

Name: _____ Date Due: _____

8th Grade Language Arts



Assignment	Points Earned
Article Analysis	
Article Annotation & Quiz – “NASA rover ...”	
GL Vocab Derivatives Handout 166-170	
BookBlog #15 – “20 Questions”	
Grammar #03	
Journals 71,72,73,74	
GL #166-170 (SEXTUS – DECIMUS)	FYI
BB#14 Due 2/25	FYI

Total=>

NASA rover finally bites the dust on Mars after 15 years

By Marcia Dunn, Associated Press

02/18/2019

CAPE CANAVERAL, Florida — NASA's Opportunity, the Mars rover that was built to operate for just three months but kept going and going, rolling across the rocky red soil, was pronounced dead on February 13, 15 years after it landed on the planet.

The six-wheeled vehicle, which helped gather critical evidence that ancient Mars might have been hospitable to life, was remarkably spry up until eight months ago when it was finally doomed by a ferocious dust storm.

Flight controllers tried numerous times to make contact and sent one final series of recovery commands the night of February 12, along with one last wake-up song, Billie Holiday's "I'll Be Seeing You," in a somber exercise that brought tears to team members' eyes. There was no response from space, only silence.

Thomas Zurbuchen, head of NASA's science missions, broke the news at what amounted to a funeral at the space agency's Jet Propulsion Laboratory in Pasadena, California, announcing the demise of "our beloved Opportunity."

"This is a hard day," project manager John Callas said at an auditorium packed with hundreds of current and former members of the team that oversaw Opportunity and its long-deceased identical twin, Spirit. "Even though it's a machine and we're saying goodbye, it's still very hard and very poignant, but we had to do that. We came to that point."

The two slow-moving, golf-cart-sized rovers landed on opposite sides of the planet in 2004, for a mission meant to last 90 sols, or Mars days, which are 39 minutes longer than Earth days. In the end, Opportunity outlived its twin by eight years and set endurance and distance records that could stand for decades. Trundling along until communication ceased last June, Opportunity roamed a record 28 miles and worked longer than any other lander in the history of space exploration.

Opportunity was a robotic geologist, equipped with cameras and instruments at the end of a mechanical arm designed for analyzing rocks and soil. Its greatest achievement was discovering, along with Spirit, evidence that ancient Mars had water flowing on its surface and might have been capable of sustaining microbial life.

Project scientist Matthew Golombek said these rover missions are meant to help answer an "almost theological" question: Does life form wherever conditions are just right, or "are we really, really lucky?" The twin vehicles also pioneered a way of exploring the surface of other planets, said Lori Glaze, acting director of planetary science for NASA.

She said the rovers gave us "the ability to actually roll right up to the rocks that we want to see. Roll up to them, be able to look at them up close with a microscopic imager, bang on them a little bit, shake them up, scratch them a little bit, take the measurements, understand what the chemistry is of those rocks and then say, 'Oh, that was interesting. Now I want to go over there.'"

Opportunity was exploring Mars' Perseverance Valley, fittingly, when the fiercest dust storm in decades hit and contact was lost. The storm was so intense that it darkened the sky for months, preventing sunlight from reaching the rover's solar panels.

When the sky finally cleared, Opportunity remained silent, its internal clock possibly so scrambled that it no longer knew when to sleep or wake up to receive commands. Flight controllers sent more than 1,000 recovery commands, all in vain.

With project costs reaching about \$500,000 a month, NASA decided there was no point in continuing. Callas said the last-ditch attempt to make contact the night before was a sad moment, with tears and a smattering of applause when the operations team signed off. He said the team members didn't even bother waiting around to see if word came back from space — they knew it was hopeless.

Scientists consider this the end of an era, now that Opportunity and Spirit are both gone. Opportunity was the fifth of eight spacecraft to successfully land on Mars, all belonging to NASA. Only two are still working: the nuclear-powered Curiosity rover, prowling around since 2012, and the recently arrived InSight, which just last week placed a heat-sensing, self-hammering probe on the dusty red surface to burrow into the planet like a mole.

Three more landers — from the U.S., China and Europe — are due to launch next year. NASA Administrator Jim Bridenstine said the overriding goal is to search for evidence of past or even present microbial life on Mars and find suitable locations to send astronauts, perhaps in the 2030s. "While it is sad that we move from one mission to the next, it's really all part of one big objective," he said.

1. What role did project costs play in the Opportunity team's decision to end its mission?
 - (A) The project costs did not play any role in the team's decision to end Opportunity's mission because Opportunity had already been missing for a while.
 - (B) The team had enough money to continue searching for Opportunity so they prolonged the end of the mission.
 - (C) The project costs were steadily increasing every month that Opportunity was missing and forced the team to end the search prematurely.
 - (D) The team could no longer justify the project costs given that Opportunity had been unresponsive for months.

