



GREAT HEARTS WESTERN HILLS

Great Hearts Academy

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Dear 6th Grade Families,

Welcome to week five of Remote Learning! We will be observing Friday (4/24) as a holiday. Therefore, this week of Remote Learning will be 3 days of instruction and 1 assessment day. As we move into Week 5, we continue to reach out to our scholars through scheduled Zoom Classes and tutoring sessions. Please continue to look for weekly emails from your Lead Teacher with further details. Please continue to encourage your child to use RLN (Remote Learning Notebook) to collect their notes from the daily guided instruction and their independent practice. Remember this RLN will be shared when we return to school. Feel free to glue notes, Art projects, Latin work, or anything else you would like to share with your classmates.

Again, if your child has any questions, does not know or understand how to do something, please reach out to us by e-mail and we will provide more directions and clarifications. Stay safe, healthy, and studious!

All of our best,
Your 6th Grade Teachers

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Table of Contents

1. Letter to Families.....	Pg. 1
2. Table of Contents.....	Pg. 2
3. Parent Packet.....	Pgs. 3-8
a. General Instructions & Helpful Tips for Parents	
b. Monday - Wednesday Instructions/Answer Keys for Parents	
4. Student Packet - organized by day: Daily Plan, Guided & Independent Practice, and Rubric	
a. Monday	Pgs. 9-18
b. Tuesday	Pgs. 19-33
c. Wednesday	Pgs. 34-52
5. Appendix:	
Vocabulary Packet	Pgs. 53-60
Skill Review	Pg. 61
6. Thursday Assessments	
a. Student Affidavit- signed by both scholar & parent	Pg. 62
b. Assessments	Pgs. 63-69

****The Thursday Assessment Packet needs to be turned in by Saturday at 8pm**

Sections in **bold** are necessary for printing. The rest can be viewed online and completed in your remote learning notebook.

General Packet Instructions for Parents

Dear Families,

In this packet, you will find all of the activities and readings necessary for your student to access and complete this week's lessons. In the table of contents you will see how the material is divided. The work for Monday - Wednesday does not need to be printed. The Parent Guide can be found at the beginning of the packet. This guide has helpful tips and answers to some of the Independent Work. This is a great time for our scholars to work on their great sense of wonder! Remember it is up to the parent to decide the daily schedule and decide how much work to do in one sitting (see sample schedule below). As much as possible, the teachers have designed the activities to be done independently. Each activity will be coded as either **I=Independent activity** or **PA=parent assistance needed**. Additionally, each activity/assignment will have a suggested amount of time it should take to complete.

For the sake of academic honesty, please help the students be accountable for doing the portions of the work that were designated as Independent work. If you notice that from the student's answers that they need some help better understanding the directions or the content, feel free to reteach, review, or assist the student. The only item that the students will be **submitting** is the **Thursday Assessment Portion**. This is attached separately and will be graded. You will be asked to administer these assessments to your child. After your student completes their Assessment packet, please take pictures or scan the work and email it to your teacher. **The deadline for submission is Saturday at 8pm.**

Sample Daily Schedule:

8:00 AM Wake up and follow the typical school morning routine (minus the uniform!) - get dressed, comb hair, eat breakfast, brush teeth, etc.

8:30 AM Read The Wind in the Willows and answer the reflection questions

9:15 AM Take a walk, play a game, grab a snack, or play "Simon Says" ;)

9:30 AM Math- if you have extra time Check out the extra "Skill Review" in the Appendix portion OR practice your Math Facts

10:15 AM Help out around the house or help a younger sibling with their remote learning

10:30 AM Poetry and Vocabulary

10:45 AM Specials

11:00 AM Recess. Run around, build something, or have a snack!

11:30 AM History or Science

12:15-1:15 PM Go outside and pick a plant or find a cool bug to draw! Enjoy a picnic lunch if the weather is nice!

1:15 PM Complete ELAR or MATH independent work IF you are finished enjoy a book of your choice.

1:45 PM That's it! You're done for the day.

Helpful Tips and Resources:

ELAR: Our new novel is The Wind in the Willows ISBN 9780143039099
You can also access the book at the following website [gutenberg.org](http://www.gutenberg.org)
<https://www.gutenberg.org/files/27805/27805-h/27805-h.htm>

A note on reading The Wind in the Willows: If your student struggles to comprehend this text, or finds it a challenge to read on their own, please consider the following options:

- 1) Purchase the audiobook from Audible. Students can listen on any smart device – Android & Apple devices – you just need to download the app if necessary. [Audible Link](#)
- 2) Read aloud with your child!

MATH: Practice Math facts at <https://www.math-drills.com/>
Find extra help at <https://www.khanacademy.org/math>

HISTORY: We will pause on our History lessons this week to give focus to Science, however you can continue to learn more about Mexico at the following sites:

National Museum of Anthropology, Mexico City

Dig into the archaeology and history of Mexico's pre-Hispanic heritage with a virtual tour of 23 exhibit rooms, including artifacts from the Mayan civilization. [National Museum of Anthropology Link](#)

Take a tour of the geography of Mexico <https://www.pbs.org/video/passport-latin-america-mexico-1/>

PARENT GUIDE/ANSWER KEY - Monday

ELAR

Lit. 1. While fleeing the chauffeur and policemen, Toad falls into the river, which carries him to Rat's hole. Once safe inside Rat's hole, he begins boasting of his escapades again. 2. The River-bankers (friends of Rat, Badger, and Mole) take Toad's side and say he was treated unjustly, but the Wild Wood animals (stoats, weasels, and ferrets) say hard things of Toad, like his sentence serves him right and he'll never get out. 3. At Toad Hall, the weasels seem to be in charge. The stoats and ferrets remain mostly outside Toad Hall, acting as sentries around the perimeter. 4. Rat, the poet, considers proper English to be important. Perhaps in Rat's mind, proper English is one trait that separates him and his friends from the barbaric Wild Wooders who are their enemies. Badger and Toad don't think proper English is important, which is not very surprising. In their present debate, Rat is correct. 5. Mole disguises himself in Toad's washerwoman clothes and feeds the Wild Wooders at Toad Hall a story about a great invasion of bloodthirsty rats, badgers, and toads on its way to storm Toad Hall. His story has begun to stir up fear and strife among the stoats, ferrets, and weasels.

MATH Products with Several Negative Factors

Parent Instructions: Students will find the rules for multiplying with several negative factors. If the number of negative factors is odd - the product is negative. If the number of negative factors is even - the product is positive. You can view a tutorial at Khan Academy for more information:

<https://www.khanacademy.org/math/arithmetic/arith-review-negative-numbers/arith-review-mult-divide-negative/s/v/multiplying-positive-and-negative-numbers>

Answer Key: 1)-64 2)-660 3)-90 4)243 5)2,222 6)64 7)60 8)0

SCIENCE: Life Scientist Research Paper

Parent Instructions: Before Spring Break, scholars were asked to interview a Life Scientist. We have modified the original assignment by giving the scholars a choice to either interview OR research a Life Scientist. Please reach out to your scholar's teacher if your child needs research material.

PARENT GUIDE/ANSWER KEY - Tuesday

ELAR

Lit. 1. First, Toad falls into the river, making a great commotion; then he runs into the others in the secret passage, causing chaos and confusion, and almost gets shot by Badger. 2. Badger is armed with a cudgel, whiskers bristling. Rat is “desperate and determined, his belt bulging with weapons of every age and every variety.” Mole rushes in on the Wild Wooders, black and grim, brandishing his stick and shouting, “A Mole! A Mole!” Toad is swollen to twice his ordinary size, emitting Toad whoops and shouting the words to the Chief Weasel’s mocking song about him. 3. Mole handcuffs prisoners and confiscated weapons of stoats and weasels. Also, at Badger’s behest, he forces some of the Wild Wood prisoners to get to work upstairs in Toad Hall, preparing bedrooms for Toad and friends. Finally, he shows wise leadership in choosing to pay them for their work instead of beating them; in this way, he wins their loyalty and gratitude. 4. The altered Toad simply smiles and murmurs humble remarks when congratulated about his courage, strength, or cleverness. The animals are confused by his modest behavior. The younger animals are disappointed and complain “things were not so amusing as they used to be in the good old days.” Some even begin to demand a speech or song from Toad. Perhaps Toad learns that the less one speaks about himself or his exploits, the more curious others become. 5. When the four stroll in the Wild Wood, they are respectfully greeted by its inhabitants, and mother weasels point them out to their babies as “the great Mr. Toad!... the gallant Water Rat... the famous Mr. Mole.” Mothers also use Mr. Badger’s name to frighten their misbehaving children.

GRAMMAR:

Answer Key: 1. When she was a child, Jane liked John.
2. Yesterday, Marie looked terrific in her yellow dress.
3. Before they moved to San Francisco, my grandparents lived in San Jose.
4. When they were roommates, Lucy played tennis more often than Fred.
5. The quarterback talked to reporters after last week’s victory.
6. In the 1800’s, usually women cared for the children. *In the 1800s,*
7. After the trial, the lawyers discussed the case.
8. Before it went to Obedience School, the dog growled at salesmen and snarled at Avon ladies.
9. Many students graduated from high school last year.

MATH Products with Several Negative Factors

Parent Instructions: Students will continue to practice the rules for multiplying with several negative factors. If the number of negative factors is odd - the product is negative. If the number of negative factors is even - the product is positive. You can view a tutorial at Khan Academy for more information:

<https://www.khanacademy.org/math/arithmetic/arith-review-negative-numbers/arith-review-mult-divide-negative/s/v/multiplying-positive-and-negative-numbers>

Answer Key

1) 256 2) 625 3) -1344 4) 0 5) 400 6) -7560 7) 54 8) -2
9) $5(-6) + (-7) = -37$ R. Exercises: 1) 109 2) 8 3) 473 4) 27 5) 361 6) 347 7) 64 8) 192 9) 1336

SCIENCE

Checkpoint. 1. Cell wall, cell membrane, ribosomes, genetic material, flagella 2. Conjugation is a form of sexual reproduction involving the transfer of some genetic material from one cell to another. Figure 6. Flagellum-helps the bacterium move. Cell wall-protects bacterium. Figure 8. By converting the chemicals in oil to harmless substances. Section 2 Review. 1. Bacterial cells are prokaryotic; the cells of other organisms are

PARENT GUIDE/ANSWER KEY - Wednesday

ELAR

MATH *Quotients of Integers*

Parent Instruction: Scholars will learn the following rule that will help them divide negative numbers: The quotient of two positive or two negative integers is positive. The quotient of a positive integer and a negative integer is negative.

Answer Key:

- 1) -14 2) -4 3) -15 4) -28 5) 3 6) -3 7) -5 8) 9 9) -32 10) -n 11) -1 12) 1 13) -n

SCIENCE

Checkpoint 1. All protists are eukaryotes and live in moist surroundings. 2. Pseudopods are used to move and obtain food (respond to stimuli). 3. A spore is a cell that can grow into a new organism. Figure 10. Animal-like protists are like animals in that they are heterotrophs, moving from place to place to obtain food. They are different in that they are unicellular. Figure 12. An organism that feeds on its host, harming it. Figure 14. The underground hyphae absorb food from the soil. Section 3 Review. 1. Animal-like protists: unicellular, heterotrophic. Plantlike protists: uni- or multicellular, autotrophic. Fungus-like protists: heterotrophic, have cell walls, and reproduce using spores. 2. Fungi are eukaryotic, use spores to reproduce, and are heterotrophs that feed in a similar way. 3. The hyphae grow into the food sources and spread out, creating a large surface area for absorbing food. 4. Fungi reproduce sexually by growing spore-producing reproductive hyphae or by budding. Fungi may also reproduce sexually when the hyphae of two fungi grow together and form a new spore-producing structure. 5. Mushrooms are classified as fungi because they are heterotrophic. Plants are autotrophic.

