SMALL WORD PARTS. BIG SCIENCE DISCOVERIES!

4–5 GRADE



LIVING THINGS GREEK & LATIN ROOTS IN SCIENCE

UNIT 1

KEEP SCROLLING TO SEE WHAT'S INSIDE!

WHAT'S INCLUDED?

- Teacher Guide and Lesson Plans
- Word Parts Preview
- Break It Down
- Sort, Match, and Build
- 3 Informational Reading Passages
- Science Notebook Activities
- Assessment and Answer Key

20	9	3	5
Total PDF Pages	Student activity pages	Reading passages	Greek and Latin word parts



LESSON PLANS

LESSON PLAN: OVERVIEW AND DAYS 1 TO 2

Unit 1: Living Things • Greek and Latin Roots in Science

LEARNING GOALS

- Students identify the meanings of five Greek and Latin word parts: bio, photo, micro, scope, and log / logy.
- Students break science terms into word parts and use the parts to determine a meaning.
- Students use word-part knowledge to read informational texts and explain ideas about living things in writing and in diagrams.
- Students collect and graph data, then use evidence and reasoning to explain how exercise changes the body.

PACING & MATERIALS

Plan for 40-45 minutes a day.

Each day follows the same rhythm: a short warm-up, direct teaching, practice, and a quick close. You will need one copy of the student pages per child, chart paper or a whiteboard, and sticky notes.

Day 4 also needs a timer or stopwatch for each group of three students.

DAY 1 Meet the Word Parts

Goal: Students learn the five word parts

Warm-Up (5 min): Write biology on the them that a word's parts can give clue

Teach (15 min): Work through page 1 words. Students underline the part in that -logy shows up at the end of biol

Practice (15 min): Model the first two aloud. Partners complete the next th

Close (5 min): Give students a sticky Either biology or biosphere is correc

DAY 2 Break It Down, Sort,

Goal: Students finish decoding the words

Warm-Up (5 min): Show three ter

Teach (10 min): Model Sort It on Build It tiles snap together, then

Practice (25 min): Students finis Finishers try the Challenge.

Close (5 min): Students share

LESSON PLAN: DAYS 3 TO 5

Unit 1: Living Things • Greek and Latin Roots in Sc

DAY 3 Three Reading Passages

Goal: Students read for information and use word parts to answer ques and the variety of life.

Warm-Up (5 min): Post a sentence frame where everyone can see it: T Practice it once with a word from page 2.

Teach (15 min): Read Passage 1, "A World Too Small to See", aloud to parts. Model question 2 with the frame, then have students answer q

Practice (20 min): Partners finish page 3. Then split the class: half read 6). Each student answers the questions for that passage.

Close (5 min): Pair a student from each passage. Each tells the mai using its word parts.

Tip: This is a full day. If your students need more time, spend two da passage as independent reading.

DAY 4 Science Notebook Connection

Goal: Students apply word parts in real science work: they explai changes pulse.

Warm-Up (5 min): Ask students to put two fingers on their wrist an after a minute of jumping jacks, and why. Students write a predi

Teach (10 min): Demonstrate finding a pulse and counting for 1 how the pulse is a sign of life. Show how to set up a line graph and choose a scale.

LESSON PLAN: ASSESSMENT AND SUPPORT

Unit 1: Living Things • Greek and Latin Roots in Science

SCORING

Quick Check: questions 1 to 5 are worth one point each. The Challenge is worth meanings of micro, bio, and logy, and one for connecting more points on the multiple-choice group review

Passage word p understanding

WHAT

- Stude
- Stude scope
- Studer

COMM

Watch for heart slows

SUPPORT

- Keep pa
- Reduce B
- Read the p
- Provide a gr finding their ow

SUPPORT FOR ENGLISH LE

- Use the Spanish cognates word parts to words the
- Offer the sentence fr sentence.
- Pair students with a partner who can talk through the word

EXTENSIONS

- Word families: students hunt for more words with these parts (e.g. make a poster showing the parts and their meanings.
- Science link: Students observe a leaf or onion skin under a hand lens or mic it with at least three unit words.
- Invent a word: students use the Challenge o to cre mean.
- Extend the investigation: Students com ing pul recovery

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Notes page on Day 1 and again on Day 3 so students can connect the

Day 3 for every written response, and accept a lab ed sketch alongside a

microwave, photo y, periscope) and

draw what see, and label

ain wh would

mping jacks ve alk.

