

Please refer to the Teacher Resource document for information on how to use the worksheet for the activity.

Q1. Using the observations and conclusions from the activities you have completed in previous worksheets, **present your arguments below** for why Humans cannot live on Mars. Do you **agree** or **disagree** with your original hypothesis?

Expected Responses:

- I agree that Humans cannot live on Mars. Firstly as we explored for life to exist there needs to be water and carbon. When I thought about food chains in Activity 2 I noticed that if there was no water or no carbon then the source of food for consumers in the food chain would end. This is unsustainable for life. Secondly, in Activity 3 I learned that the water on Mars is only found in the crust on the surface, absorbed in the rocks and clay. There is no water cycle like we have on Earth where water is found in liquid, solid and gas forms. The temperature on Mars is also colder than Earth so it would take longer for water to evaporate if it could be extracted from the crust somehow. Thirdly, I learned that the carbon dioxide in the atmosphere of Mars is escaping into space because of the solar wind that gives the molecules energy to escape. The atmosphere is so thin and the pressure is so low that it is easy for the molecules to get energy from the moving plasma in the solar wind and leave the atmosphere. Even though Carbon Dioxide is warming Earth and causing the climate crisis, we still need it for life to exist. Lastly in Activity 1, I saw photos of Mars and it looked dusty and sandy. It doesn't have the green land and soils that Humans on Earth use for agriculture. I think that life would be hard on Mars without the help of technology.