MONDAY- 4/20/20

ELAR (I)

VOCABULARY: pages 181-185; Vocabulary Packet in the Appendix
LITERATURE: Goal/Objective: Analyze a problem and conflict resolution.
Materials Needed: *The Wind in the Willows*, RLN
Specific Instructions: Read Chapter 11 and answer comprehension questions in the RLN.

GRAMMAR/
WRITING: Goal/Objective: Past Tense Verbs/Past Participles
Materials Needed: RLN and student packet
Specific Instructions: Fill in the blank with the correct verb tense

POETRY: Goal/Objective: Analyze the meaning of a poem.
Materials Needed: RLN, "My Heart Leaps Up"
Specific Instructions: Using the previously used analysis page in the RLN, continue writing an analysis of the poem.

Math (I/PA to help check answers)

Goal/Objective: Finding the products that have several negative factors
Materials needed: RLN (Remote learning notebook), guided instruction, and independent practice
Specific Instructions: Write the rules for finding the product of several negative integers in your RLN and do your independent practice in your RLN

Science (I/PA for proofreading)

Goal/Objective: research and present a life scientist
Materials needed: RLN
Specific Instructions: written reports due with the Thursday assessments.

Special:

PE (I)

Goal/Objective: Complete the exercises in a single activity.
Materials needed: Open space
Specific Instructions: Follow instructions given for each activity.

ELAR

LITERATURE

The Wind in the Willows Chapter Eleven “Like Summer Tempests Came His Tears”

Vocabulary for Notebook Journal

- 1) Subterfuges- deceptive strategies for the purpose of escaping or evading
- 2) Rakishly- carelessly or jauntily
- 3) Ignominiously- in a degrading way; shamefully
- 4) Pottering- poling about; wandering aimlessly
- 5) Parapet- a low wall or railing along the edge
- 6) Portentous- overdone
- 7) Victuals- food
- 8) Accoutrement- an accessory item of equipment or dress

Read Chapter 11, annotating the text and/or using the Stop, Think, Jot method.

Answer the following questions in your notebook. Be sure to include page numbers/text references:

- 1) Toad’s luck is with him again. How does Toad escape his second brush with the law? What does he do as soon as he realizes he is safe in Rat’s house?
- 2) Who are the Wild Wooders? Describe two groups of animals that take opposite views of Toad’s troubles with the law.
- 3) What is the hierarchy of stoats, weasels, and ferrets at Toad Hall? Use quotes in the book to describe each animal or draw a picture.
- 4) Who thinks proper English is important and who doesn’t? Are you surprised? Who is right?
- 5) How does Mole show himself to be the cleverest animal of all?

GRAMMAR/WRITING: Past Tense Verbs and Past Participles

Exercise: 1

Fill in each blank with the correct past tense form of the verb given.

Example: PLAY 1. We **played** baseball all afternoon.

- FRY 1. We _____ the fish we caught over the open fire.
- STUDY 2. All of us _____ hard for the chemistry exam.
- CRY 3. Mary _____ on his shoulder all through the movie.
- MARRY 4. She _____ him on Saturday and left the following Monday.
- TRY 5. Although the tickets were sold out weeks in advance, John _____ to get in the concert by posing as a photographer.
- SHOP 6. Anthony _____ for all his Christmas presents at the art fair last summer.
- ADMIT 7. No one _____ that he was tired.
- PLAN 8. Nancy and Jim _____ their divorce as if they were going on vacation.
- TERRIFY 9. The fireworks _____ the younger children.
- COMPILE 10. The teachers _____ the materials into a handbook.

POETRY

Reread "My Heart Leaps Up" by William Wordsworth

In your notebook, continue your analysis of the poem.

"So be it when I shall grow old,
Or let me die!" (5-6)

What do **you** think the poet is saying here, and why?

MATH

(Monday)

Products with Several Negative Factors

Let's Review:

1. 2×-3
2. -25×0
3. -12×13
4. $-8(7 + 8)$
5. $-25 - (-18) - 37$

Check your answers:

$$-6, 0, -156, -8 \times 15 = -120, -25 + 18 + -37 = -44$$

Guided Instruction:

Let's study the following steps that use the distributive property.

$$(6 + -1)(-1) = (6 \times -1) + (-1 \times -1)$$

$$\begin{aligned} -5 \times -1 &= -6 + (-1 \times -1) \\ -5 &= -6 + (-1 \times -1) \end{aligned}$$

Since $-5 = -6 + (-1 \times -1)$ and we know that $-5 = -6 + 1$

We can conclude that $-1 \times -1 = 1$

We can use the fact that $-1 \times -1 = 1$ to find the product of any two integers.

Example 1: Find the products

a) -1×-7

$$-1 \times -7 = -1 \times (-1 \times 7) = (-1 \times -1) \times 7 = 1 \times 7 = 7$$

b) -8×-7

$$-8 \times -7 = (-1 \times 8) \times (-1 \times 7) = (-1 \times -1) \times (8 \times 7) = 1 \times (8 \times 7) = 1 \times 56 = 56$$

**Notice that the products of -1×-7 and -8×-7 are *positive*

Example 2: Find the product

$$-3 \times 4 \times -2 = (-3 \times 4) \times -2 = -12 \times -2 = 24$$

Rule

The product of -1 and any integer equals the opposite of that integer.

The product of two negative integers is a positive integer.

Rule

For a product with no zero factors:

1. If the number of negative factors is odd, the product is negative.
2. If the number of negative factors is even, the product is positive.

Try This:

Find the product:

- 1) -2×-5 2) -6×0 3) -8×3 4) $-2(8 + -8)$ 5) $-2 \times -2 \times -2$

Check your answers:

1) 10 2) 0 3) -24 4) 0 5) -8

Independent Practice:

Find the product.

1. 16×-4

5. -101×-22

2. -10×66

6. $(-8)(7 + -15)$

3. -6×15

7. $(6 - 18)(-5)$

4. -9×-27

8. $12 \times 0 \times -11 \times -2$

SCIENCE

Life Scientist Project

For this project, you will research a life scientist! You can either present your findings to your classmates on Zoom, or complete a written report. Below, please choose a life scientist to research.

Biologist	Botanist
Microbiologist	Dentist
Veterinarian	Pediatrician
Herpetologist	Forester
Physiologist	Horticulturist
Cell Biologist	Herbalist
Scuba Diver	Cardiologist
Oculist	Tree Surgeon
Ophthalmologist	Orthopedic Surgeon
Nurse	Biochemist
Internal Medicine Doctor	Oncologist
Family Practice Doctor	Dental Hygienist
Zoologist	Medical Technician
Surgeon	Entomologist
Dermatologist	Mammalogist
Plastic Surgeon	Ecologist
Wildflower Expert	Oceanographer
X-Ray Technician	Podiatrist
Hematologist	Allergist
Marine Biologist	Anesthesiologist

Please choose an Option-

1. Life Scientist Presentation (via Zoom). This is the preferred option because your fellow classmates will be able to learn from you.
 - a. Prepare a 3-minute presentation about the life scientist you interviewed or researched. You may show your visual during this presentation, and you do **not** have to include the visual in your final written report.
 - b. Submit the written report with the Thursday Assessments.
2. Written Report Only
 - a. Submit a written report on the life scientist you have interviewed or researched. The written report **must** include a visual (you may take a picture of the visual and insert it into the document).
 - b. Submit the written report with the Thursday Assessments.

Follow the steps to complete your research project.

Step 1 - Organize your research:

Life Scientist: _____

(life scientist list below)

Topic Sentence: _____

Question #1	Question #2	Question #3
_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____
Explain	Explain	Explain
_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

Step 2: Create a Key Word Outline with your research:

I. Introduction

A. (Topic Sentence) _____

B. _____

C. _____

D. (Restatement of the topic) _____

II. Paragraph 1

A. (Main Idea- this should be your 1st question) _____

B. _____

C. _____

D. (Restate Main Idea) _____

- III. Paragraph 2
 - A. (Main Idea/2nd question) _____
 - B. _____
 - C. _____
 - D. (Restate Main Idea) _____
- IV. Paragraph 3
 - A. (Main Idea/3rd Question) _____
 - B. _____
 - C. _____
 - D. (Restate Main Idea) _____
- V. Conclusion
 - A. (Restate your Topic Sentence) _____
 - B. Question 1 Findings _____
 - C. Question 2 Findings _____
 - D. Question 3 Findings _____
 - E. (Powerful concluding sentence) _____

Step 3: Write a rough draft

Step 4: Ask a parent to proofread - read it aloud and check for grammar mistakes - add a “dress-up” to each sentence!

Step 5: Keep it in a safe place! You will need to write your final draft for your Thursday assessment

PE

Physical Education Week 5 Online

Task: This week's PE activity involves the use of your full name. I call this alphabet PE as each letter of the alphabet is associated with a specific exercise. Each exercise is done in repetition sets of 10 except the run-in place and planks. For that exercise do 30 seconds. (Don't shorten your name or use nicknames)

Goal: Try to complete the exercises in a single activity. If you cannot, continue when able and finish the exercises associated with your name.

Materials: None

A Frog Kicks	B Pushups	C Sit-ups	D Steam Engine	E Windmill
F Run in Place	G Jumping Jacks	H Squats	I Wall Sit	J Flutter Kicks
K Leg Lifts	L Crunches	M Mountain Climbers	N Crab Kick	O Planks
P Lunges	Q Cobras	R V Ups	S Front Clap	T Overhead Clap
U Bicycle	V Wide Arm Pushups	W Toe Touches	X High Jumper	Y Step Up
Z Burpee				

Example: Coach (C 10 sit-ups/O Plank/A 10 Frog Kicks/C 10 Sit-ups/H 10 squats)

I will be publishing a video demonstrating each of these exercises for you. I miss you all.

Coach France

Daily Rubric

Directions: Give yourself a check mark in each box at the end of each day. Then, give yourself a pat on the back! You did it! Nice work 😊

Monday, 4/20	<ul style="list-style-type: none"><input type="checkbox"/> I spent between _____ minutes on the daily activities.<input type="checkbox"/> I read all directions before I asked for more help.<input type="checkbox"/> If required, I wrote all of my answers in complete, cursive sentences.<input type="checkbox"/> I double-checked my written answers to check for capitalization, punctuation, and correct grammar usage.<input type="checkbox"/> My handwriting is neat and can be read by both me and an adult.<input type="checkbox"/> I showed all of my work in math when necessary.<input type="checkbox"/> I read for at least 20 minutes today. I used integrity and put forth my best effort today.<input type="checkbox"/> I am proud of myself and I know my teacher would be proud of me, too.
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TUESDAY- 4/21/20

ELAR (I)

VOCABULARY: pages 186 and 189; Vocabulary Packet in the Appendix
LITERATURE: Goal/Objective: recognize how characters develop through a novel.
Materials Needed: The Wind in the Willows, RLN
Specific Instructions: Read Chapter 12 and answer the comprehension questions.

GRAMMAR/
WRITING: Goal/Objective: Identify past and present participle
Materials Needed: RLN
Specific Instructions: Rewrite the sentences in your RLN

POETRY: Goal/Objective: analyze a poem
Materials Needed: RLN, "My Heart Leaps Up"
Specific Instructions: continue the analysis on the same analysis page previously used.

Math (I/PA to help check answers)

Goal/Objective: More practice finding the products that have several negative factors
Materials needed: RLN (Remote learning notebook), guided instruction, and independent practice
Specific Instructions: Write the rules for finding the product of several negative integers in your RLN and do your independent practice in your RLN

Science (I)

Goal/Objective: describe ways in which bacteria cells are different from all other organisms' cells.
Materials needed: RLN
Specific Instructions: Read and answer questions.

Specials:

Music (I)

Goal/Objective: Learn about time signature.
Materials needed: pencil
Specific Instructions: As included in the packet.

Art (I)

Goal/Objective: Learn about African Art.
Materials needed: colored pencils
Specific Instructions: As included in the packet.