PROVIDES A READY-TO-FOLLOW FIVE-DAY PLAN, SAVING TEACHERS TIME AND SIMPLIFYING LESSON DELIVERY.

WHAT'S INCLUDED?

WORD PARTS PREVIEW

Name: _____ Date: _____

These five word parts appear in science words about living things and the tools scientists use to study them. Read each one, then add a word you already know.

bio — means life
WORDS YOU MAY KNOW: biology biography biome antibiotic
My word: _____
I think it means: _____

photo — means light
WORDS YOU MAY KNOW: photograph photocopy photosynthesis
My word: _____
I think it means: _____

micro — means small
WORDS YOU MAY KNOW: microscope microwave microphone
My word: _____

log / logy — means study of
WORDS YOU MAY KNOW: biology zoology geology technology
My word: _____
I think it means: _____

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BREAK IT DOWN

Name: _____ Date:

Split each science word into its parts. Then write what the word means in your own wo
The first one is done for you.

WORD	WORD PARTS	WHAT IT MEANS
biology	bio + logy	the study of living thing
biologist		
biosphere		
biodiversity		
zo		
photo		
photo		
phototropis		
microscope		
telescope		
microorganism		
microbiology		

EXTRA WORDS AND WORD PARTS TO KNOW
zoo = animal; synthesis = putting together; graph = write, draw; tropism = turning; tele = far; sphere = a round layer or ball; diversity = variety; organism = a living thing; ist = one who

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Greek and Latin Roots in Science • Unit 1 • Student page 2 of 9

SORT, MATCH, AND BUILD

Name: _____ Date: _____

A. SORT IT Write each word under the word part it begins with.

photograph, phototropism, microscope, biodiversity, biosphere, microorganism, biology, photosynthesis, microbiology

bio	photo	micro

B. MATCH IT Write the word t

zoology	microscop

1. a tool for looking at very s
2. the study of animals
3. a picture made with light
4. all the places on Earth where life exist
5. a scientist who studies living things
6. a tool for looking at faraway things

C. BUILD IT Use the parts to build three science words. Write each word and what it means.

bio · photo · micro · tele · zoo · scope · graph · sphere · logy · ist

1. _____ means _____
2. _____ means _____
3. _____ means _____

CHALLENGE
Scientists often build new words from Greek and Latin word parts. Invent a word that uses one part from this unit. Write it and tell what it would mean.

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WORD PARTS PREVIEW

BREAK IT DOWN

SORT, MATCH, & BUILD

WHAT'S INCLUDED?

DRAW & EXPLAIN

SCIENCE ACTIVITY

QUICK CHECK

SCIENCE NOTEBOOK: PHOTOSYNTHESIS

Name: _____ Date: _____

1. DRAW IT

Draw and label the process of photosynthesis. Show where sunlight, water, and carbon dioxi
where sugar and oxygen go out.

sunlight · water · carbon dioxide · sugar · oxygen

SKETCH

2. EXPLAIN IT

Explain how a plant makes its own food. Use at least four words from this unit an

CHECK YOUR WORK

- ☐ My diagram shows sunlight, a leaf, a stem, and roots.
- ☐ I used at lea
- ☐ I labeled water, carbon dioxide, sugar, and oxygen.
- ☐ My arrows s

WORD BANK

photosynthesis · phototropism · biosphere · biology

Add other words from the unit that fit your diagram.

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SCIENCE NOTEBOOK: MEASURE IT

Name: _____ Date: _

QUESTION How does exercise change your pulse, and how long does it take to return to norm

MY PREDICTION

I predict that my pulse will rise to about _____ beats per minute b

PROCEDURE

1. Sit quietly for 1 minute. Find your pulse on your wrist or neck. Count the beats for 15 seconds and multiply that number by 4. Record it as Rest.
2. Do jumping jacks for 1 minute while your partner keeps time.
3. Sit down and count your pulse for 15 secon away. Multiply that number by 4 and record minutes. Repeat every minute.
4. Graph your data. Draw a dotted line at yo rate. Then find how much your pulse chang

DATA TABLE Pulse = beats in 15 sec x 4

TIME	PULSE (BEATS PER MIN)
Rest	
0 min	
1 min	
2 min	
3 min	
4 min	
Highes	

LINE GRAPH Bea

2 3

es after exercise

otted line = resting rate

ANA

My pu

It took about _____ minutes to come back close to my resting rate.

