Hesam Shakib : Writing 8: Integrated Task 1 : TPO 50: Week 8: Class 233:

Introduction:Both the reading and the lecture discuss problems of sending humans to Mars in the near future. According to the reading, the author claims that there are three problems with this voyage that make it impossible. The professor, on the other hands, refutes all the three problems provided by the author and asserts that even though a trip to Mars might be challenging, there are some solutions to make it possible.

Firstly, the reading points out that because the distance from earth to Mars is far, it is impossible to take enough food to Mars. The lecturer, by contrast, casts doubt on this idea by saying that there is a hydroponic technique by which astronauts can grow plants in space. in this technique, the plant's root would be in the water instead of soil. Therefore, they would occupy a little space in the spacecraft and make it possible to produce their own food crop. Moreover, these plants can recycle wastewater, so the people would be able to use clean water for drinking. The other positive effect of these plants is that the absorb co2 and release oxygen. As a result, plants can provide the people with the fresh air to breath.

Secondly, the author claims that the sever zero-gravity may have a negative effect on human. The professor, however, refutes this challenge by arguing that there is a lot of spacecraft which are orbiting in the space and the humans use some techniques to overcome zero-gravity. Regular exercise and taking vitamins and mineral such as calcium stop the probability decreasing of bone density. Therefore, using this method would make the Mars trip plausible.

Finally, the article avers that exposing to lots of radiation would have a bad effect on people and using a shield on spacecraft add weight to that. The speaker, nonetheless, rejects this idea by explaining that the radiation will not be at a dangerous level every time, but this radiation may be active occasionally. Moreover, he adds that to avoid this problem the monitor device and small shield which would not add to the weight can be used. Whenever the level of radiation is low, which is showing by the help of monitor device, they can live on the unsheltered cage, but when the te monitor shows the high level of radiation, they can live on the small sheltered cage.

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