as pets.

Major impacts of invasive species

As discussed, an invasive species is one that is brought into a new area where they are generally able to outcompete native species for food, habitats, etc. The effects brought about by their introduction can be drastic and widespread. Invasive species may:

- disrupt the delicate balance of the food web by changing the who-eats-who relationships.
 - decrease biodiversity by altering the abundance and diversity of species that are important in a certain habitat.
 - alter environmental conditions such as: soil chemistry, intensity of wildfires, microenvironment temperature.
 - prey on native species due to their lack of natural predators or competition.
 - displace native species due to an aggressive competition for food and other resources.
 - carry infectious agents that native species are not able to fight off.
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Preventing the spread of invasive species

Once an invasive species has become established, they can be almost impossible and/or highly expensive to remove. As a result, the best approaches for dealing with an invasive species are:

1. Generating effective mechanisms to prevent their introduction in the first place, such as federal policies and new legislations.
2. Creating monitoring systems for detecting new infestations and increasing the budget for the study of reported invasive species.
3. Rapidly eradicate newly detected invaders and inform the population about the control and eradication programs. Specific programs include:
 - Chemical Control through the use of pesticides.
 - Mechanical Control by creating barriers to prevent the movement of species from one location to another.
 - Biological Control through the introduction of an additional invasive species, which can be used to hunt and kill the original invader.

Examples of the most destructive invasive species

microorganisms:

- **Avian Malaria:** Avian malaria was introduced to Hawaii in exotic birds kept by settlers, and the vector southern house mosquito in water barrels of a sailing ship in 1826. It's introduction caused a major drop in the populations of native birds that had no resistance to avian malaria.

ants:

- Kudzu – A vine native to Japan and southeast China. It was first brought to the United States in 1876 and impressed people with its sweet-smelling blooms, large leaves and sturdy vines. It gained a further foothold in the 1930s when it was planted in the Southern U.S. as a means to prevent soil erosion. Kudzu is a formidable plant that grows about a foot per day and covers 150,000 acres per year. It is estimated that the control of this plant costs the United States Government six million dollars annually.
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- Miconia: A famous decorative tree from South America, the Miconia was introduced to the island of Tahiti in 1937. Its huge red and purple leaves made it highly desirable for gardening uses, but it was spread into the wild by fruit-eating birds and invaded more than half the island. Its superficial and tentacular rooting system causes landslides and shades out the entire forest. Scientists estimate that several of the island's native species are endangered as a result of habitat loss caused by this tree's invasion.



nimals:

- The Small Asian Mongoose: Was introduced to Hawaii in the 1880s as a means of controlling the rat population. Instead, the mongoose decided to eat the local birds and turtles and due to their rapid breeding, their population soared. Currently they cause about \$50 million dollars in damages per year.
- Western Mosquito Fish: Native to the fresh waters of the Eastern and Southern United States, It has become a pest in many waterways around the world, following the initial introductions in the early last century as a biological control for mosquitoes. Nowadays, it is not considered more effective than native predators of mosquitoes, but instead, this highly predatory fish eats the eggs



of economically desirable fish and preys on and endangers rare indigenous fish and invertebrate species.

- **Brown Tree Snakes:** Native of Australia, Indonesia, Papua New Guinea, and the Islands, the brown tree snake is thought to have been given a ride on a military aircraft in the 1940s or early 1950s. The lack of natural predators and plenty of food, allowed its population to increase rapidly. In addition to being a danger to humans, this snake currently causes significant economic and ecological damage resulting in major power outages across the island. This has caused the endangerment of many native forest birds.
 - **The Long-Tailed Possum:** In order to establish the fur trade, possums were introduced to New Zealand in 1837. Due to the island's lush vegetation and lack of predators, they thrived. Currently, over the course of one night, the estimated 35 million long-tailed possums will consume 12,000 tons of vegetation making them New Zealand's most despised mammal.
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Reading Comprehension Questions:

1. What is an invasive species?
2. What factors allow invasive species to do so much damage?
3. How has increased global travel boosted the spread of certain species?
4. How can invasive species alter an ecosystem's food web?
5. Think of an example of how infectious agents (viruses, bacteria, etc.) could be invasive species and why these agents could be so dangerous to the native population.
6. Out of the three ways to prevent the spread of invasive species, which do you think is the most effective and why?
7. Biological control of invasive species requires the introduction of a new predator to hunt and kill the original invader. What flaws do you see in this logic?
8. How did the introduction of the Small Asian Mongoose backfire?
9. Why do you think it is so difficult for New Zealand to rid themselves of the Possum?
10. Summarize what you have learned about invasive species in 100 – 150 words.
11. Using your device, research an invasive species currently affecting your area. Describe how it arrived, what damage it causes and what is currently being done to reduce its population.