(Tuesday)

ELAR

LITERATURE

The Wind in the Willows Chapter Twelve “The Return of Ulysses”

Vocabulary for Notebook Journal

- 1) Placidly- calmly
- 2) Carousing- wild partying with drinking of liquor
- 3) Consummate- perfect
- 4) Tumultuous- noisy
- 5) Unction- earnestness; fervor
- 6) Chaff- light jesting talk; banter
- 7) Base libel- base: low or dishonorable; libel: unjust defamation of character

Read Chapter 12, annotating the text and/or using the Stop, Think, Jot method.

Answer the following questions in your notebook. Be sure to include page numbers/text references:

- 1) Toad starts off the expedition with two humorous mishaps. What are they?
- 2) Describe each of the Heroes, their war-cries, and how they are dressed.
- 3) How does Mole distinguish himself as a leader again? Give specific examples.
- 4) Describe the altered Toad. What do the younger animals think about the new Toad?
- 5) Give evidence that the Four Heroes became a legend in the Wild Wood.

GRAMMAR/WRITING: Identify Past and Present Participle

DIRECTIONS: Rewrite the following sentences in your RLN, changing the verbs from present to past tense so that they show the correct time or tense.

Example:

I listen to the radio. *yesterday,*

Yesterday, I listened to the radio.

1. Jane likes John. *When she was a child,*
2. Marie looks terrific in her yellow dress. *Yesterday,*
3. My grandparents live in San Jose. *Before they moved to San Francisco,*
4. Lucy plays tennis more often than Fred. *When they were roommates,*
5. After a victory, the quarterback talks to reporters. *After last week's victory,*
6. Usually women care for the children. *In the 1800s,*

7. The lawyers discuss the case. *After the trial,*
8. The dog growls at salesmen and snarls at Avon ladies. *Before it went to Obedience School,*
9. Many students graduate from high school. *last year.*

POETRY

Reread "My Heart Leaps Up" by William Wordsworth

In your notebook, continue your analysis of the poem.

"The Child is father of the Man"

What do **you** think the poet is saying here? How can a child be a father to a man?

MATH

(Tuesday)

Products with Several Negative Factors

Let's Review:

1. -8×-1 2. -5×-5 3. -8×-3 4. $-6 \times 3 \times -2$ 5. $8 \times -2 \times -1$

Check your answers:

8, 25, 24, 36, 16

Guided Instruction:

Let's review the rules we learned yesterday:

If there are an ODD NUMBER of negative numbers
the answer is NEGATIVE

$(+) \times (-) = \text{NEGATIVE}$
 $(+) \times (+) \times (-) = \text{NEGATIVE}$

If there are an EVEN NUMBER of negative numbers
the answer is POSITIVE

$(-) \times (-) = \text{POSITIVE}$
 $(-) \times (+) \times (-) = \text{POSITIVE}$

More Examples 

$(-4)(-7) = 28$ (even number of negative numbers)

$-11 \times 4 = -44$ (odd number of negative numbers)

$-2 \times 2 \times -2 = 8$ (even number of negative numbers)

Try This:

Find the product:

- 1) -2×-5 2) -6×0 3) -8×3 4) $-2(8 + -8)$ 5) $-2 \times -2 \times -2$

Check your answers:

10, 0, -24, 0, -8

Independent Practice:

Find the product

1) -8×-32

5) $-4 \times 4 \times 5 \times -5$

2) -25×-25

6) $-7 \times -18 \times -15 \times 4$

3) $-4 \times -14 \times -24$

7) $(-4 + -5) - 6$

4) $12 \times 0 \times -11 \times -2$

8) $(-6 \times -3) + (4 \times -5)$

Solve the following.

9) Serena bought 5 shirts for \$6 each and spent \$7 on lunch. She paid for the shirts and lunch using her debit card. Write an expression and solve it to find the remaining balance in Serena's checking account.

Review Exercises.

Find the value of n that makes the equation a true statement.

1) $654=6n$

4) $891=3n$

7) $1024=16n$

2) $512=64n$

5) $2166 = 6n$

8) $1344 = 7n$

3) $1892 = 4n$

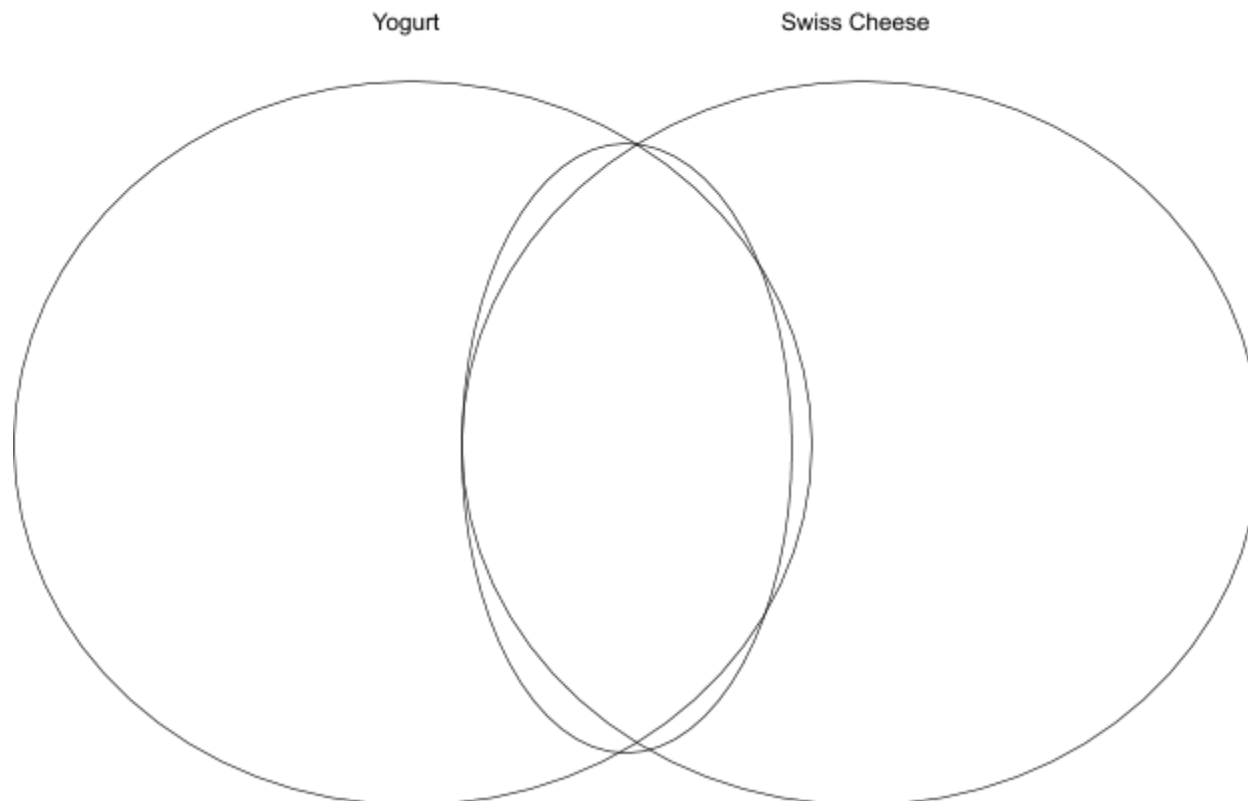
6) $3123 = 9n$

9) $4008 = 3n$

SCIENCE

Bacteria

Complete the Venn Diagram using your prior knowledge.



Do you know that yogurt and Swiss cheese are both produced with the help of certain kinds of bacteria? There are other foods that are prepared with the aid of bacteria, too. Some of these are buttermilk, sauerkraut, and sour cream! Have you ever been told to eat yogurt after having taken a prescription for antibiotics? Antibiotics get rid of bacteria that make you sick but may also kill helpful bacteria in the intestines. Yogurt contains bacteria, so eating yogurt replaces the helpful bacteria.

Read about bacteria from the Science Explorer. Using your remote learning notebook, record definitions of the key terms and answer all questions (Figure, Checkpoint, and Section 2 Review). Look at Figure 7 on page 172. What main difference can you see between conjugation and binary fission? How does conjugation result in the production of new bacteria? Refer to the parent guide for the correct responses.

Sense of Wonder (record in RLN).

Why is the ability to form endospores important to a species of bacteria?

On page 193, complete the “Science at Home” activity. Hint: look for keywords “live” or “active cultures”, “enzymes”.

Integrating History:

The tomb of the Egyptian pharaoh Tutankhamen was discovered by the archaeologist Howard Carter in 1922. In the seven years following the discovery, eleven people, including Lord Carnarvon (who had paid for the

excavation), died. The story of a curse was made up by security guards to keep away looters. Others have speculated that bacterial endospores sealed in the tomb were responsible for the deaths. This seems unlikely, however because there are few similarities between the deaths of the individuals. However, it is possible for some bacterial spores to survive for a long time. *Bacillus anthracis*, the bacteria that causes anthrax, can live in the soil for many decades or longer. Archaeologists who excavated in areas where anthrax is known to have occurred must take precautions.

SECTION 2 Bacteria

DISCOVER

ACTIVITY

How Fast Do Bacteria Multiply?

1. Your teacher will give you some beans and paper cups. Number the cups 1 through 8. Each bean will represent a bacterial cell.
2. Put one bean into cup 1 to represent the first generation of bacteria. Approximately every 20 minutes, a bacterial cell reproduces by dividing into two cells. Put two beans into cup 2 to represent the second generation of bacteria.



3. Calculate how many bacterial cells there would be in the third generation if each cell in cup 2 divided into two cells. Place the correct number of beans in cup 3.
4. Repeat Step 3 for each of the remaining cups. All the cups should now contain beans. How many cells would be in the eighth generation? How much time would have elapsed since the first generation?

Think It Over

Inferring Based on this activity, explain why the number of bacteria can increase rapidly in a short time.

GUIDE FOR READING

- ◆ How are the cells of bacteria different from those of all other organisms?
- ◆ Why are bacteria important to you?

Reading Tip Before you read, write a paragraph stating what you know about bacteria. As you read, add information to your paragraph.

Key Terms flagellum

- binary fission • conjugation
- endospore • decomposer

You may not know it, but seconds after your birth, tiny organisms invaded your body. Today millions of these unicellular organisms coat your skin. They swarm inside your nose, throat, and mouth. In fact, there are more of these organisms living in your mouth than there are people living on Earth. They are found nearly everywhere—in soil, rocks, volcanoes, Arctic ice, and all living things. These organisms are bacteria.

The Bacterial Cell

As you read in Chapter 4, the cells of bacteria differ from the cells of other organisms in important ways. **Bacteria are prokaryotes. The genetic material in their cells is not contained in a nucleus.** In addition to lacking a nucleus, the cells of prokaryotes lack many other structures, such as mitochondria, that are found in the cells of eukaryotes.

Cell Shape The cells of bacteria have three basic shapes: spherical, rodlike, or spiral. The shape of a bacterial cell helps scientists identify the bacterium. The chemical makeup of the bacterium's outermost structure, its rigid cell wall, determines the cell's shape.



