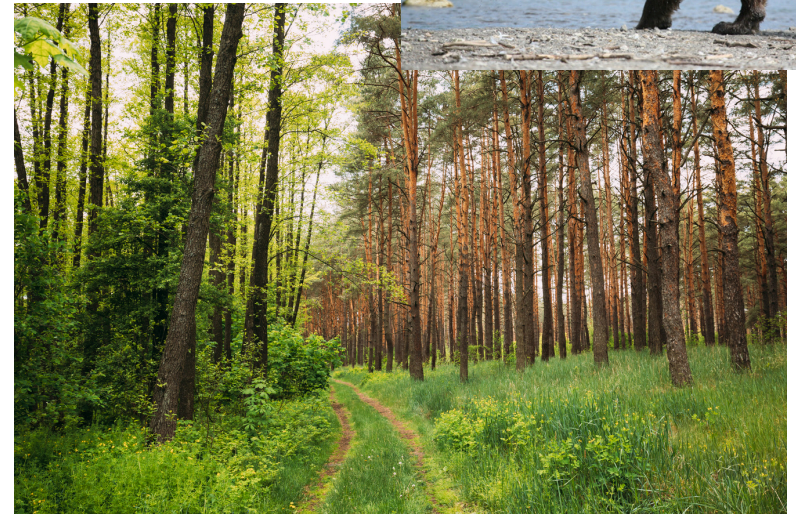


# Biology and Ecology - High School Reading Comprehension Bundle

- ✓ 68 Reading Comprehension Passages with Questions
- ✓ No Prep - Just Print or Upload | NGSS Aligned
- ✓ Buyer Comment: "I have loved having these for sub days, or just having for early finishers!"



## **Biology:**

- Fermentation and Food
- DNA Paternity Tests
- Laser Eye Surgery
- Physical Adaptations
- Muscle Growth
- Genetically Modified Organisms
- Mosquitoes And The Diseases They Spread
- Twins
- GERD and Acid Reflux - A Digestive System Disease
- Bats – Misconceptions, Importance, and Facts
- Superbugs - The Super Villains of Modern Medicine
- Heart Attack and Stroke
- Why Leaves Change Color In The Fall
- The Science of Fireflies
- The Marvels of Microorganisms

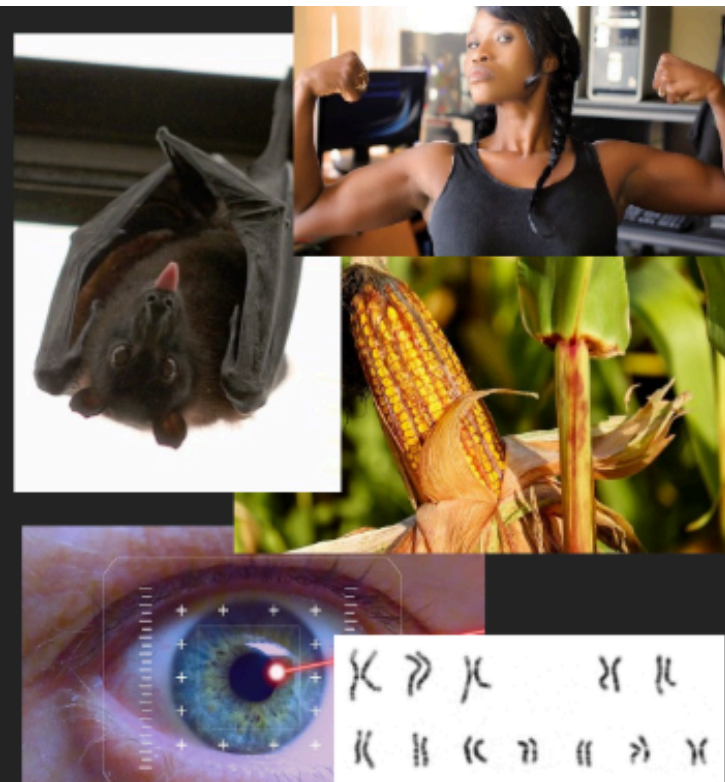
## **Ecology and the Environment:**

- Invasive Species
- Ecosystems
- Pesticides
- The Importance of Bees
- Coral Reef Ecosystems and their Future
- Climate Change
- Hydraulic Fracturing - Fracking
- Farming: Organic vs. Conventional
- Oil Spills and Their Consequences
- Bioaccumulation and Biomagnification
- RuBisCO - Earth's Most Important Protein
- Symbiotic relationships between plants and insects
- Smog - Its Causes and Dangers
- Ocean Acidification
- Pollution Control Devices
- Tap vs Bottled Water
- Predator Prey Relationships
- Greenhouse Effect
- Species Extinction
- Nuclear Reactor Accidents and Their Impacts