Reading Comprehension Questions: Answer Key

1. What is an invasive species? **An invasive species is any living organism: bacteria, fungus, plant or animal; that is NOT originally from a specific location and is thought to cause it harm.**
2. What factors allow invasive species to do so much damage? **They have a rapid and aggressive rate of growth and reproduction and spread soon after introduction. They lack natural predators, competitors and/or pathogens that would normally regulate their population further increasing their numbers.**
3. How has increased global travel boosted the spread of certain species? **Species can easily catch a ride on a plane or boat and travel anywhere in the world relatively quickly.**
4. How can invasive species alter an ecosystem's food web? **They may eat animals or plants normally reserved for other species thereby decreasing the food availability for the natives.**
5. Think of an example of how infectious agents (viruses, bacteria, etc.) could be introduced by an invasive species and why these agents could be so dangerous to the native population. **Invasive species such as mosquitoes can easily introduce harmful agents into a given area. These agents can be particularly harmful, as the native species have never been exposed to them. Not having previous exposure will make it difficult for the native species to fight the infection off.**
6. Out of the three ways to prevent the spread of invasive species, which do you think is most effective and why?
7. Biological control of invasive species requires the introduction of a new predatory species to hunt and kill the original invader. What flaws do you see in this logic? **The new species is also an invasive species and may present a new set of problems to an area.**
8. How did the introduction of the Small Asian Mongoose backfire? **Instead of controlling the rat population, the mongoose decided to eat the local birds and turtles. Currently they cause about \$50 million dollars in damage per year.**

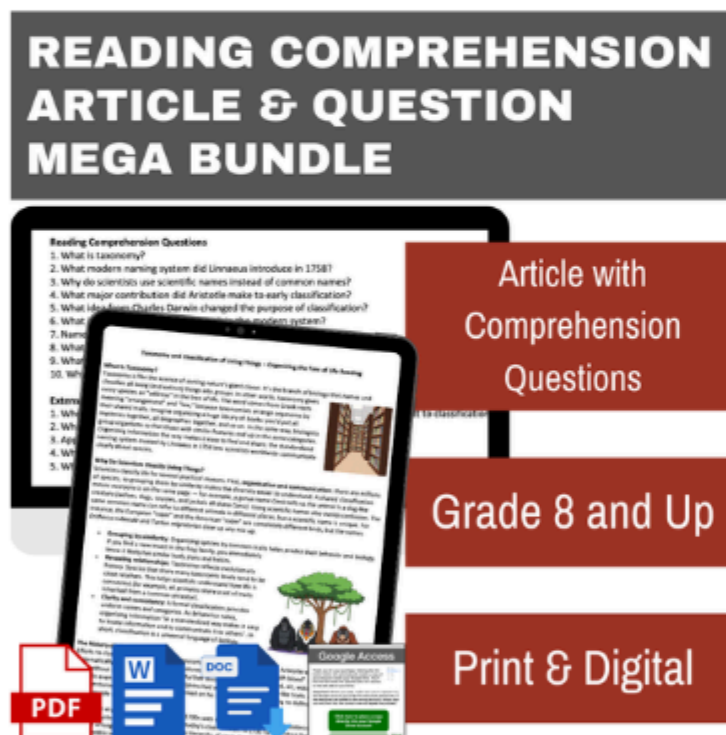
Full Answer Key

Comprehension and Extension Questions



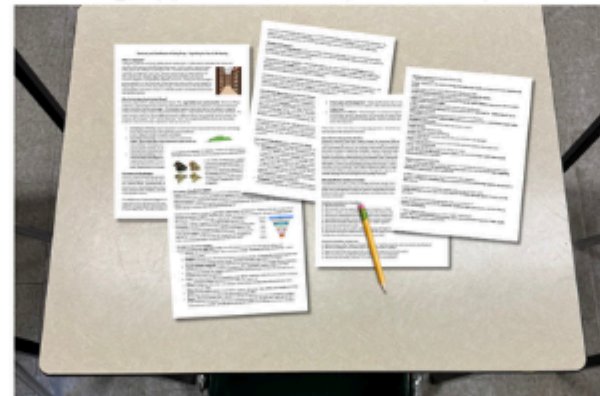
Upgrade to the Grade 8 and Up Reading Mega Bundle

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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★★★★★ 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
Energy
Health
Natural Disasters
Physics



Improve your students' **Literacy and Analysis Skills**, use as an **Emergency Substitute Plan** or create **Applicability** in your classroom

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Connect!*

