Mars 2020: Perseverance Rover **Questions**

1. Calculate the number of days that Perseverance will have travelled from launch to landing on Mars.

_____ days

2. Explain why rovers have searched for evidence of water on Mars.

3. Explain why robotic missions such as the Mars rovers have been sent to Mars before manned missions.

4. Give **two** pieces of evidence collected by Mars rovers that support the possibility that life existed on Mars in the past.

   1. _____

   2. _____

5. Describe how Perseverance will use one of its instruments to investigate one of its goals.

6. Suggest why it will be useful for future missions to collect the samples obtained by Perseverance and bring them back to Earth.

BEYOND SCIENCE

7. Name the force that slows down the spacecraft as it enters the atmosphere of Mars.

8. Suggest why the rover needs a heat shield to travel through the atmosphere.

9. Calculate the reduction in velocity from the point the parachute deploys to the sky crane manoeuvre.

_____ mph

10. Suggest why the descent stage continues to fly for a while before it crash-lands.

11. Explain the challenges that astronauts will face on the first manned mission to Mars.