CLAIM Exercise made my pulse _____, and then it _____

EVIDENCE _____

REASONING Your muscles need more oxygen and energy when you exercise. Ex your heart beats faster, and use a word from this unit.

WORD PARTS Break **biology** into parts. Tell why the name fits this science.

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QUICK CHECK

Name: _____

Fill in the bubble for the best answer.

1. The word part bio means

- ○ A. light
- ○ B. small
- ○ C. life
- ○ D. measure

2. A microscope is a tool for

- ○ A. looking at
- ○ B. taking p
- looking at faraway thi
- easuring heat

3. Photosynthes

- ○ A. make fo
- ○ B. grow sh

to

ake food

ove around

4. A zoologist studies

- ○ A. rocks
- ○ B. weather
- ○ C. stars
- ○ D. animals

5. The biosphere is

- ○ A. a kind of plant food
- ○ B. all the places on Earth where life exists
- ○ C. a looking at cells
- ○ D. the sun's ligh

6. CHALLENGE

Microbiology is a branch of science. Use the word parts micro, bio, and logy to explain what a microbiologist studies.

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3-PAGE READING PASSAGE

STUDYING SMALL THINGS

PHOTOSYNTHESIS

LIFE ON EARTH

READ: PASSAGE #1 Name: Date:

Read the passage. The bold words use word parts from this unit.

A WORLD TOO SMALL TO SEE

A **microscope** is a tool that makes tiny things look much bigger. It uses curved glass lenses to bend light, making the image appear larger. Lenses also power the **telescope**, a tool for viewing faraway objects such as the moon. About 350 years ago, a Dutch [illegible] named Antonie van Leeuwenhoek built his own microscopes. He look

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Scientists wh
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THINK ABOUT TH

1. What do
passage.

2. Break **mi**

3. Name two pla

4. Break **microbiology**

the word part **micro** tell you about microorganisms? Use

word parts. Explain why the name fits this

croorganisms live. Why are many m

rts. Explain what a biologist i

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READ: PASSAGE #2 Name: Date:

Read the passage. The bold words use word parts from this unit.

PLANTS MAKE FOOD FROM LIGHT

Most living things need food for energy, but plants make their own. They do it throug **photosynthesis**. The word comes from photo, meaning light, and synthesis, meaning putting together. In photosynthesis, a plant puts together water, carbon dioxide, and captures sunlight. The plant makes sugar and releases oxygen, which animals nee breathe.

Light also guides how plants grow. A plant on a sunny windowsill will bend toward glass. This is called **phototropism**, meaning growth toward light. Without photosynthesis, the **biosphere** would ha very little food or oxygen.

THINK ABOUT THE WORD PARTS

1. Break **photosynthesis** into word p es each part tell you about how plan make food?

2. What three things does a pla er in photosynthesis? What does it make

3. A plant on a windowsill be the glass. Use the word **phototropism** to explain why.

4. Why do animals depend on photosynthesis, even animals that never eat plants?

READ: PASSAGE #3 Name: Date:

Read the passage. The bold words use word parts from this unit.

STUDYING LIFE ON EARTH

Biology is the study of life. Because Earth has so many kinds of living things, biologists divide their work into branches. **Zoology** is the study of animals. Botany is the study of plants. Each branch asks different questions, but all of them help us understand how living things grow, eat, and survive.

All of
dee
vari
bec

Biodiversity matters because living things depend on one another. If one kind of plant or animal disappears, others that rely on it may struggle. **Zoologists** and other **biologists** count species, track animal populations, and look for ways to protect habitats. By studying life closely, they help people make wise choices abo nd and water.

