



## Lesson Plan: Science in Our World

**Grade Level:** 4

**Subject:** Science

**Duration:** 45–60

**4-LS1-1:** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

### Learning Objectives

By the end of this lesson, students will be able to:

- **Identify** various branches of science and the specific topics they study
- **Explain** how the scientific method helps us understand the natural world
- **Describe** the role of science in health, technology, and understanding natural phenomena



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### Materials Needed: (all links are included in this PDF)

- Study Guide: Science in Our World (<https://newpathworksheets.com/api/guide/study-guide-science-grade-4-science-in-our-world-4th-gr.pdf>)
- Practice Worksheet 1 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-0.pdf>)
- Practice Worksheet 2 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-1.pdf>)



- Practice Worksheet 3 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-2.pdf>)
- Vocabulary Set 1 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-science-in-our-world-4th-gr-1.pdf>)

## Lesson Procedure

### Step 1: Introduction (5 minutes)

- Ask students: "What is a way that you use science every day without even thinking about it?"
- Discuss how science helps us understand our bodies, the environment, and the technology we use.

### Step 2: Direct Instruction (15 minutes)



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- Have students work individually or in pairs to complete Practice Worksheet 1. (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-0.pdf>)
- Assign Practice Worksheet 2 to further practice identifying different branches of science and biological processes. (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-1.pdf>)

### Step 5: Assessment (10 minutes)



- Use Practice Worksheet 3 as an assessment to evaluate students' grasp of how science applies to everyday phenomena.  
(<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-2.pdf>)
- Review answers to the assessment to clear up any misconceptions about scientific concepts.

## 💡 Differentiation Strategies

For advanced learners:

- Challenge students to research a specialized branch of science (e.g., meteorology) and explain its real-world impact.
- Have students design an experiment using the scientific method to test a simple natural phenomenon.



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## 📖 Complete List of Available Resources:

- Science in Our World (<https://newpathworksheets.com/science/grade-4/science-in-our-world-4th-gr>)
- Study Guide: Science in Our World (<https://newpathworksheets.com/api/guide/study-guide-science-grade-4-science-in-our-world-4th-gr.pdf>)
- Practice Worksheet 1 (<https://newpathworksheets.com/api/worksheet/worksheet-science-grade-4-science-in-our-world-4th-gr-0.pdf>)
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- Vocabulary Set 1 (<https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-4-science-in-our-world-4th-gr-1.pdf>)



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## SCIENCE IN OUR WORLD

### Science is Everywhere!

Science is ALL around us, no matter where you look! Whether you are at home, outside, at school...you see signs of science and its happenings everywhere!

### Keeping Ourselves Healthy

We know about cells from science. We need to take care of our cells, such as our skin cells, for example. The sun can damage our skin cells leading to disease, but luckily, there are ways we can help protect our skin cells from such damage. One way we can protect our skin cells is to put on sun block before going outside. Sun block protects our skin against too much of the Sun's rays.



The illustration shows a group of diverse children standing on a green grassy field under a blue sky with a yellow sun. Above them are four thought bubbles containing various scientific and mathematical icons: a cube, microscope, and protractor; a beaker, globe, and compass; an atom, pie chart, and 'ABC' box; and a bar graph, pencil, and math symbols (+, -, ×, =).

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where she thinks they will be safe from animal predators.

You can witness a **complete metamorphosis** life cycle when you view the life cycle of a butterfly. Look for caterpillars in your yard. Do you see any cocoons? How about butterflies? Do you see any flying around outside today?



### You may hear about science in the news:

Around the world, several areas have been experiencing warmer than usual temperatures. Warmer temperatures have been causing the surrounding bodies of waters to warm as well which in turn affect the invertebrates and fish which live in them. Some can't survive in warmer waters. What are those organisms going to do to survive? Will they survive?

You listen to the radio and hear that there has been a **4.3** earthquake in California. The 4.3 refers to the earthquake's measurement on the Richter Scale, a scale that determines the magnitude or size of an earthquake.

A tsunami is a **series of huge waves** that occur often because of an underwater disturbance, such as an earthquake or volcano eruption. A tsunami occurred in 2004 due to a large earthquake in the Indian Ocean that greatly affected many countries such as Sri Lanka, India, Maldives, Indonesia and Thailand.



