

Middle School Science: Colonizing Mars Juicy Sentence Example

JUICY SENTENCE

“Harnessing these traits might also someday allow astronauts to journey farther than Mars, out to some even more exotic and dangerous cosmic locales.”

Excerpted from “[Colonizing Mars May Require Humanity to Tweak its DNA](#)” by Mike Wall (para 6)

WHOLE

Questions about the Sentence

Display and read paragraph 6 aloud for context. Then reread aloud the juicy sentence. Pair students and invite them to Turn and Talk or Think-Pair-Share in response to these questions:

- What’s the gist of this sentence? (If students can answer this question and be in the right ballpark, consider skipping the vocabulary question below since we will work with words and phrases a bit later.)
- Are there any words or phrases that are unfamiliar to you? (You may wish to provide this sentence on a handout and ask students to circle unfamiliar or interesting words and phrases and share them with a partner. I recommend circulating to address common words or phrases that may need direct instruction to understand the gist of the sentence. We go deeper with vocabulary and comprehension a bit later on in the lesson.)
- How might you say this sentence in your own words?

PART: Break it Down!

Questions about the chunks:

Consider displaying the juicy sentence and model breaking it into chunks. The chunks may differ depending on your intended purpose of the comprehension. I generally break the sentence into logical phrases. Provide pairs of students with these sentence chunks cut up and placed in an envelope.

Harnessing these traits	might also someday	allow astronauts to journey
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farther than Mars,	out to some even more exotic	and dangerous	cosmic locales.
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- Can you rearrange the chunks so they make sense? (Allow students time to play around with the chunks. We students to be rereading the chunks, discussing the order, playing with the language, etc. regardless of whether or not the sentence can be rearranged with meaning.)
- Ask this question emphasizing the italicized word, *these*: “What does the chunk “Harnessing *these* traits” tell us? What is the word “these” referring to? Where do we need to look in the paragraph to know what *these* is referring us back to?”
- How can we say “might also someday” in our own words?
- Which chunk helps us understand what is needed to “allow astronauts to journey farther than Mars”? (I’m trying to get students to focus on the word *traits* in the first chunk.)

Questions about the words:

- What do we think the word *traits* means? What are some synonyms of this word? How are they different in meaning?
- What does the word *harness* mean? Have you heard this word used in other contexts?
 - What do you think it means to harness traits?
- What words does the author use to describe Mars?
 - What comes to mind when you hear the word *exotic*?
 - Do you think the author thinks Mars is a place with palm trees and interesting food? How do you know?
 - So, what is the author saying about Mars when he uses the word *exotic*?
 - Latin from Greek *exōtikos* ‘foreign’, from *exō* ‘outside’.
- Let’s look at the word *cosmic*. Have we encountered this word in our unit?
 - The word *cosmic* means **world** and it comes from the Greek word *kósmos*
- Now focus on the word *locales*. Everyone say, “*locales*” (students repeat). Does this word remind you of a word you know?
- Reinforce that *locale* means a **place**.
- What do you think the phrase *cosmic locales* means?
- What does the author think these cosmic locales will be like?

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Take a Step Back

- Now, let's reread the juicy sentence. What do you think is the meaning of this sentence?
- How has your understanding of the sentence changed?
- How does this sentence relate to our study of natural and genetic adaptations?

WRITING PRACTICE:

You try it! After reading and analyzing this sentence use your knowledge of Kepler or Trappist to write a sentence about how your planet is exotic and dangerous.

You can use these questions to help you get started:

- What planet are you going to write about?
- What makes this planet exotic?
- What dangers will they face?
- What traits will people need to control to survive on the planet?

Sentence Frames for Additional Support

1. To survive on _____, a place with _____, people will need

(planet) (describe the exotic conditions and dangers)

_____ to survive.

(traits needed for survival)

2. On a planet like _____, a cosmic locale with _____, harnessing traits like

(planet) (describe the exotic conditions and dangers)

_____ will be essential for survival.

(traits needed for survival)