## **Health:**

- The Common Cold
- The Flu
- Exercise and its Importance for Health
- Stem Cell Therapy: The Future of Medicine?
- Concussions
- Poliomyelitis - Polio
- Smallpox
- The Measles
- Genetics and Gene Therapy
- Heart Diseases
- Cancer
- The Effects of Caffeine
- Down syndrome
- Protective Equipment - Keeping you safe
- HIV/AIDS - Informing the Public and Dispelling the Misconceptions
- The Effect of Stress on the Brain
- The Effect of Sugar on the Body
- Farming: Organic vs. Conventional
- Whooping Cough
- Asthma and Asthma Attacks
- The Immune System
- The Dangers of Smoking
- Parkinson's Disease
- Fats
- Tinnitus – Ringing in the Ears
- Cystic Fibrosis
- The Effects Of Binge Drinking On Teenagers
- Multiple Sclerosis
- Painkillers
- Diabetes
- Radioactivity
- Scarring
- Allergies
- Carbohydrates, Lipids, and Health
- The Placebo Effect
- The Nervous System
- The Coronavirus and COVID
- Common Viruses - Part 1
- Common Viruses - Part 2
- Bacterial Infections - Part 1
- Bacterial Infections - Part 2
- Nuclear Reactor Accidents and Their Impacts

- **Biology and Ecology**  
**Science Topic**  
**Comprehension Readings**
- **Tackle literacy and science!**
- **Each reading comes with comprehension questions as well as critical thinking, connecting, and open-ended questions**



## **Buyer Comments From My Science Comprehension Readings**

- "I hesitated to buy this, but bit the bullet and did it anyway. It has been my GO TO homework! As a science teacher, it can be really hard to find reading that holds their attention and improves reading skills. Thanks!"
- "Excellent balance of articles. I was looking for some good readings to teach science reading comprehension. Liked the variety of questions."
- "I use these as once a week assignments in my science class and they are great. Thank you for putting this all together."
- "I love these readings"
- "Awesome, awesome, awesome bundle!"
- "These are so professional looking with great information! Thanks for the great offer!"
- "EXACTLY what I NEEDED! Thank you!!!! AWESOME job!!! Great rigor and flexibility!"
- "Thanks, this is a great addition to my science and health units."

## Bats – Misconceptions, Importance, and Facts

### Introduction to Bats



Bats are mammals that can fly.

Bats are mammals. Contrary to popular belief, they are not rodents, but instead occupy their own order within Mammalia: Chiroptera. In fact, they are more closely related to primates than to rodents. Bats are the only mammals that can truly fly. There are over 1000 different bat species in the world, making up a quarter of all mammal species.

Most bat species eat insects, but some eat fruit, nectar, other small animals (including mammals, birds, lizards, frogs, and fish), or blood. In fact, there are three species of blood-eating bats, called vampire bats.

There are two size classes of bats: megabats and microbats. Megabats are usually larger, and eat fruit, flowers, and nectar. Microbats feed on insects, frogs, small fish, mammals, and blood. Little brown bats can eat up to 1000 mosquitoes per hour. The smallest bat in the world is the Kitti's hog-nosed bat (also called the bumblebee bat), which weighs only about 2 grams. On the opposite side of the spectrum is the golden-crowned flying fox, a megabat, which weighs around 2 pounds and has a wingspan of nearly 6 feet (1.8 meters).

In the winter, some bats migrate south, some hibernate, and some enter a state of torpor.



Megabats include fruit-eating bats.



Most bats

safely and locate

and drink the blood that wells up to the surface of the skin), and the ones that drink mammal blood target livestock, not people. Vampire bats have actually helped people. Their saliva contains an anticoagulant, so they can drink blood without it clotting. We have harnessed this anticoagulant to use in stroke-prevention medication. Finally, while bats, like most other mammals, can contract rabies, not all bats are rabid. Most of them aren't. This doesn't mean you should handle a bat, but you don't need to be scared of them.

### Importance of Bats

Bats are very important to the environment. They eat many pests and other insects that could be harmful to humans, other animals, and plants. They also act as **pollinators** by eating nectar and carrying pollen from flower to flower. In fact, some North American desert plants, such as the giant cactus and agave, are dependent upon the pollination services of bats. They also help plants in another way, by dispersing seeds from the fruits they eat. Finally, their droppings, called guano, are very nutrient-rich fertilizers that can help plant growth. Humans can harvest this guano for use in farming.



Bats pollinate flowers, disperse seeds, and fertilize plants.



White-nose Syndrome, responsible for many bat deaths, is caused by a fungus.