◀ Bacteria on the surface of a human tooth

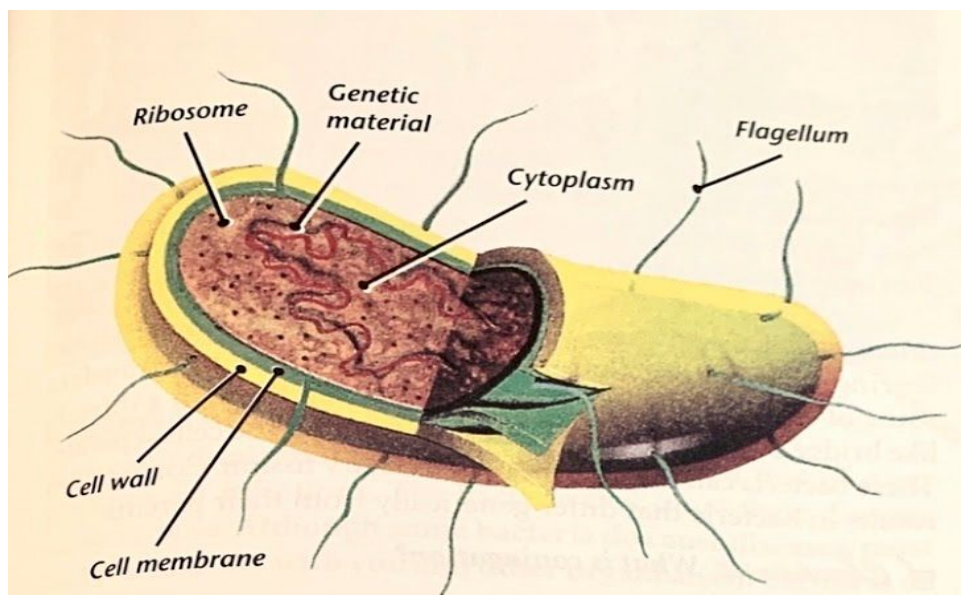


Figure 6 The diagram shows the structures found in a typical bacterial cell.

Interpreting Photographs Which structures can you locate in the photograph of the bacterium? What roles do these structures play?

Cell Structures and Functions Inside the cell wall is the cell membrane, which controls the movement of materials into and out of the cell. In the gel-like material of the cytoplasm are ribosomes, the sites where proteins are made. The genetic material, which looks like a thick, tangled string, is also located in the cytoplasm. If the genetic material were untangled, it would be circular.

You can see the cell wall, ribosomes, and genetic material of a bacterial cell in Figure 6. You also see **flagella** (fluh JEL uh) (singular *flagellum*), which extend from the cell membrane and pass out through the cell wall. A bacterial cell may have one or many flagella. The long, whiplike structure of a flagellum enables it to perform its function of moving the bacterial cell from one place to another. A flagellum moves the cell by spinning in place like a propeller.

Checkpoint List four structures found in bacterial cells.

Energy Needs

Like all organisms, bacteria must obtain food. Some bacteria are autotrophs that capture and use the sun's energy to make their own food, much as plants do. Other bacteria, such as those that live deep in the ocean, are autotrophs that use the energy from chemical substances in their environment to make their food. Still other bacteria are heterotrophs that consume autotrophs or other heterotrophs as food.


Bacteria use their food to supply the energy they need. Most bacteria use oxygen to break down food and release its energy. However, some bacteria do not need oxygen for respiration. In fact, they die if oxygen is present in their surroundings.

TRY THIS

Bacteria for Breakfast

In this activity, you will observe helpful bacteria in a common food.

ACTIVITY


1. Put on your apron. Add water to plain yogurt to make a thin mixture.
2.  With a plastic dropper, place a drop of the mixture on a glass slide.
3. Use another plastic dropper to add one drop of methylene blue dye to the slide. **CAUTION:** *This dye can stain your skin.*
4. Put a coverslip on the slide.
5. Observe the slide under both the low and high power lenses of a microscope.
6. Dispose of the materials as your teacher instructs.

Observing Draw a diagram of what you see under high power. Label any cell structures that you see.

Reproduction

In Figure 7A you see bacteria reproducing by **binary fission**, a process in which one cell divides to form two identical cells. Binary fission is a form of asexual reproduction. In binary fission, the cell first duplicates its genetic material. Then it divides into two cells that contain the same genetic material.

Some bacteria, such as those in Figure 7B, sometimes undergo a form of sexual reproduction called conjugation. During **conjugation** (kahn juh GAY shun), one cell transfers some of its genetic material into another cell through a thread-like bridge between the cells. After the transfer, the cells separate. These bacteria can then reproduce by binary fission. Conjugation results in bacteria that differ genetically from their parents.

 **Checkpoint** What is conjugation?

Survival Needs

Sometimes conditions in the environment become unfavorable for the growth of bacteria. For example, food sources can disappear or wastes can build up. Some bacteria respond to an unfavorable environment by forming endospores that survive these conditions. An **endospore** is a small, thick-walled, resting cell that forms inside a bacterial cell. It contains the cell's genetic material and some of the gel-like material in its cytoplasm. Endospores can survive for many years because they resist freezing, heating, and drying. When conditions are suitable, they can open and grow again.

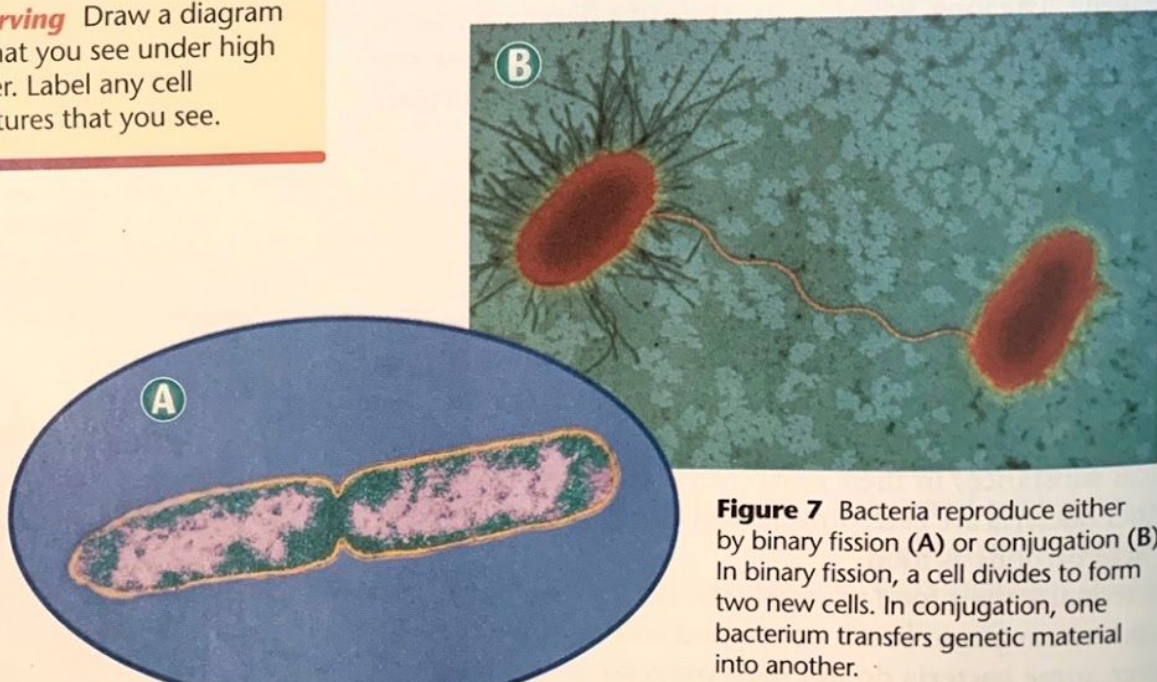


Figure 7 Bacteria reproduce either by binary fission (A) or conjugation (B). In binary fission, a cell divides to form two new cells. In conjugation, one bacterium transfers genetic material into another.

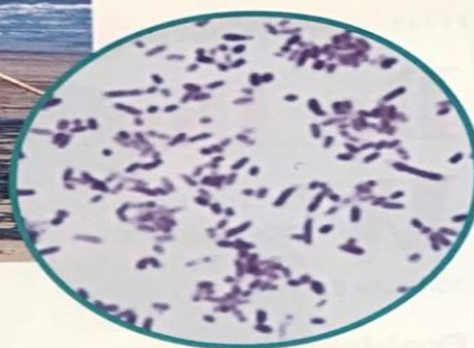


Figure 8 Scientists use bacteria such as these *Ochrobactrum anthropi* to help clean up oil spills.
Applying Concepts How do bacteria clean up spilled oil?

Bacteria and the Living World

When you think about bacteria, you might think first of strep throat or ear infections. The bacteria that cause these diseases are eubacteria. **Although some bacteria do cause diseases, most bacteria interact with you and other organisms in harmless or positive ways.**

Bacteria play positive roles in fuel and food production as well as in environmental recycling and cleanup. For example, archaeobacteria that died millions of years ago produced methane gas. Today, this methane gas is the major component in about 20 percent of Earth's deposits of natural gas, a fuel that heats many homes. Some eubacteria that grow in milk produce dairy products such as buttermilk, yogurt, and cheeses.

Some bacteria living in Earth's soil are **decomposers**, organisms that break down large molecules in dead organisms into smaller molecules. Decomposers recycle Earth's matter by returning basic chemicals to the environment for other organisms to reuse. Other recycling bacteria live in the roots of plants such as peanuts and soybeans. They use the nitrogen in air to form compounds the plants need to grow. Finally, some bacteria help clean up oil spills on land and water. These bacteria convert the dangerous chemicals in oil into harmless substances.



Section 2 Review

1. How is a bacterial cell different from the cells of other kinds of organisms?
2. List four ways in which bacteria are important to you.
3. Describe three ways that bacteria may obtain food.
4. **Thinking Critically Comparing and Contrasting** How are binary fission and conjugation alike? How do they differ?

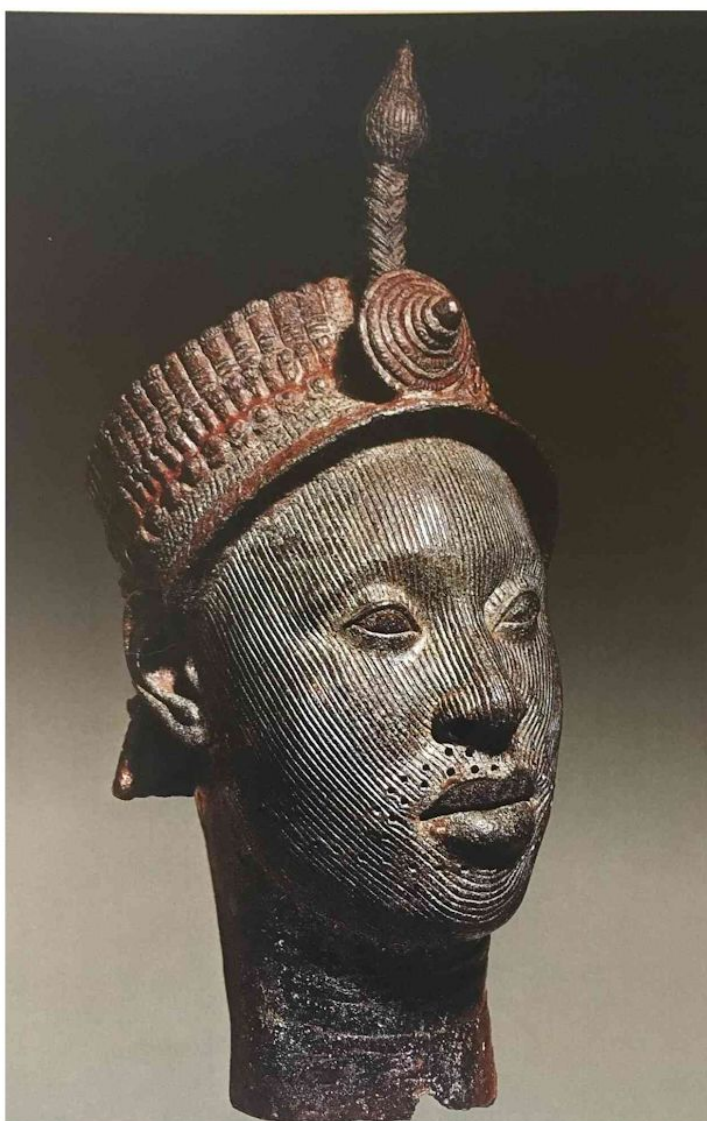
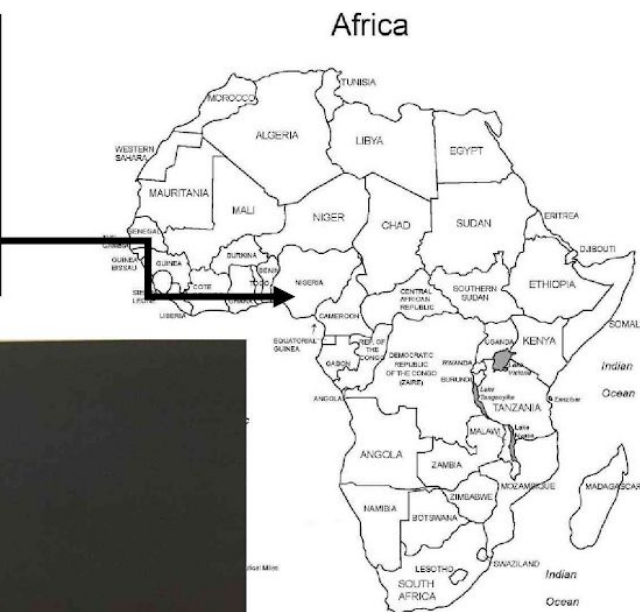
Science at Home

Helpful Bacteria With a family member, look around your kitchen for foods that are made using bacteria. Read the labels on the foods to see if the role of bacteria in the food's production is mentioned. Discuss with your family member the helpful roles that bacteria play in people's lives.