2. Which sentence BEST explains how the dust storm affected Opportunity's ability to work?
 - (A) The dirt accumulated by the dust storm likely found its way inside of Opportunity and caused it to stop responding.
 - (B) The dirt accumulated by the dust storm likely blocked the signals that the team was trying to send Opportunity.
 - (C) The darkness caused by the dust storm likely caused Opportunity to crash into some object and ruin its internal clock.
 - (D) The darkness caused by the dust storm likely caused damage to the solar panels that helped Opportunity to run.

3. Read the sentence from the article.

The twin vehicles also pioneered a way of exploring the surface of other planets, said Lori Glaze, acting director of planetary science for NASA.

What does the verb "pioneered" convey in the sentence?

- (A) the sense that the twin vehicles prepared the way for future planetary exploration
- (B) the sense that the twin vehicles were the only ones to ever explore a planet
- (C) the sense that the twin vehicles were much better than other rovers that explored Mars
- (D) the sense that the twin vehicles had to overcome difficulties other rovers had not

4. Read the selection from the article.

Flight controllers tried numerous times to make contact and sent one final series of recovery commands the night of February 12, along with one last wake-up song, Billie Holiday's "I'll Be Seeing You," in a somber exercise that brought tears to team members' eyes.

The word "somber" has a connotation of seriousness and mourning. Which other selection BEST emphasizes that connotation?

- (A) NASA's Opportunity, the Mars rover that was built to operate for just three months but kept going and going, rolling across the rocky red soil, was pronounced dead on February 13, 15 years after it landed on the planet.
- (B) Thomas Zurbuchen, head of NASA's science missions, broke the news at what amounted to a funeral at the space agency's Jet Propulsion Laboratory in Pasadena, California, announcing the demise of "our beloved Opportunity."
- (C) Project scientist Matthew Golombek said these rover missions are meant to help answer an "almost theological" question: Does life form wherever conditions are just right, or "are we really, really lucky?"
- (D) Opportunity was exploring Mars' Perseverance Valley, fittingly, when the fiercest dust storm in decades hit and contact was lost. The storm was so intense that it darkened the sky for months, preventing sunlight from reaching the rover's solar panels.

8th Grade Greek/Latin Vocabulary Derivatives 166-170

For any of the activities below, you are responsible for knowing the morphology of each derivative. You must be able to properly add affixes to words (e.g. pre-, un-, re-, de-, -ed, -ing, -s, -y, -tion, etc.) or remove them when necessary depending on the context of the sentence. If you do not, and the word requires an affix (or its removal), you will be marked wrong. Spelling always counts.

Part I

Directions: In the space provided please write down each of your spelling words' dictionary definitions, what root(s) we've studied that are in the word, the definition of the word from the back of your GL card, and finally, identify all morphological constructs of that word by adding or removing affixes (be careful with this part—do not invent a new word, only add affixes that are allowed [hint: use the dictionary—it won't have all constructions, but it will start you off on the right path for most words]).

For Example:

	PARADOX		derivative	
10.	_____	_____		dictionary definition
	para / dokein	_____		definition from GL card
GL	paradoxes, paradoxical, paradoxically, paradoxicalness			
root(s)	affixes			

1. **SEXTET** _____

2. **SEXTANT** _____

3. **SEPTIMAL** _____

4. **OCTAVO**

5. **OCTAVE**

6. **NONES**

7. **NOON**

8. **DECIMATE**

9. **DECIMALIZATION**

10. **DIME**

Part II

Directions: Fill in the blank with the correct word from the word bank. Use the context of the sentence to determine which word should be used.

1. Sally used to be part of a singing trio and, on the weekends, she was in a barbershop quartet. This year they combined and the Sally's Singing Salon _____ was formed!
2. Sally and her singing sisters loved to perform for the public; unfortunately, Sally was just an _____ too high for her group and she was kicked out.
3. After leaving Sally's Singing ... (you know the rest), Sally realized she was nickel-and-_____ herself into poverty. She needed to make money somehow!
4. Sally wasn't too smart and used fractions instead of decimals in her Math; therefore, when trying to do her budget that afternoon, the _____ process took forever.
5. After giving up on her budget, Sally decided that the best way to make money was to become a sailor, so she took all her sailing supplies—her pirate maps, compass, _____, cutlass—and went down to the marina.
6. It was _____, so most of the boat captains were having lunch.
7. Captain Bob was eating a ham sandwich and reading an original Shakespeare _____ when Sally approached him.
8. Sally explained to him how her singing group had kicked her out on the _____ of March, and how she desperately needed a job.
9. Captain Bob explained to her that in order to become a sailor, she have to seek an audience with the seven sea captains; also known as the _____ Sailors.
10. Sally felt _____, but knew if she wanted to become a sailor, this is what she would have to do.