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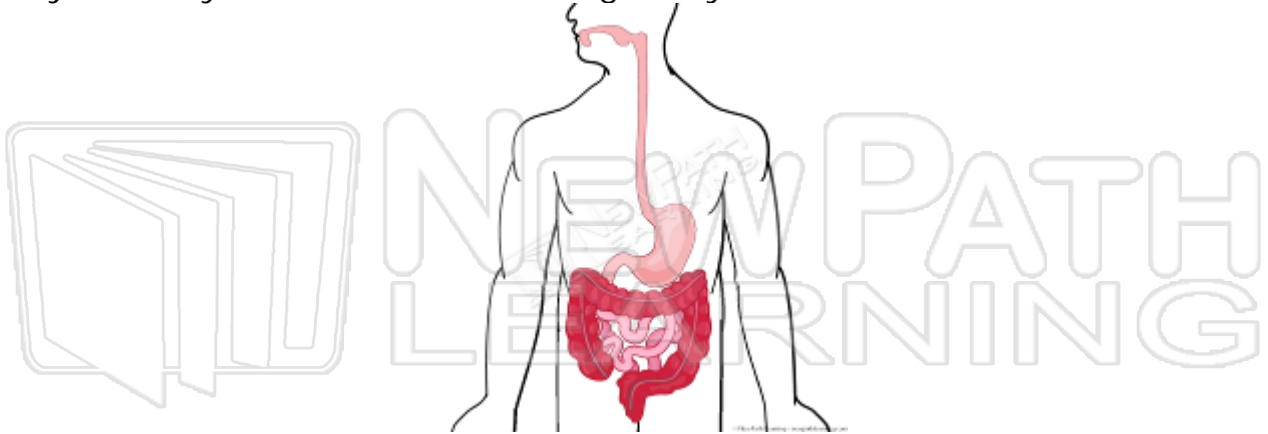
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The **Safe Drinking Water Act** was established to protect the quality of **drinking water** in the United States.

### You even experience science when you eat:

It's dinner time and you are starving. Your Mom put a delicious piece of pizza in front of you. Even before you take a bite, saliva starts filling your mouth from **glands** inside your mouth. Your saliva contains chemicals that help start to break down your food so your body can digest it, even before you swallow.

Everyday you walk, talk, and move around in many ways. All these things require energy. The **process** of digestion releases energy in your body every day so that you can do all the moving that you do.



Our bodies need minerals, which are natural substances found in the Earth. We get these minerals from the food we eat.



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separated the mineral group because they discovered these groups are very different and do not belong in the same group according to many scientists.

**There are many organizations that dedicate their time to science.**

Take those that help animals from becoming extinct. Animal conservation organizations help **protect and preserve** living species that are in danger of becoming extinct.

### Science on display at night:

Have you ever seen a meteor shower? **Meteors** are small fragments of debris from space that enter the Earth's atmosphere at extremely high speed. They then turn into a vapor leaving a streak of light that disappears quickly.



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### When you listen to the weather report, you're hearing science in action:

You hear on the radio that a **high air pressure system** will be moving in tomorrow, which means there is a very good chance of clear skies. But if you hear that a **low air pressure system** is moving into your area, you may want to grab your umbrella.



### Science is FUN:

Did you ever go to an amusement park? Do you like roller coasters? We



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into the inner ear and restores some hearing to the deaf.

### You can make a CAREER out of science too:


There are many types of scientists: a biologist studies living organisms and their environments, a zoologist studies animals, a botanist studies plants, a paleontologist studies fossils, and a cytologist is one who studies cells! The **study of cells** is known as cytology, which many scientists study to find cures for diseases.



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 The **study of life** is known as \_\_\_\_\_.

**A** biology  
**B** cytology  
**C** psychology  
**D** botany




2 Everyone needs to take care of his or her skin cells. **What is one way we can protect our skin cells?**

**A** put oil on our skin daily  
**B** avoid washing your skin daily  
**C** put on sun block before going outside  
**D** make sure we take long baths



3 We help plants and plants help us. **We breathe in oxygen and breathe out \_\_\_\_\_.** Plants take in what we breathe out and release **oxygen** for us to use.

**A** carbon  
**B** nitroaen



4 **Botanists** study \_\_\_\_\_, which are used to make medicines, foods, fibers, building materials, and other products.

**A** plants  
**B** animals



5



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8 \_\_\_\_\_

**B** space  
**C** vertebrates  
**D** soil



8 \_\_\_\_\_

**C** bird  
**D** dragonfly



9 The United States Congress passed the **Clean Air Act** in 1963. The Clean Air Act helps reduce \_\_\_\_\_ by **setting strict standards** that industries need to follow.

**A** water temperatures  
**B** water availability  
**C** air pollution and smog  
**D** air and water pollution



10 Let's say you are very hungry. Your mom puts a delicious piece of pizza in front of you. Even before you take a bite, your glands send \_\_\_\_\_ into your mouth. It contains **chemicals that help break down your food** and begin the digestive process.

**A** saliva  
**B** water  
**C** salt  
**D** blood






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(A)

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(C)

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(C)

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**B** animals



(A)

5



(C)

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6

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8

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Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

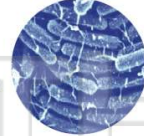
1 **White blood cells** are produced in your body to fight off foreign and diseased cells. The worse the infection, the more white blood cells your body produces to fight the infection. So a **raised white blood cell count** indicates \_\_\_\_\_.

- A a healthy body
- B someone is tired
- C an infection of the body
- D someone is hungry



2 Scientists moved from a Five Kingdom classification system to a Six Kingdom classification system. They **split the Monera group** into two, eubacteria and archaeobacteria, because \_\_\_\_\_.