ART

Remote Learning Art Assignment 5: Nigerian Art

This week we are beginning our study of African Art. Africa is the second largest continent in the world, so we will be studying art from a different country in Africa each week. This week, we are looking at a piece from Nigeria.



Notes:

- Portrait Head of an Ife King**
- Made around 1300 CE
- Material: Bronze/Copper casting
- From: Nigeria, Africa

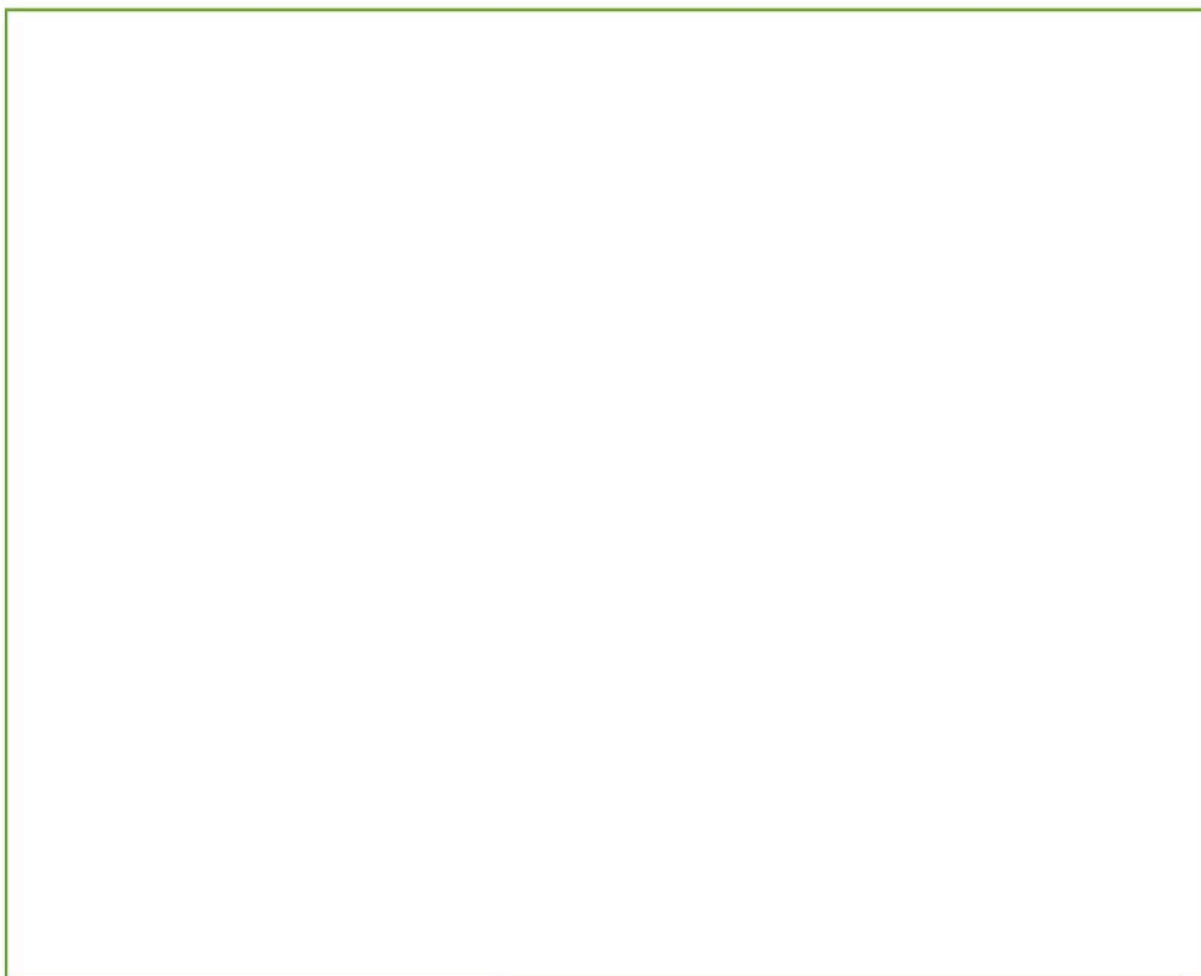
Questions:

1. The style of this portrait is called *naturalistic*. What do you think that means?

2. What about this portrait makes you think this is an important person?

3. Notice how the lines move with the shape of the face. What does this add to the way the portrait looks?

Take your time while you are practicing drawing this picture in the space below. Really make sure you are paying attention to the movement of the lines around the facial features. They do not go straight across the face. Notice where there are no lines on the face.



Answers: 1. Realistic or lifelike, 2. Headdress is fancy/elaborate, 3. Answers will vary

Daily Rubric

Directions: Give yourself a check mark in each box at the end of each day. Then, give yourself a pat on the back! You did it! Nice work ☺

<p>Tuesday, 4/21</p>	<ul style="list-style-type: none"><input type="checkbox"/> I spent between _____ minutes on the daily activities.<input type="checkbox"/> I read all directions before I asked for more help.<input type="checkbox"/> If required, I wrote all of my answers in complete, cursive sentences.<input type="checkbox"/> I double-checked my written answers to check for capitalization, punctuation, and correct grammar usage.<input type="checkbox"/> My handwriting is neat and can be read by both me and an adult.<input type="checkbox"/> I showed all of my work in math when necessary.<input type="checkbox"/> I read for at least 20 minutes today. I used integrity and put forth my best effort today.<input type="checkbox"/> I am proud of myself and I know my teacher would be proud of me, too.
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Wednesday 4/22/20

ELAR (I)

VOCABULARY: page 190; Vocabulary Packet in the Appendix

LITERATURE: Goal/Objective: Recall important events from the novel.

Materials Needed: The Wind in the Willows

Specific Instructions:

GRAMMAR/
WRITING: Goal/Objective: Sentence diagramming and labeling.

Materials Needed: RLN

Specific Instructions: Label parts of the sentence and diagram.

POETRY: Goal/Objective: Analyze a poem.

Materials Needed: "My Heart Leaps Up", RLN

Specific Instructions: analyze the remainder of the poem on the analysis page in your RLN.

Math (I/PA to help check answers)

Goal/Objective: Finding the quotients of Integers

Materials needed: RLN (Remote learning notebook), guided instruction, and independent practice

Specific Instructions: Write the rules for finding the quotients of positive and negative integers in your RLN and do your independent practice in your RLN

Science (I)

Goal/Objective: describe the characteristics of protists and fungi.

Materials needed: RLN

Specific Instructions: Read and answer questions.

Special:

Latin (I)

Goal/Objective: Translate a Latin passage into English.

Materials needed: pencil

Specific Instructions: As included in packet.

ELAR

(Wednesday)

LITERATURE

The Wind in the Willows (End of Novel)

Watch the videos on how to illustrate the main characters in The Wind in the Willows and create your own illustrations to participate in the "Who Said It" game either during your class zoom meeting or on this packet.

WHO SAID IT?

- 1) ""There's no security, or peace and tranquility, except underground" _____
- 2) "I'd send Rat, if he wasn't a poet," _____
- 3) "The hour has come! The hour of Toad!" _____
- 4) "Such trials, such sufferings, and all so nobly borne!" _____
- 5) "Bother! O Blow! Han spring-cleaning!" _____
- 6) "He is indeed the best of animals...." _____
- 7) "O bliss! O poop-poop!" _____
- 8) "You exasperating rodent." _____
- 9) "Smashes, or machines? Oh, well, after all, it's the same thing - with Toad." _____
- 10) "Mayn't I sing them just one little song?" _____

GRAMMAR/WRITING: Sentence diagramming and labeling

Example:

My dad gave me a dog.

My: *possessive pronoun*

Dad: *subject*

Gave: *verb*

Me: *indirect object*

A: *article*

Dog: *direct object*

Directions: Label the parts of each sentence.

1. The tree grew taller every year.

The: _____ Tree: _____ Grew: _____ Taller: _____

Every year: _____

2. I caught a snowflake in my mouth.

I: _____ Caught: _____ The: _____ Snowflake: _____ In: _____
My: _____ Mouth: _____

Directions: Label the parts of each sentence, then diagram the sentence.

1. I babysat my brother.

I: _____ Babysat: _____ My: _____ Brother: _____

Diagram:

2. She loves listening to hip hop and reggae.

She: _____ Loves: _____ Listening to: _____ Hip hop: _____

And: _____ Reggae: _____

Diagram:

3. He knew that he could improve if he tried.

He: _____ Knew: _____ That: _____ He: _____

Could improve: _____ If: _____ He: _____ Tried: _____

Diagram:

Diagram each sentence.

1. He fell down when she pushed him.

2. Her dinner didn't taste very good.

3. I need to cut my hair, but I don't have time.

Poetry

Reread "My Heart Leaps Up" by William Wordsworth

In your notebook, continue your analysis of the poem.

"And I could wish my days to be,
Bound each to each by natural piety."

What do **you** think the poet is saying here? What does piety mean?

MATH

(Wednesday)

Quotients of Integers

Review.

1) -8×12 2) $-9 \times 11 \times -2 \times -4$ 3) $-100 \times 80 \times 0 \times -2$

Check your answers:

0 762- 96

Guided Instruction:

Associated with the product

$$2 \times 5 = 10$$

is the quotient

$$10 \div 5 = 2 \text{ or } \frac{10}{5} = 2$$

Study the following examples:

$$2 \times 5 = 10 \quad 10 \div 5 = 2 \quad \text{or} \quad \frac{10}{5} = 2$$

$$2 \times -5 = -10 \quad -10 \div -5 = 2 \quad \text{or} \quad \frac{-10}{-5} = 2$$

$$-2 \times 5 = -10 \quad -10 \div 5 = -2 \quad \text{or} \quad \frac{-10}{5} = -2$$

The examples above suggest the following rules about division.

Rule

The quotient of two positive or two negative integers is positive.

The quotient of a positive integer and a negative integer is negative.

Try this!

Find the quotient:

a) $\frac{4}{-2}$ b) $\frac{-9}{3}$ c) $\frac{-8}{-4}$ d) $-3 \div -3$

Check your answers: 2, -3, 2, -2

Independent Practice

Find the quotient.

1. $98 \div -7$

3. $-270 \div -18$

2. $-52 \div 13$

4. $-420 \div -15$

Find the value of n .

5. $-2n = -6$

7. $13n = -65$

6. $-3n = 9$

8. $-16n = -144$

Simplify.