### Bat Conservation

Bats are threatened by many human activities, including hunting, habitat loss, and disease. They reproduce slowly, with most giving birth to only one pup a year, which means they cannot recover quickly from population crashes. They are hunted for food and out of misplaced fear. They are driven from their habitats by mining, logging, tourism, and guano harvesting. In addition, wind turbines have been

known to kill hundreds of thousands of bats. A deadly disease called White-nose Syndrome is sweeping North American bat populations. It is estimated that over 5.7 million bats have been killed by this disease since its discovery in 2006. Bats are affected by this disease, caused by a fungus, while they hibernate. It spreads throughout a cave of hibernating bats, sometimes killing the entire colony.

Educating people about bats, establishing protected areas for bats, and adopting safer means of generating wind power (idling blades on calm nights to reduce the danger to bats) can help preserve this important species.

### Echolocation

Echolocation is the process of using sound waves and echoes to locate objects. When a sound is made, the sound waves travel through the air or water until they hit an object. These sound waves bounce back in what is known as an echo. This process is the same as how light waves from you; reflect off a mirror back to your eyes so you can see yourself.

The time it takes for an echo to return, the size of the reflection, and the time it takes for the sound to return to its origin (the bat) indicates three things:

- 1) That an object is up ahead
- 2) The size and shape of the object
- 3) How far the object is

Cetaceans (whales and dolphins) also use echolocation, and humans have learned from them. Submarines use echolocation to determine how far they are from underwater objects, such as reefs, islands, other submarines, or animals. Technology-driven echolocation like this is called SONAR. A specially trained technician listens through headphones for the echoes and interprets the sounds to safely guide the submarine through the water.



Bats echolocate to navigate and find food.

### Bat Echolocation

Bats make a high frequency noise with their mouth or nose and wait for the sound waves to return from objects ahead. If there is no echo, then they know they can fly forward safely. If the sound creates an echo, then either an obstacle or food is ahead. From the nature of the returning sound, bats can determine the location, size, and shape of an approaching object. Their abilities are so specialized that they can detect objects at very fine scales, even as thin as a human hair.

### Misconceptions

### Reading Comprehension Questions:

- 1) What ability do bats have that other mammals don't?
- 2) How many species of vampire bats are there?
- 3) How do bats navigate and find food at night?
- 4) What is echolocation?
- 5) Name three benefits bats provide to ecosystems.
- 6) Name three threats to bats.

### Extension Questions:

- 7) Draw a diagram of how echolocation works.
- 8) Research current technologies humans have developed that those with visual impairments can "see".
- 9) Imagine you are trying to convince your grand important and worthy of conservation. What would you tell her?

### Reading Comprehension Questions – KEY

- 1) What ability do bats have that other mammals don't? **They can truly fly.**
- 2) How many species of vampire bats are there? **3**
- 3) How do bats navigate and find food at night? **By using echolocation.**
- 4) What is echolocation? **A process which uses sound waves and echoes to determine the location, size, and shape of unseen objects.**
- 5) Name three benefits bats provide to ecosystems. **Pest control, pollination, seed dispersal, fertilization. (Any three).**
- 6) Name three threats to bats. **Hunting, habitat loss, disease.**

### Extension Questions - KEY

- 7) Draw a diagram of how echolocation works. **Answers will vary, but diagram should look something like this:**



- 8) Research current technologies humans have developed that utilize echolocation so that those with visual impairments can "see". **People with visual impairment can learn to use a form of echolocation, usually by snapping their fingers or using some other type of clicking noise.**
- 9) Imagine you are trying to convince your grandmother, who is superstitious, that bats are important and worthy of conservation. What would you tell her? **Answers will vary.**

# Some Readings

## Heart Attack and Stroke

Scientific Reading Comprehension  
Article and Extension Activity

## Superbugs

Scientific Reading Comprehension  
Article and Extension Activity

## Bats – Misconceptions, Importance and Facts

Scientific Reading Comprehension Article

## Gastroesophageal Reflux Disease - GERD

Scientific Reading Comprehension Article  
and Extension Activity

## Twins

Scientific Reading Comprehension  
Article and Extension Activity

## Mosquitoes and the Diseases they Spread

Scientific Reading Comprehension Article and  
Extension Activity

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

## Physical Adaptations

Scientific Reading Comprehension  
Article and Extension Activity

## DNA Paternity Tests

Scientific Reading Comprehension  
Article and Extension Activity

## Laser Eye Surgery

Scientific Reading Comprehension  
Article and Extension Activity

## Muscle Growth

Scientific Reading Comprehension  
Article and Extension Activity

## Genetically Modified Organisms

Scientific Reading Comprehension Article  
and Extension Activity

## Fermentation and Food

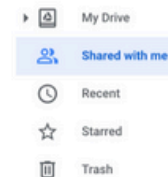
Scientific Reading  
Comprehension Article

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

# Google and Word Versions

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