

Packing for Mars Discussion Questions

1. Taking into consideration all of the problems we must solve to be able to put a person in space, is it worth it? Moreover, is it worth government funding? Why or why not?
2. Considering all of the funds spent on each mission (estimated \$1.3-\$1.5 billion per mission according to Forbes and \$450 million per launch according to NASA), is it worth all of the money spent? What impact do these missions have on our planet? What do we get out of it?
3. Our nation is concerned with our dependence on fossil fuels. Considering the amount of fuel it takes to launch rockets into space, is it environmentally sustainable to continue space missions? If not, is it worth the fuel expenditure anyway? Why or why not?
4. At the very end of her first chapter, Roach writes, "Space doesn't just encompass the sublime and the ridiculous. It erases the line between." Roach goes to great lengths to illustrate this point throughout the rest of her book. Why? Why is it so important for the reader to see how space joins "the sublime and the ridiculous"?
5. Roach mentions several times that the human body is a problem for NASA. The systems we've evolved that work so well with Earth's gravity, atmosphere and resources are often obstacles to be overcome in space. In your opinion, which of these things make us human? Is it the way our bodies have evolved, our capacity to solve the problems those bodies present, or something else?
6. What purpose does humor serve in *Packing for Mars*? Do you think it's effective? Do you think it's appropriate? Why or why not?
7. What is the appropriate role of humor in science? Humor can make your work more accessible to a broader audience, but can also trivialize it. What is the right balance? Are some topics more appropriate for humorous treatment than others?
8. How does humor allow us to better deal with stress or discomfort in the workplace?
9. Not everyone finds *Packing for Mars* funny. In the university setting and in the workplace, how do we deal with different senses of humor? What if you are in the minority and everyone around you finds it funny? What if you are in the majority and you see that one or two other people don't find it funny?
10. Astronauts and others associated with different space programs are clearly very passionate about their chosen profession, even as they acknowledge the substantial risk. Are you so passionate about anything (work or leisure) that you would be potentially willing to die for it? What percentage of risk is acceptable? Is it a good thing that some people are so passionate they are willing to take that kind of risk?
11. One potential motivation for becoming an astronaut is to become a part of history. Is that something that motivates you?
12. How is *Packing for Mars* relevant to you? Why would Clarkson choose this book as your first real "assignment" as a college student?
13. Of all the different roles involved in the enterprise of going to space (astronaut, engineer, social psychologist, ground control, etc.), which one would you be?
14. Mary Roach writes about science in a very accessible way. Would you be more or less likely to be a scientist had your textbooks been written like *Packing for Mars*?

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15. NASA and other space programs have conducted testing (and have killed) many animals in conducting research and test missions. Is it ethical to use animals in this way? Is it ethical to use primates? Why or why not?
16. NASA now relies on private companies to send people and supplies to space now that the US government has retired the space shuttle program. Is this a good idea? Does this trivialize space travel? Is it fair for government to have a monopoly on some enterprises such as space travel? Does this encourage a competitive and safer market for space exploration and missions? What is the better approach? <http://archive.spacefrontier.org/commercialspace/lspalaw.txt>
17. With private space travel enterprises becoming available in the near future, should passengers be required to train as intensely as the astronauts of the NASA missions? <http://www.businessinsider.com/how-the-private-sector-revolutionized-the-space-race-in-a-few-short-years-2012-8>
18. Psychologists are studying human interactions and team dynamics in an effort to prepare for a mission to Mars. Roach also notes some of the psychological studies that have been done in preparation for astronauts' living together in close quarters for extended periods of time. An astronaut's first space mission bears some similarities to a student's first year in college (living in a confined space with a new person, being away from home, etc.). How will you choose to deal with these similar stressors at Clarkson? What about your first year at Clarkson makes you most apprehensive? What makes you most excited? <http://www.apa.org/monitor/2013/03/mars.aspx>
19. With a common consensus being that we will not be sending people into Mars when the Earth is depleted and can no longer sustain life, then what is the point of continuous space exploration?
20. If we were to send people onto Mars to live, how would the criteria for who goes work? Would this work now that space research and development is now privatized? How is this ethical, or isn't it?
21. Who owns space and thus space research? Especially considering NASA is now hiring researchers from other countries and expecting them to keep information confidential?
22. Is there any psychological irony in that when astronauts are trained to go into space, they are packed into small spaces, yet once astronauts get into space they are seemingly far away from humanity?