9. $(-5 \times -8 \times 24) \div (10 \times -3)$

Replace the ? with n , $-n$, 1 , or -1 .

10. $-n \div 1 = ?$

12. $-n \div -n = ?$

11. $-n \div n = ?$

13. $n \div -1 = ?$

SCIENCE

Protists and Fungi

Read about Protist and Fungi in the Science Explorer. Using your RLN, answer all questions (Figure, Checkpoint, and Section 3 Review).

Study the “Exploring Protozoans” information on pages 198 &199. Free living protists encounter changes in temperature, water acidity, food supply, moisture, and light. Many survive during these changes by entering a dormant stage- forming cysts with tough walls that act as protective coverings. During encystment, protozoans that have flagella and cilia lose them, and the contractile vacuole and food vacuoles disappear. Many protozoans can form cysts, and biologists believe this ability formed early in their history. Some parasitic protozoans, such as the one that causes amebic dysentery, also form cysts. The cysts are excreted and survive in the soil or water, and humans who come into contact with the cysts can be infected. Answer the following questions in your RLN:

1. What do these protists have in common?
2. What is different about them?
3. What characteristics of the ameba do you think make it suited to living in either soil or water?
4. What characteristics of the paramecium do you think make it suited to living only in water?

SECTION
3

Protists and Fungi

DISCOVER



ACTIVITY

What Lives in a Drop of Water?

1. Use a plastic dropper to place a drop of pond water on a microscope slide.
2. Put the slide under your microscope's low-power lens. Focus on the objects you see.
3. Find at least three different objects that you think might be organisms. Observe them for a few minutes.
4. Draw the three organisms in your notebook. Below each sketch, describe the movements or behaviors of the organism. Work with your teacher to devise a plan for disposing of the materials. Wash your hands thoroughly when you have finished.

Think It Over

Observing What characteristics did you observe that made you think that each organism was alive?

GUIDE FOR READING

- ◆ What are the characteristics of animal-like, plantlike, and fungus-like protists?
- ◆ What characteristics do fungi share?

Reading Tip Before you read, preview the headings. Record them in outline form, leaving space for writing notes as you read.

Key Terms protozoan
• pseudopod • cilia • parasite
• host • algae • spore
• hyphae • budding

Look at the objects in Figure 9. What do they look like? Jewels? Crystal ornaments? You might be surprised to learn that these beautiful structures are the walls of unicellular protists called diatoms. Believe it or not, diatoms provide food for many organisms that live in the ocean.

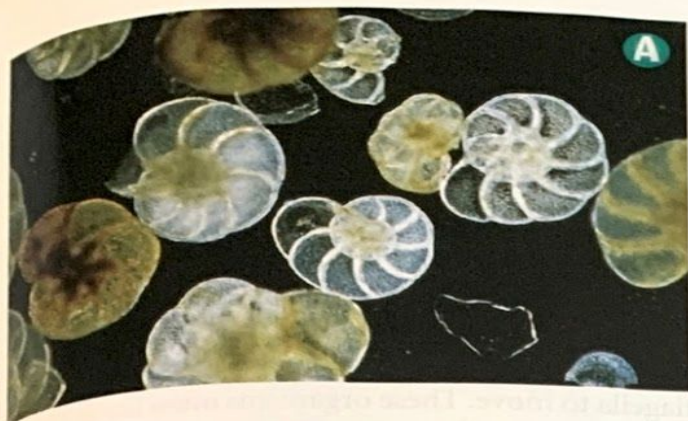
The Protist Kingdom

Diatoms are only one type of organism classified in the protist kingdom. The protist kingdom is sometimes referred to as the “junk drawer” kingdom. A “junk drawer” is filled with odds and ends, such as pencils, ticket stubs, and postcards. The protist kingdom is filled with organisms that don't fit easily into other kingdoms. However, these organisms do share some characteristics. They are all eukaryotes, or organisms that have cells with nuclei. In addition, almost all protists live in moist areas.

Despite these common characteristics, the word that best describes the protist kingdom is *diversity*. For example, many protists are unicellular organisms. But some protists are multicellular. In fact, the protists known as giant kelps can be over 100 meters long. Protists also vary in how they obtain food.

Figure 9 These delicate-looking diatoms are classified in the protist kingdom.





Some protists are heterotrophs, some are autotrophs, and others are both. Some protists cannot move, while others zoom around in their surroundings.

Because protists vary greatly, scientists have proposed different ways of grouping these organisms. One useful way of grouping protists is to divide them into three categories: animal-like protists, plantlike protists, and fungus-like protists.

Checkpoint What characteristics do all protists share?

Animal-like Protists

What image pops into your head when you think of an animal? A tiger chasing prey? A snake slithering onto a rock? Most people associate animals with movement. **Like animals, animal-like protists have structures that enable them to move around. And these organisms, like animals, are heterotrophs.** Unlike animals, however, animal-like protists, which are also called **protozoans** (proh tuh ZOH unz), are unicellular.

When an organism moves, it is usually responding to a stimulus. Protozoans move in response to a variety of external stimuli. For example, protozoans move toward food, such as bacteria. Protozoans may move away from harmful chemicals. Some protozoans respond to the stimulus of light by moving toward it. Others move away from light.

Protozoans With Pseudopods One group of protozoans use structures called pseudopods (soo doh pahdz) to move and obtain food. **Pseudopods** are temporary bulges of the cell membrane. The cytoplasm flows into the bulge and the rest of the organism follows. Amebas are protozoans that form pseudopods. Amebas use pseudopods to respond to external stimuli. Amebas move away from bright light and toward food.

Figure 10 The protist kingdom includes animal-like, plantlike, and fungus-like organisms. (A) These shells contained unicellular, animal-like protists called foraminifera. (B) This red alga is a multicellular, plantlike protist that lives on ocean floors. (C) This yellow slime mold is a fungus-like protist.

Comparing and Contrasting In what way are animal-like protists similar to animals? How do they differ?

Protozoans With Cilia Members of a second group of protozoans have structures called cilia that they use to move and obtain food. **Cilia** (SIL ee uh) are hairlike projections from cells that move with a wavelike pattern. Cilia move an organism by acting something like tiny oars. Their movement also sweeps food into the organism. One type of protozoan with cilia is a paramecium. Look at *Exploring Protozoans* to compare the structures of an ameba and a paramecium and to learn about the functions of each structure. Notice that the cell of a paramecium has a greater variety of structures than that of an ameba.

Protozoans With Flagella Members of a third group of protozoans use flagella to move. These organisms often live inside the bodies of other organisms. For example, protozoans with flagella

EXPLORING Protozoans

Amebas live either in water or soil. They feed on bacteria and smaller protists in the surroundings. Paramecia live mostly in fresh water. Like amebas, paramecia feed on bacteria and smaller protists.



AMEBA

Pseudopod

An ameba uses pseudopods to move and feed. Pseudopods form when the cell membrane bulges and cytoplasm flows into the bulge.

Cytoplasm

Nucleus

The nucleus controls the cell's functions and is involved in reproduction. Amebas usually reproduce by binary fission.

Cell membrane

Because the cell membrane is very thin and flexible, an ameba has no definite shape.

Food vacuole

When the ends of two pseudopods fuse around food, they form a food vacuole. Food is broken down inside the food vacuole in the cytoplasm.

Contractile vacuole

The contractile vacuole collects excess water from the cytoplasm and expels it from the cell.

live in the intestines of termites. These protozoans digest the wood that the termites eat, producing sugars for themselves and for the termites.

Other Protozoans A fourth group of protozoans, called sporozoans, are characterized more by the way they live than by the way they move. Sporozoans are **parasites**, organisms that live on or in another organism, the **host**, and harm that organism. Sporozoans feed on the cells and body fluids of their hosts. Some sporozoans use flagella to move, and others depend on hosts for transport. One sporozoan even slides from place to place on a layer of slime that it produces. A sporozoan called *Plasmodium* causes the disease malaria in people.

Checkpoint What is the function of a pseudopod?



PARAMECIUM

Contractile vacuoles

Two contractile vacuoles collect excess water from the cytoplasm and expel it from the cell.

Anal pore

Wastes leave through the anal pore.

Cilia

Thousands of cilia project through the pellicle. The beating cilia enable a paramecium to move smoothly in one direction.

Food vacuole

A food vacuole forms and pinches off from the oral groove. It moves into the cytoplasm. Inside the vacuole, the food is broken down and then distributed.

Oral groove

The oral groove is a funnel-like indentation lined with cilia. The cilia move water containing food into the vacuole that forms at the end of the oral groove.

Cytoplasm

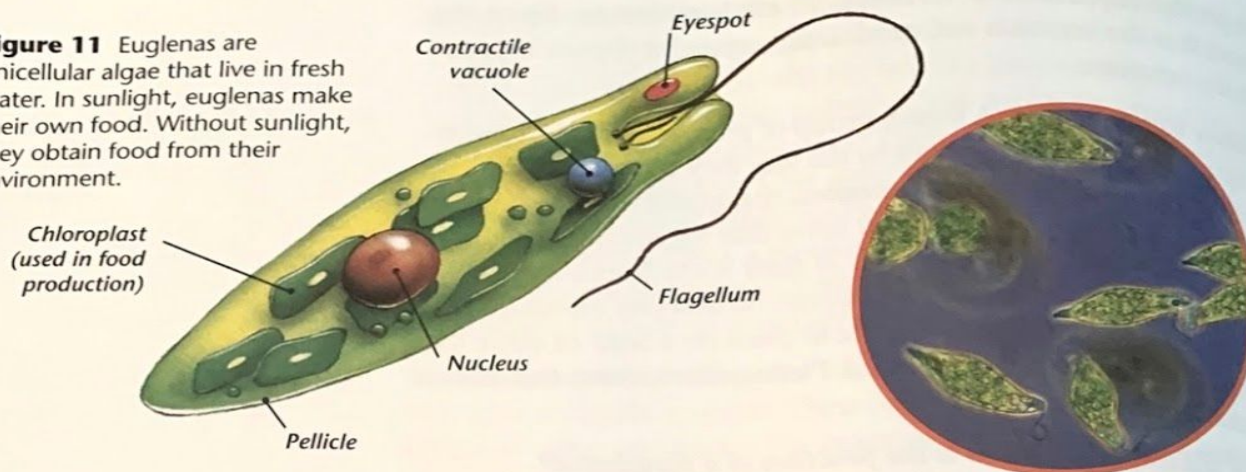
Small nucleus

Large nucleus

Pellicle

A stiff but flexible covering, called the pellicle, surrounds a paramecium and gives it shape. The cell membrane makes up the inner part of the pellicle.

Figure 11 Euglenas are unicellular algae that live in fresh water. In sunlight, euglenas make their own food. Without sunlight, they obtain food from their environment.



TRY THIS

Feeding Paramecia

In this activity you will feed *Chlorella*, a plantlike protist, to paramecia.

ACTIVITY

1. Use a plastic dropper to place one drop of paramecium culture on a microscope slide. Add some cotton fibers to slow down the paramecia.
2. Use the microscope's low-power objective to find some paramecia.
3. Add one drop of *Chlorella* to the paramecium culture on your slide.
4. Switch to high power and locate a paramecium. Observe what happens. Then wash your hands.

Inferring What evidence do you have that paramecia are heterotrophs? That *Chlorella* are autotrophs?

Plantlike Protists

If you've ever seen seaweed at a beach, then you are familiar with a type of plantlike protist. Plantlike protists, which are commonly called **algae** (AL jee), are even more varied than animal-like protists. **The one characteristic that all algae share is that, like plants, they are autotrophs.**

Some algae live in the soil, others live on the barks of trees, and still others live in fresh water or salt water. Algae that live on the surface of ponds, lakes, and oceans are an important food source for other organisms in the water. In addition, most of the oxygen in Earth's atmosphere is made by these algae.

