

Cosmic Oratory Challenges

Public Speaking And Space Science · Answer Key · 8 Questions

1. What is the approximate time delay for a public speaker on Earth to receive a response from Mars due to the speed of light?

- A) 30 seconds
- B) 3 to 22 minutes**
- C) 1 hour
- D) 24 hours

2. Which Apollo 11 astronaut famously spoke the words, 'That's one small step for man, one giant leap for mankind,' while standing on the lunar surface?

- A) Buzz Aldrin
- B) Michael Collins
- C) Neil Armstrong**
- D) Alan Shepard

3. Why is it physically impossible for a public speaker to use vocalized speech to communicate with an audience on the surface of the Moon?

- A) Lack of atmosphere**
- B) The gravity is too low
- C) Extreme cold temperatures
- D) Solar radiation interference

4. In 1977, the Voyager Golden Record was launched into space, carrying audio recordings intended for extraterrestrial life. What is the approximate distance it has traveled from Earth?

- A) 1 million km
- B) 1 billion km
- C) 20 billion km**
- D) 100 billion km

5. What is the primary scientific reason a public speaker cannot use a traditional megaphone to amplify their voice in the vacuum of outer space?

- A) Sound requires a medium to travel**
- B) Megaphones melt in space
- C) The vacuum creates sound distortion
- D) Electronic interference from stars

6. The 'Pale Blue Dot' speech, delivered by Carl Sagan, reflects on an iconic photograph of Earth taken by which space probe?

- A) Voyager 1**
- B) Hubble Telescope
- C) Cassini
- D) Curiosity Rover

7. If a speaker were addressing a crowd on Venus, what atmospheric condition would make the transmission of sound significantly different than on Earth?

- A) The atmosphere is 90 times denser**
- B) The atmosphere is made of neon
- C) There is no atmosphere
- D) The wind speed is zero

8. In orbital mechanics, what is the term for the 'public' signal delay experienced when a space station commander speaks to Mission Control?

- A) Latency**
- B) Echo suppression
- C) Frequency shift
- D) Doppler drift