**TPO 50\_Integrated**

The reading passage points out that the project of sending astronuts to Mars would be approximately impossible because of three major problems. Conversely, the professor believes that scientists present several solutions for these problems which will be explained in the following paragraphs.

First, the writer puts forward the idea that the cargo capacity of space vehicles is limited for carrying plenty of food, water and oxygen needed by astronauts for two years. By contrast, the professor dismisses this contention, stating that the crew could use hydropanic technology for growing plants in water instead of soil. This way they could cultivate food crops and secure the required foods. Not only that, but they could recycle waste water by using some particular tools to clean waste water and drink fresh water. They could plant some crops which absorb CO2 and release oxygen and fresh air for the crew.

Second, the author mentions that zero-gravity environment of space for two years could have detrimental effects on the human body of astronauts. Conversely, the lecturer refutes this argument by providing the fact that the crew could consume some pills and vitamins like calcium which could help their body to tolerate zero-gravity pressure of the space.

Finally, yet importantly, the reading states that astronauts on the spacecraft would be exposed to harmful and noxious levels of space radiation and they are not safe completely. Nevertheless, the professor believes that dangerous type of radiation do not exist for all time and scientist devise a shield for ships that astronauts could use just for that dangerous times.

**262 words**

**20 minutes**