Algae range greatly in size. Some algae, such as diatoms and euglenas, are unicellular. Recall from Chapter 4 that a unicellular organism carries out all the functions necessary for life. Unlike other algae, euglenas like the ones shown in Figure 11 can be heterotrophs under certain conditions. Euglenas are green and use flagella to move. In contrast, diatoms move on slime that oozes out of slits in their cell walls.

Other algae are groups of unicellular organisms that live together in colonies. Unlike true multicellular organisms, an algae colony contains few or no cells that are specialized to perform specific functions. Like unicellular organisms, most cells in a colony carry out all the life processes.

Still other algae, such as seaweeds, are multicellular organisms. Multicellular algae contain cells that are specialized to perform specific tasks. For example, giant kelps, which are a kind of seaweed, have many plantlike tissues and organs. Holdfasts anchor the alga to rocks. Stalks support the leaflike blades. Brown algae also have gas-filled sacs called bladders that allow the algae to float upright in the water.

Fungus-like Protists

A third group of protists are the fungus-like protists. Fungus-like protists are **heterotrophs**, **have cell walls**, and **use spores to reproduce**. A **spore** is a tiny cell that is able to grow into a new organism. All fungus-like protists are able to move at some point in their lives. In Figure 12, you can see a type of fungus-like protist called a water mold.

Checkpoint What is a spore?

The Fungi Kingdom

Like the fungus-like protists, fungi use spores to reproduce. The cricket-killing fungus in Figure 13 began as a spore that fell on a living cricket. Tiny threads from the spore began to grow into the cricket's body. The threads released chemicals that dissolved the cricket's tissue. Then some threads thickened, forming the stalks with knobs at their ends that grew out of the cricket's body. When the knobs break open, they will release thousands of spores, which the wind may carry to new victims.

Although you may not have heard of a cricket-killing fungus before, you are probably familiar with other kinds of fungi. For example, the molds that grow on stale bread or decaying fruit are all fungi. The mushrooms that sprout in forests or yards are fungi. Unicellular yeasts that make bread rise are also fungi.

Most fungi share three important characteristics: They are eukaryotes, use spores to reproduce, and are heterotrophs that feed in a similar way. In addition, fungi need moist, warm places in which to grow. They thrive on moist foods, damp tree bark, lawns coated with dew, damp forest floors, and even wet bathroom tiles.



Figure 12 The threadlike water mold is a protozoan parasite that grows on fish. The water mold eventually kills the fish.

Applying Concepts What is a parasite?



Figure 13 A bush cricket has been attacked by a killer fungus.

Cell Structure of Fungi

Yeasts are unicellular fungi, but other fungi are multicellular. The cells of multicellular fungi are arranged in structures called hyphae. **Hyphae** (HY fee) (singular *hypha*) are branching, thread-like tubes that make up the bodies of multicellular fungi.

The appearance of a fungus depends on how its hyphae are arranged. In some fungi, such as fuzzy-looking molds, the hyphae are loosely tangled. In other fungi, hyphae are packed tightly together. For example, the stalks and caps of the mushrooms in Figure 14 are made of hyphae packed so tightly that they appear solid. Underground, however, the hyphae of these mushrooms form a loose, threadlike maze.

How Do Fungi Obtain Food?

Some fungi feed on the remains of dead organisms. Other fungi are parasites that break down the chemicals in living organisms. For example, athlete's foot is a disease caused by a fungus that feeds on chemicals in a person's skin.

Fungi absorb food through hyphae that grow into the food source. First, the fungus grows hyphae into a food source. Then digestive chemicals ooze from the hyphae into the food. The chemicals break down the food into small molecules that the hyphae can absorb. Imagine yourself sinking your fingers into a chocolate cake and dripping digestive chemicals out of your fingertips. Then imagine your fingers absorbing the digested particles of the cake. That's how a fungus feeds.

Hyphae are a good example of how structure is related to function in organisms. The long, threadlike structure of a fungus's hyphae provide a large surface area for absorbing food. The larger the surface area, the greater the amount of food that can be absorbed.

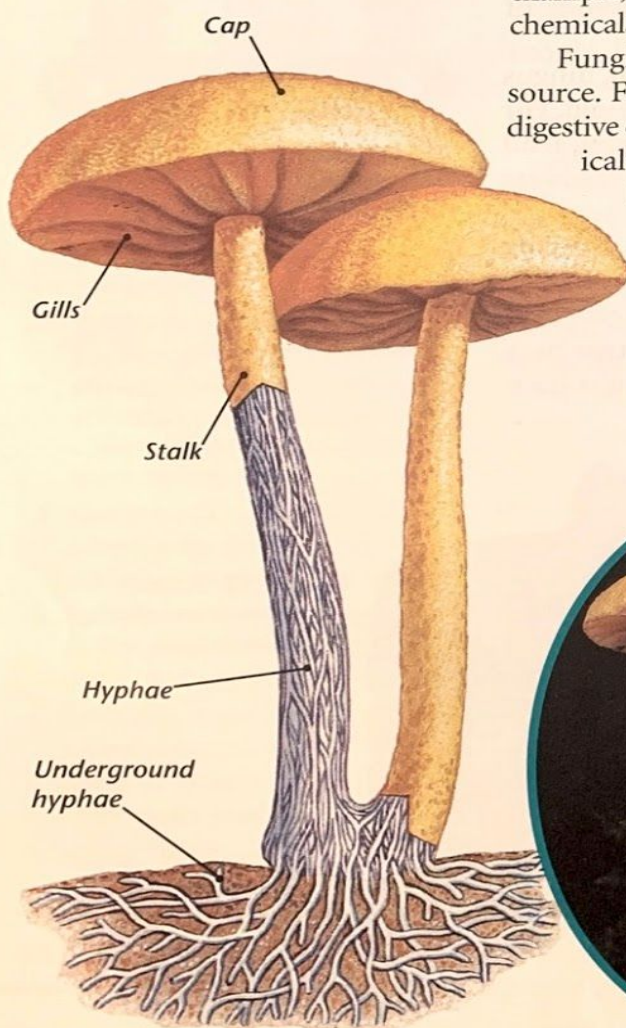


Figure 14 The hyphae in the stalk and cap of a mushroom are packed tightly to form very firm structures. Underground hyphae, on the other hand, are arranged loosely.
Inferring What function do the underground hyphae perform?



Figure 15 Budding is a form of asexual reproduction that occurs in yeast. The small yeast cell that grows from the body of a parent cell is identical to the parent.

Reproduction in Fungi

Like it or not, fungi are everywhere. The way they reproduce guarantees that they survive and spread. Fungi usually reproduce by means of spores that are lightweight and have protective coverings. They travel easily through air or water to new sites.

Asexual Reproduction Most fungi reproduce both asexually and sexually. When there is adequate moisture and food, most fungi reproduce asexually by growing spore-producing reproductive hyphae. Fungi produce thousands of spores. However, only a few of them fall where conditions are right for them to grow into new organisms.

Unicellular yeast cells undergo a form of asexual reproduction called **budding**. In budding, no spores are produced. Instead, a small yeast cell grows from the body of a large parent cell in a way that might remind you of a bud forming on a tree branch. The new cell then breaks away and lives on its own.

Sexual Reproduction When growing conditions become unfavorable, fungi may reproduce sexually. In sexual reproduction, the hyphae of two fungi grow together. Then a new spore-producing structure grows from the joined hyphae. These spores develop into fungi that have a combination of the genetic material of both parents.



Section 3 Review

1. List the characteristics of animal-like protists, plantlike protists, and fungus-like protists.
2. List three characteristics that fungi share.
3. Explain how the threadlike structure of a fungus's hyphae enables the fungus to obtain a large amount of food.
4. How do fungi reproduce?
5. **Thinking Critically Classifying** Explain why mushrooms are classified as fungi rather than plants.

Check Your Progress

CHAPTER PROJECT

Your plants should now have, or will soon have, flowers. Make a diagram of the flower's structure. When the flowers open, you'll have to pollinate them. This work is usually done by insects or birds. After pollination, watch how the flower changes. (*Hint:* Pollination is explained on pages 209–210. Discuss with your teacher and classmates how to pollinate the flowers.)

LATIN

LATINA CANTEBRIGIA V: In Theatro

***Instructio:** please read through and translate the below story into English in the space provided. In the gloss below the text I have provided the definitions of any new words.*

Actōrēs

magna turba est in urbe. fēminae et puellae sunt in turbā. senēs quoque et iuvenēs sunt in turbā. servī hodiē nōn labōrant. senēs hodiē nōn dormiunt. mercātōrēs hodiē nōn sunt occupātī.

Pompēiānī sunt ōtiōsī. urbs tamen nōn est quiēta. Pompēiānī ad theātrum contendunt. magnus clāmor est in urbe.

agricolae urbem intrant. nautae urbem petunt. pāstōrēs dē monte veniunt et ad urbem contendunt. turba per portam ruit. nūntius in forō clāmat: “āctōrēs sunt in urbe. āctōrēs sunt in theātrō. Priscus fābulam dat. Priscus fābulam optimam dat. āctōrēs sunt Actius et Sorex.”

Caecilius et Metella ē villā discēdunt. argentārius et uxor ad theātrum ambulant. Quīntus et Lūcia ad theātrum contendunt. Clēmēns et Melissa ad theātrum currunt. sed Grumiō in villā manet.

Ōtiōsī: on holiday/vacation

Āctōrēs: actors

Turba: crowd

Fēminae: women

Puellae: girls

Iuvenēs: young men

Quiēta: quiet

ad theātrum to the theater

contendant: hurry

clamor: shout, uproar

agricolae: farmers

nautae: sailors

petunt: head for

pāstōrēs: shepherds

uxor: wife

manet: remains, stays

nūntius: messenger

Otiosi: on holiday, vacation

De monte: down from the
mountain

Fabulam dat: showing a play

Daily Rubric

Directions: Give yourself a check mark in each box at the end of each day. Then, give yourself a pat on the back! You did it! Nice work ☺

Wednesday 4/22	<ul style="list-style-type: none"><input type="checkbox"/> I spent between _____ minutes on the daily activities.<input type="checkbox"/> I read all directions before I asked for more help.<input type="checkbox"/> If required, I wrote all of my answers in complete, cursive sentences.<input type="checkbox"/> I double-checked my written answers to check for capitalization, punctuation, and correct grammar usage.<input type="checkbox"/> My handwriting is neat and can be read by both me and an adult.<input type="checkbox"/> I showed all of my work in math when necessary.<input type="checkbox"/> I read for at least 20 minutes today. I used integrity and put forth my best effort today.<input type="checkbox"/> I am proud of myself and I know my teacher would be proud of me, too.
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APPENDIX

Chapter 16: Truth and Faith

The motto of the Marine Corps is "Semper Fidelis," which means "Always Faithful." In this chapter, you are going to learn words that deal with truth and faith.

Chapter 16:
Truth and Faith

INNOCENT
OR
GUILTY?

Roots to Learn:

ver
fid

Words to Learn:

verify	infidel
veracity	confide
verdict	confidant
fidelity	

The Latin word meaning "true" is **VERUS**. We get the root **VER** from this word.

To **VERIFY** means "to check the truth of something."

President Ronald Reagan once said about a treaty that the U.S. should "trust but verify!" What do you think that statement means? Is there any sense in trusting something if you cannot **VERIFY** it?



The reporter had to **verify** the facts of her story by talking to other witnesses.

Chapter 16: Truth and Faith

VERACITY means "truth."

Aliens? Bigfoot? The Loch Ness Monster? Ghosts? Chupacabra? Many people believe in these mysterious creatures. However, to prove the **VERACITY** of the claims that these things exist, some proof must be shown, but, so far, no clear evidence has ever been produced.



Many letters to the editor questioned the *veracity* of the article.



It took the jury five days to agree on a *verdict*.

Remember that the root *dict* means "to say."

A **VERDICT** is a statement of guilt or innocence.