THINK ABOUT THE WORD PARTS

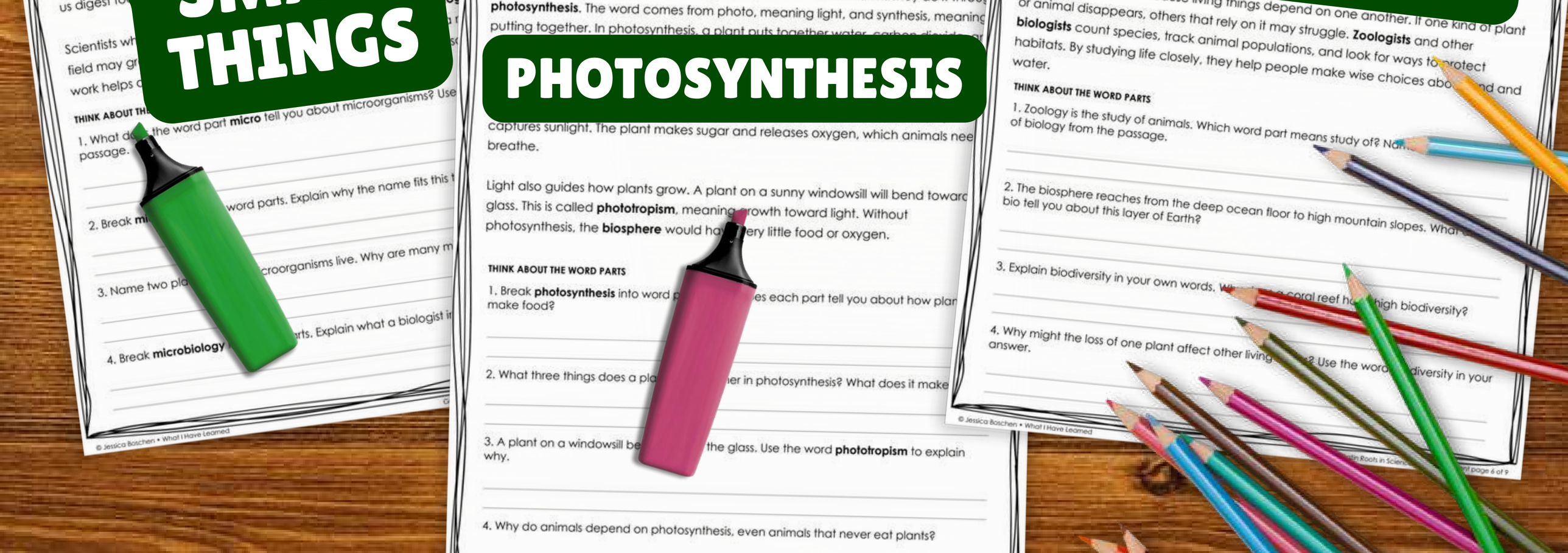
1. Zoology is the study of animals. Which word part means study of? Na
of biology from the passage.

2. The biosphere reaches from the deep ocean floor to high mountain slopes. What bio tell you about this layer of Earth?

3. Explain biodiversity in your own words. W coral reef ha high biodiversity?

4. Why might the loss of one plant affect other living ? Use the word diversity in your answer.

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WAYS TO USE IN THE CLASSROOM

- **Whole-Group Instruction:** Introduce and practice science vocabulary together.
- **Learning Centers:** Rotate through sorting, matching, building, and reading activities.
- **Science Notebooks:** Apply learning through diagrams and hands-on investigations.
- **Independent Practice:** Use for enrichment, review, early finishers, or sub plans.

YOU WILL LOVE THIS BECAUSE



Cross-Curricular Learning

Integrates science vocabulary, reading comprehension, writing, and scientific investigation into meaningful interdisciplinary classroom learning experiences.



Hands-On Science Connections

Encourages students to apply learning through photosynthesis diagrams, pulse investigations, graphing, and evidence-based explanations.



Ready-to-Use Teacher Support

Provides structured lesson plans, differentiation strategies, assessments, and answer keys for flexible classroom implementation.



My passion is making learning accessible to all students. I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections. I love figuring out the small components that build up to the big ideas and helping students see it all.



What I have LEARNED