Investigating Space

Currently scientists are working on two major new space opportunities. One is commercial space tourism and the other is the first manned mission to Mars. For both of these journeys to be possible scientists need the right rocket technology to allow people to travel safely beyond the Earth's atmosphere and return.

The fastest speed reached by a rocket with human passengers was 39,897 km/hr achieved by the Apollo 10 upon reentry to Earth. With current technology the average is much slower to account for the need to slowly decrease the speed for landing, minimizing fuel storage and the limits of the human body. **If** rockets could maintain an average travelling speed of 40,000 km/hr, how long would it take to get to?

	Closest Distance (km)	**Speed (km/hr)**	**Time (hours)**
The Moon	385,000 km		
Mars	56,000,000 km		
Jupiter	588,000,000 km		

In addition to the time it takes to get there, there are some other considerations in traveling to new frontiers.

	Earth	**Moon**	**Mars**	**Jupiter**
Planet material (gas or rock)	Rock Source: CPO PHYSICAL SCIENCE	Source		
Average Temperatures	14 degrees Celsius Source: CPO PHYSICAL SCIENCE	Source		

Diameter of planet	12, 800 KM Source: CPO PHYSICAL SCIENCE	Source		
Strength of gravity compared to Earth **(divide it's gravity by 9.8)**	1 (9.8 N/Kg) Source: CPO PHYSICAL SCIENCE	Source		

Based on the information you collected, where would be the best location to establish a new human colony? Be sure to use at least 2 pieces of evidence in your explanation and explain your reasoning.