Many people do not want to be on a jury because they don't want the responsibility of determining a verdict that could send someone to prison. However, very few people have any problems voting for the verdict on a reality show.

Chapter 16:
Truth and Faith

CONFIDE means "to trust someone with information."

How do you think that the word **CONFIDE** relates to faith. That's easy to explain. The prefix *con-* means "with." Therefore, confide literally means "with faith." You want to *confide* in someone who you trust with the information.



Vickie *confided* to Jane that she had a crush on Tom.



Mary has been my main *confidant* for many years.

A **CONFIDANT** is someone to whom you can tell something private without fearing that he or she will tell anyone else.

Do not confuse this word, **CONFIDANT**, with the adjective that means being sure of something—*confident*. The two words certainly are related: A confidant is someone you are confident will not betray you.

Chapter 16:
Exercises

Exercises

Word Bank

verify
veracity

verdict
fidelity

infidel
confide

confidant

I. Define It! (Part I)

DIRECTIONS: Write the letter of the word from the right column that matches the definition in the left column. The first one has been done for you.

- | | |
|---|--------------|
| 1. to check the truth of something B | A. verdict |
| 2. someone who can keep a secret ____ | B. verify |
| 3. to trust someone with information ____ | C. fidelity |
| 4. truthfulness ____ | D. confidant |
| 5. a betrayer ____ | E. confide |
| 6. a statement of guilt or innocence ____ | F. veracity |
| 7. faithfulness ____ | G. infidel |

II. Finish It!

DIRECTIONS: Using the root, write a word to complete each sentence. The first one has been done for you.

1. My grandmother's closest **confidant** was my grandfather; they had been married for almost 50 years. (Root = FID)
2. The drummer proved his _____ to his band mates by turning down an offer from a more famous group. (Root = FID)
3. After discussing the facts of the case for seven hours, the jury returned a(n) _____ for the plaintiff. (Root = VER)
4. Jeff discovered that _____ in his sister about getting a detention was a mistake because she told their parents about it the next day. (Root = FID)
5. Felicia did not question the _____ of the statement Paulo made under oath. (Root = VER)
6. The cashier needed to _____ the customer's identity by checking his driver's license. (Root = VER)
7. Henry and Alberto called Marcel a(n) _____ after he joined the other neighborhood's baseball team. (Root = FID)

Chapter 16: Exercises

Word Bank

verify
veracity

verdict
fidelity

infidel
confide

confidant

III. Define It! (Part 2)

DIRECTIONS: Based on what you have learned in this chapter, define each of the following in your own words, and create a sentence using the word.

1. verify: _____

2. veracity: _____

3. verdict: _____

4. fidelity: _____

5. infidel: _____

6. confide: _____

7. confidant: _____

IV. Personalize It!

DIRECTIONS: Using your understanding of the vocabulary words, respond to the following prompts. Use a separate piece of paper if necessary.

1. Describe a *confidant* of yours. Why do you trust this person so much?

2. Do people *confide* in you? Why or why not?

3. Write about a time when you have had to question the *veracity* of someone's statement. How did it make you feel to have to do that?

4. How important is *fidelity* in your relationship with your friends?

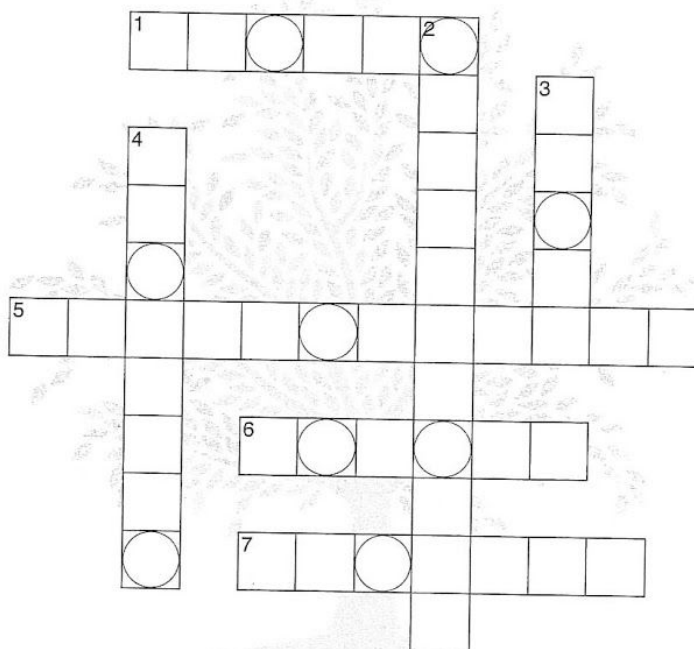
Chapter 16: Exercises

VII. Solve It!

DIRECTIONS: Use the words from this chapter as clues to complete the crossword puzzle. The answers in the puzzle will be synonyms for the vocabulary words.

Word Bank

decision
faithfulness
friend
honesty
prove
reveal
unbeliever



Clues:

ACROSS

1. confidant
5. fidelity
6. confide
7. veracity

DOWN

2. infidel
3. verify
4. verdict

Unscramble the letters in the circles in the crossword puzzle to answer the question below. The unscrambled word is not exactly from the vocabulary words in this lesson, but it is related to some of them.

What word means something you have when you are sure of your abilities?

_____ **C** _____

Chapter 16:
Exercises

Word Bank

verify
veracity

verdict
fidelity

infidel
confide

confidant

VIII. Write About It!

DIRECTIONS: In this chapter you have learned words about truth and faith. If you had to explain *veracity* to a child, what would you compare it with so he or she would understand the concept? Write a few sentences in which you explain the importance of *veracity* to a kindergartner. Keep in mind that the words you use should be suitable for a kindergartner's education level and experience.



SKILL REVIEW

Math Sprint 6

Apply the distributive property to produce equivalent expressions.

1.	$6(x+4)$	11.	$6(x+9)$
2.	$8(x-3)$	12.	$27(x-2)$
3.	$6(x-5)$	13.	$12(x-5)$
4.	$10(x+3)$	14.	$15(x+4)$
5.	$6(x+6)$	15.	$12(x-6)$
6.	$18(x-2)$	16.	$24(x-3)$
7.	$6(x+7)$	17.	$12(x-7)$
8.	$14(x-3)$	18.	$28(x+3)$
9.	$6(x-8)$	19.	$12(x+8)$
10.	$24(x+2)$	20.	$32(x-3)$

Student Attendance Affidavit

My Western Hills student attended to his/her distance learning studies on the following days:

Monday, April 20, 2020

Tuesday, April 21, 2020

Wednesday, April 22, 2020

Thursday, April 23, 2020

For the sake of academic honesty, please help the students be accountable for doing the portions of the work that were designated as Independent work. If you notice that from the student's answers that they need some help better understanding the directions or the content, feel free to reteach or review the content or directions with your student before allowing them to make a second attempt. Reach out to your scholar's teacher via email if you need further assistance.

My scholar has completed Thursday's Assessments to the best of his/her abilities and I have directed these assessments with my child's academic integrity in mind.

Parent Signature: _____

I have completed Thursday's Assessments to the best of my abilities.

Student Signature: _____

Student Printed Name: _____ Class Section: _____

THURSDAY ASSESSMENTS

Name: _____

Chapter 16 Vocabulary Quiz

Part I

- | | |
|--|--------------|
| 1. _____ to check the truth of something | A. fidelity |
| 2. _____ truth | B. infidel |
| 3. _____ a statement of guilt or innocence | C. verdict |
| 4. _____ faithfulness | D. confide |
| 5. _____ a nonbeliever or someone who betrays | E. veracity |
| 6. _____ to trust someone with information | F. confidant |
| 7. _____ someone to whom you can tell something private without fearing that he or she will tell anyone else | G. verify |

Part II

In this chapter, you learned about fidelity. In a short paragraph, describe the characteristics that a faithful confidant would have. Please be specific.

ELAR

Literature

Final Exam for *The Wind in the Willows*

- 1) Crossword Puzzle: *4 Across Clue should read “deceptive strategies”

Answer Bank- Tumultuous, impertinence, subterfuges, sanguine, libel, voluble, Imperiously, penitence, placid, carousing, Ratty, Mole, Badger, Toad

- 2) Matching: Literary Devices

- a) Alliteration b) Foreshadowing c) Personification d) Metaphor

___ “So spoke the Badger, not knowing what the future held in store, or how much water, and of how turbid a character, was to run under bridges before Toad should sit at ease again in his ancestral hall.

___ “While the river still chattered on to him, a babbling procession of the best stories in the world.”

___ “Such a rich chapter it (the summer) had been.”

___ “the diffident and delaying dog-rose”

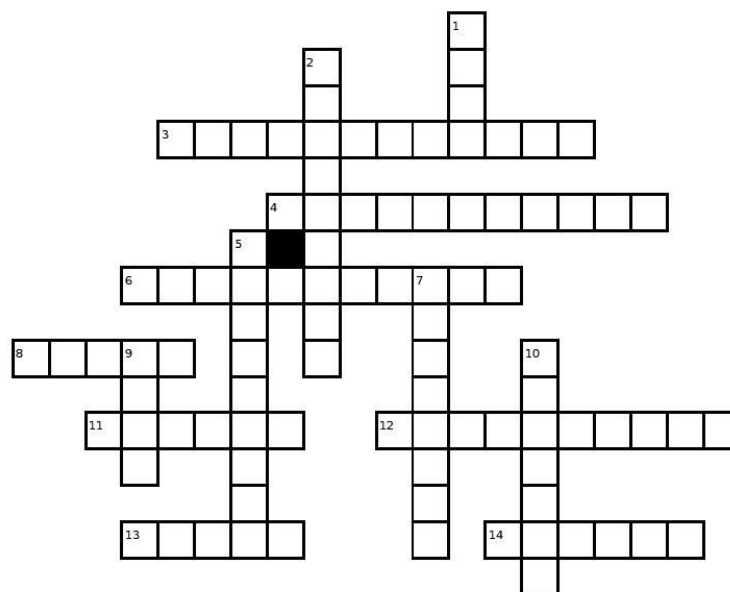
- 3) Short Answer: Answer using at least 3 sentences.

- a) What character has changed the most in *The Wind in the Willows*?

- b) Describe each of the four main characters in a few adjectives each. Which character do you most relate to? Do you see any of your friends in these characters?

- c) At one point in the story, Ratty changes his opinion about something in a significant way. What is it?

The Wind in the Willows Vocabulary and "Who Said It"



Down:

1. "Please stop...You don't understand! It's my home- my old home!"
2. wild partying
5. sorrow over wrong-doing
7. outgoing
9. "Never so happy as when I've got both arms in the wash-tub."
10. loud and talkative

Across:

3. defiance
4. defiance or disrespect
6. with authority
8. "Row on...For the music and the call must be for us."
11. "There's no security or peace and tranquility except underground."
12. noisy
13. unjust defamation of character
14. peaceful

POETRY

Fill in the blanks:

My heart leaps _____ when I _____

A _____ in the sky:

So was it when my _____ began;

So is it now I am a _____;

So be it when I shall _____ old,

Or let me _____!

The _____ is father of the _____;

And I could _____ my days to be

Bound each to each by natural _____.

Math Assessment

For problems 1–9, simplify the numerical expression.

1. -12×14

2. $-14 \times -6 \times 0$

3. -19×-25

4. $-8 \times 4 \times -2 \times -1$

5. $-96 \div 3$

6. $-104 \div -8$

7. $0 \div -10$

8. $80 \div -4 \div 5$

9. $-5(19 - 27) + -23$

10. Explain whether or not the following is true: Every integer and its opposite have equal cubes.

SCIENCE

You may use your RLN to help you complete this portion of the assessment.

1. Describe four ways in which bacteria are important to you.

2. Explain why mushrooms are classified as fungi rather than plants.

3. Life Scientist Report (send your report with the Thursday assessment).

