



SOLVING COMMUNICATION PROBLEMS

Overview

Book: *The Martian* by Andy Weir

Grades 6-12

In Andy Weir's *The Martian*, one of Mark Watney's top priorities is to establish contact with NASA to ensure his rescue. Mark is eventually able to establish communication with NASA using ASCII, a code that uses numbers to represent characters in the English language. In this ELA lesson, students will research various forms of nonverbal communication, then demonstrate a particular form to their classmates.

Standards

L.6-8.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCR.SL.1	Prepare for and participate in a range of conversations and collaborations with diverse partners.
SL.6-12.4	Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details, to accentuate main ideas or themes; use appropriate eye contact, volume, and clear pronunciation.

Objectives

Students will explore ways that people communicate in a nonverbal manner.

Students will research a form of nonverbal communication.

Students will demonstrate this form of communication to classmates.

Materials Required

Internet or library access

Tools that may be required for the various types of nonverbal communication (for example, flags for semaphore or clickers or laser pointers for Morse Code)

Procedure

1. Read the section in *The Martian* when Mark Watney is able to communicate with NASA.
2. Ask students to brainstorm all the possible ways to communicate a word or feeling in a nonverbal manner.
3. Explain that there are many established forms of communication that do not involve the spoken word. Examples: American sign language, Morse Code, semaphores, nautical flag letters, traffic signs, signal lamps, emojis, and hieroglyphics.
4. Divide students into pairs. Tell students they are to select a form of nonverbal communication. They will research its history and usage. At least 3 sources should be used during their research. The research should answer the following questions.
 - Why was your form of communication created?
 - When was your form of communication developed and when was it used?
 - What situations lead to its development?
 - What are the limitations of this form?
 - Is it currently still in use? Where?
5. Have students write a message that Mark Watney might have wanted to communicate and translate it into the nonverbal communication method they have researched.
6. Reorganize students into groups that have researched the same form of communication.
7. Have these groups explain their specific type of communication to the class.

Extensions

1. Ask students to create their own new and original form of nonverbal communication.
2. Have students, using the same communication method, engage in a conversation with at least one back-and-forth interaction. Have one student communicate as Mark Watney and another as an Ares 3 crewmate or a NASA representative.

Rubric

RUBRIC	Exceeds (3)	Meets (2)	Partially Meets (1)	Does Not Meet (0)
Research	Student cites 4 or more resources	Student cites 3 resources	Student cites 2 resources	Student cites 1 resource
Communication	Sentence is complex and stated correctly in nonverbal format	Sentence is simple and stated correctly in nonverbal format	Sentence is simple and contains 2 or fewer errors in the nonverbal format	Sentence is simple and contains 3 or more errors in the nonverbal format
Presentation content	Answers all 5 questions with well-developed content, details, and facts	Answers all 5 questions with adequate details and facts	Answers 3-4 questions with some details and facts	Answers 1-2 questions with poor details and facts
Presentation	Presentation is very well organized and all students use appropriate eye contact, volume, and clear pronunciation.	Presentation is very well organized and most students use appropriate eye contact, volume, and clear pronunciation	Presentation is poorly organized and few students use appropriate eye contact, volume, and clear pronunciation	Presentation is very poorly organized and students did not use appropriate eye contact, volume, and clear pronunciation

Total N/12				
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