NEWS BREAK

Article: **NASA prepares for a 'Wright brothers' moment**

Section: **MAIN, A6**

Sunday's News Break selects an article from **Sunday, April 11, 2021** of The Seattle Times print replica for an in-depth reading of the news. Read the selected article and answer the attached study questions.

You are encouraged to modify this lesson to fit the needs of your students. For example, some teachers might use this as a take-home assignment and others might read and answer the questions in a small group or larger, class discussion.

Please be sure to preview all NIE content before using it in your classroom to ensure it is appropriate for your students.

Standards:

CCSS.ELA-Literacy.RI.4.1

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

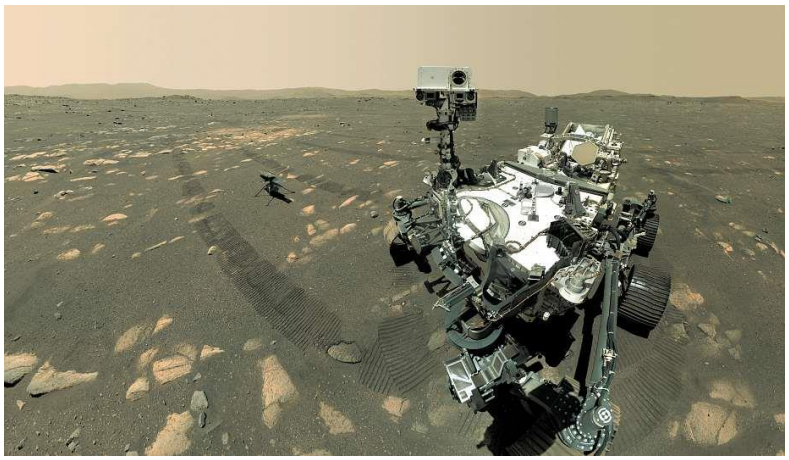
CCSS.ELA-Literacy.RI.4.2

- Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Objectives:

Students will talk about the meaning of perseverance and ingenuity and why they think these words were chosen as names for these two vehicles. They will discuss how flight tests like these can open up aerial mobility on Mars. They will also have a dialogue about what this might mean for the future of Mars and debate whether it's a good thing to explore other planets and why experimentation is important.

Pre-Reading Discussion:



- What do you think the article will be about, using only this picture?
- Are there clues?
- What can you infer?

Vocabulary Building:

Read this sentence, what do you think the highlighted words mean using *context clues*? A ***context clue*** is a word or words that are hints and refers to the sources of information outside of words that readers may use to predict the identities and meanings of unknown words.

In a statement Saturday, NASA said, “The helicopter is safe and healthy and communicated its full ***telemetry*** set to Earth.”

***Telemetry* Guess:**

Telemetry Definition:

Comprehension Questions:

1. Engineers at NASA’s Jet Propulsion Laboratory even sneaked a coded message into the parachute used to slow it down for a soft landing that says what message?
2. Now comes what the space agency says will be a “Wright brothers” moment on Mars. What did they create, what do they hope happens, how far and how long should it take and what highlights will it mark?
3. What will the Perseverance Rover do?
4. Reading the geological history embedded in its rocks will give scientists what?
5. Perseverance carries Ingenuity with it. What is it?

6. Describe the reduced gravity and thin air on Mars. What heights do they compare it to, here on Earth? Why will it be a challenge to fly Ingenuity there?
7. As a tribute to the Wright brothers, Ingenuity has what attached to it?
8. In 1903, the Wright brothers' first flight went about _____ feet.
9. Ingenuity's first flight won't go that far. What are the plans for the first test flight? How far do they want it to rise and hover? What additional testing do they want to complete on this mission?
10. The Perseverance rover will assist in Ingenuity's flight. How?

Discussion Questions (small/large groups), Journal Prompts or Essay Questions:

- ***What surprised (or stood out to) you in the article?***
- ***At first I thought _____, but now I think _____?***
- ***What things did you already know from prior experience?***
- ***What is perseverance and ingenuity? Why do you think these words were chosen as names for these two vehicles?***

If successful, Ingenuity's flight would come nearly 120 years after the Wright brothers' first flight of a plane above the beach in North Carolina. Nothing like Kitty Hawk, Ingenuity's airfield is a dusty, rock-strewn, barren strip of land that is flat enough, NASA hopes, for takeoff and landing. Designed as a test vehicle, Ingenuity is "in the long tradition of experimental aircraft that started with the Wright brothers, who were able to bring aerial mobility as a dimension for us to be able to travel here on Earth," NASA's Bob Balaram, the chief engineer of the Mars helicopter project, said in a news briefing last month. "In the same way, we are hoping that Ingenuity also allows us to expand and open up aerial mobility on Mars."

- **How can flight tests like these open up aerial mobility on Mars? What will that mean for the future of Mars? Do you think it's a good thing to explore other planets? Why or why not?**
- **Why is experimentation important?**

News Break is posted to the Web on Monday. Please share this NIE News Break program with other teachers. To sign-up for the print replica for your class, please register on-line or call 206/652-6290 or toll-free 1-888/775-2655.