- A they are similar
- B they are different
- C all bacteria are the same
- D no bacteria is alike



3 \_\_\_\_\_ help **protect and preserve** living species that are in danger of becoming extinct.

- A Factories
- B Environments
- C Animal conservation



4 Which of the following is an example of a **non-living component** of the ecosystem you live in?

- A air
- B plants



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- B the time the earthquake happened
- C an address where it occurred
- D the number of earthquakes

- C 7
- D 8



9 The \_\_\_\_\_ was established to protect the **quality of drinking water** in the United States.

- A Clean Water Act
- B Anti-Water Pollution Act
- C Clear Water Act
- D Safe Drinking Water Act



10 A \_\_\_\_\_ is a **series of huge waves** that occur often because of an underwater disturbance, such as an earthquake or volcano eruption. A tsunami in 2004 affected many countries such as Sri Lanka, India, Indonesia and Thailand.

- A wave
- B tide
- C tsunami
- D current

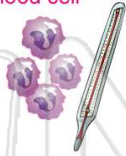




Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

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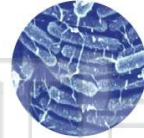
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C

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A



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C

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 D 8



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A wave  
 B tide  
 C tsunami  
 D current



C



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 Have you ever seen a meteor shower?  
**Meteors** are small fragments of debris from space that enter the earth's atmosphere at extremely high speed. They then turn into a \_\_\_\_\_, leaving a streak of light that disappears quickly.

A vapor      C solid  
 B liquid      D comet



2 You can tell the moon in this phase comes **before the full moon phase** and is **waxing** (meaning the visible area is getting larger) because the \_\_\_\_\_.

A moon rose in the east  
 B moon looks round  
 C visible surface is on the left side  
 D visible surface is on the right side



3 You hear on the radio that a **high air pressure system** will be moving in tomorrow. **After hearing this news, which would most likely occur?**

A The baseball game will be cancelled.  
 B You will have to play inside.

4 Which item may be a good idea to bring with you if you hear that a **low air pressure system** is moving into your area?

A sun glasses



5



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C take not showers  
 D carpool with a friend

will not work.  
 C If a bulb goes out, others will stay lit.  
 D Parallel circuits are safer.

9

When would it be helpful to use a **convex type of lens**?

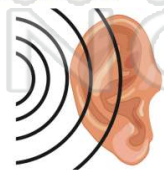
A to heat something quickly  
 B to make something smaller  
 C to magnify an object  
 D to make a mirror



10

A \_\_\_\_\_ is an **electronic device** that is **implanted during surgery into the inner ear** and restores some hearing to the deaf.

A cochlear implant  
 B sound implant  
 C hearing implant  
 D hearing aid





Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

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- B You will have to play inside.



D

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- A sun glasses



C

5



B

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C

9

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- B to make something smaller
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- D to make a mirror

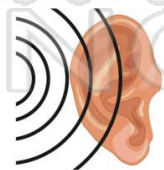


C

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- A cochlear implant
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- C hearing implant
- D hearing aid



A



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

**Match each of the following terms to its definition:**

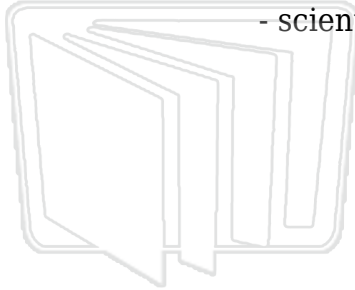
Tsunami

Botanists

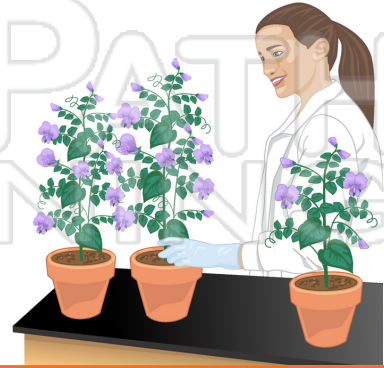
Cytology

White blood cells

1. \_\_\_\_\_ - scientists who study plants



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2.



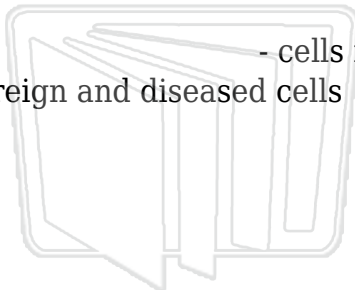
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3. \_\_\_\_\_  
and fa  
under  
volcan

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4. \_\_\_\_\_ - cells in your body that fight  
off foreign and diseased cells



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Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

**Match each of the following terms to its definition:**

- |          |                   |
|----------|-------------------|
| Tsunami  | Botanists         |
| Cytology | White blood cells |

1. **botanists** - scientists who study plants



2. cyt

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3. tsu  
movin  
distur  
erupti

4. **white blood cells** - cells in your body that fight off foreign and diseased cells

