

Writing a Great Test Response

Goal: Students will examine an example of well-written test responses and then create their own perfect test response.

Background: Tests are a chance for a student to show what they've learned, but I don't only want to know what you remember. I also want to know how good you are at looking for and finding connections. I want you to share the logic that you used to reason your way to a final answer. Sometimes, students accomplish this goal with amazingly brief, but enlightening responses. Many other times, a good response requires writing in depth (i.e. four to five sentences) about their thoughts.

Procedure: We'll look at a single test question and two good ways to respond to the question. Then you'll choose a question from your astronomy test that you didn't respond to very well. Using the examples and resources from the astronomy unit, you'll write a mechanically sound, logical, and conceptually correct response to the question you chose.

Test Question: How is it that technology for cave exploration could be useful for exploration of planets? What do cave and planet exploration have in common?

Good Response #1: Bill Stone is a cave scientist who explores the possibility of life in the world's deepest, wettest caves. Cave exploration is as psychologically challenging as it is physically, and there are just some places that humans have been unable to go. Stone has developed a robot that can dive into caves to create 3D maps, take samples of the water and stone walls, and regularly make decisions for itself. The concept that an exploration robot could make decisions for itself is what makes this cave technology useful for space exploration. So far, the planets in our solar system have been unreachable by humans, and when we send robots they have to be able to make decisions about where to go and what tests to perform just as with the most remote cave.

Good Response #2: Caves and planets are remote locations with conditions that are often uninhabitable, so human exploration is limited to the robots that we send into these environments. Earth is just another planet, so exploration of caves on Earth and exploration of other planets pose the similar obstacles—rocks, seas, ice, darkness, and more. These physical challenges are easy to overcome. The difficulty lies in how to operate a robot when communication is limited because the cave is so deep or the planet so far away. Therefore, robot explorers in both cave and solar system situations need artificial intelligence to help them make decisions after humans have lost touch.

Poor Response: Caves need to be explored and so do planets. The technology can be the same because they have to do the same thing.

Assessment: Your mechanics (spelling, grammar, punctuation, organization) will be graded out of 10 points. The quality of your response will be graded out of 10 points.