



SOLVING COMMUNICATION PROBLEMS

Grade Levels 6-12

Activity

Students will research various forms of nonverbal communication, then demonstrate a particular form for their classmates.

Materials Required (per student)

- Computers
- 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

In Andy Weir's *The Martian*, one of Mark Watney's top priorities after being stranded on Mars is to establish contact with NASA to ensure his rescue. Mark Watney is eventually able to establish communication with NASA using ASCII, a code that uses numbers to represent characters in the English language.

For this activity, students will explore ways people communicate without spoken language, such as ASCII, sign language, Morse code, or flag semaphore. Students will choose one of these methods to research and to eventually demonstrate to classmates. Have students work in groups of two, so that each can learn a sentence or message and then communicate it to a partner. Either assign each pair of students a communication method or allow them to pick their own.

Students will research topics such as the origin of their communication method and the situations and time when it was used most. Then, each student should write a Watney-inspired sentence, translate it, and demonstrate it to

their classmates. Students using the same communication method could also engage in a conversations 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.

This entire activity should take at least 3 class periods to complete. Students may need extra time between when they complete their research and when they present to their classmates so that they can practice their communication methods.

Teacher Extras

Optional Extension

To deepen your students' understanding, have them take the time to teach another group of students the sentences they learned in their chosen form of nonverbal communication.

Ask the Students

- Why was your form of communication created? What situations lead to its development?
- When was your form of communication developed and when was it used?
- Describe some difficulties you had when learning to use your form of communication.