Part III

Directions: Read the paragraph below. Highlight the misspelled words and write the correct spelling in the blanks on the back of this page.

Sally sought out the seven sea captains. She knew it was her only chance at a life on the sea. Captain Bob put down his ocvato and finished off his ham sandwich. He said he would show her where to find the Septmail Seven. After finding them at the local Wal-Mart, picking up supplies for their next excursion, the Septimal Seven agreed to meet with Sally if she could help them do their math homework. Sally told them that the next time she'd be available to tutor them would be the Nunes of May. They explained to her that the decimalazation process of converting fractions to decimals had always been a problem for them. Sally was decimuted, she knew she had no chance of ever being able to help them with their math problems now. Sally was not going to be a sailor after all.

Name: _____ Book Title: _____

Book #15 – 20-Questions

Choose two characters in your book that want to get to know each other better. Maybe your protagonist wants to get to know the antagonist better to figure out where that evil man might strike next; maybe the hero wants to get to know the fair damsel better; or maybe the dog wants to know why its owner keeps leaving every day. Whatever the relationship between characters, choose two to analyze that you believe need to have a heart-to-heart. From the point of view of one of those two characters, have him or her ask the other character 20-questions that are meant to dig deep into the heart of the other person. Do not ask questions like, "How are you today?" Ask the deep questions. Maybe Katniss might ask President Snow why he left her the white rose at the end of *Mockingjay*. Or maybe Harry might ask Tonks how she fell in love with Lupin (*Harry Potter* nerd, sorry). Let me know who's talking, what their relationship is in the story (husband/wife, hero/villain, dog/owner, friends, etc.), and why they're talking (A,B,C, & D below), then ask the questions. **Do not answer the questions.**

- A. Character 1 (asking the questions): _____
 - B. Character 2: _____
 - C. What is their relationship? _____
 - D. Why does character 1 want to ask character 2 these questions? _____
- _____

Questions:

- 1. _____

- 2. _____

- 3. _____

- 4. _____

- 5. _____

- 6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

Lesson 4**Subjects and Predicates: Simple and Complete**

Both a subject and a predicate may consist of more than one word. The **complete subject** includes all of the words in the subject part of a sentence. The **complete predicate** includes all of the words in the predicate part of a sentence.

COMPLETE SUBJECT COMPLETE PREDICATE
My younger brother likes alphabet soup for lunch.

The **simple subject** is the main word or group of words in the complete subject. The **simple predicate** is the main word or group of words in the complete predicate. The simple predicate is always a **verb**, a word or words that express an action or a state of being.

SIMPLE SUBJECT SIMPLE PREDICATE
My younger **brother** **likes** alphabet soup for lunch.

► **Exercise 1** Draw a vertical line between the complete subject and the complete predicate.

People|call Australia the continent “down under.”

1. Australia is one of the most spectacular countries in the world.
2. The country is both the smallest continent and the largest island.
3. This small continent lies in the Southern Hemisphere.
4. The coastline of Australia is irregular.
5. It measures 12,210 miles.
6. The island state of Tasmania once formed the southeastern corner of the mainland.
7. The Great Barrier Reef continues along the eastern coast for 1,250 miles.
8. Four species of coral reef compose the chain of reefs and islands.
9. Australia’s western regions form a great plateau.
10. The climate ranges from temperate to tropical.
11. Forty percent of Australia has only two seasons: hot and wet or warm and dry.
12. The average rainfall ranges from five to fifteen inches.
13. Australia’s natural lakes fill with water only after heavy rains.

14. The country's major lakes are salt water.
15. Most of the land is desert.
16. Australia's four deserts include the Simpson, the Gibson, the Great Sandy, and the Great Victoria.
17. Few rivers exist in the western part of this country.
18. Aqueducts and tunnels channel water from the Snowy Mountains for irrigation and hydroelectric power in the southeast.
19. The Australian Alps rise to 7,310 feet in the Eastern Highlands.
20. Ayers Rock in central Australia is a tourist attraction.

► **Exercise 2** Draw one line under the simple subject and two lines under the simple predicate.

Australia has many unique plants and animals.

1. Forests cover the east coast of Tasmania.
2. The forests consist mainly of pine trees.
3. The dingo is a doglike animal.
4. It hunts sheep.
5. Dingoes prey on kangaroos as well.
6. Many people find wallabies interesting.
7. They are small members of the kangaroo family.
8. Wallabies belong to the marsupial order.
9. Female wallabies carry their young in a pouch.
10. Two species of crocodiles dwell in Australia.
11. The Queensland lungfish has no gills.
12. A lungfish breathes with a single lung.
13. Six hundred fifty species of birds live in Australia.
14. One hundred species of venomous snakes lurk on the ground.
15. The ocean offers seventy species of sharks.
16. Sharks pose no threat to people in most cases.

