

Exploration by Martian Landers – Seven U.S. spacecraft have successfully landed on the Martian surface, conducting detailed geological and chemical analyses of Martian surface rocks, and searching for life and water. – Based on data from studies of it, a group of scientists pointed to spherical structures like those produced by bacteria on Earth, the presence of chemical compounds sometimes associated with Earth biology, and curved, rod-like structures resembling Earth bacteria, which the researchers interpreted as fossils of primitive Martian organisms. – The Curiosity rover landed to study Mars' climate and geology, investigate water's past and present roles, determine if the landing site (with in Gale Crater) was ever favorable for microbial life, and assess the planet's suitability for future human exploration. – In 1997, the Mars Pathfinder lander measured the Martian atmosphere and atmospheric dust, while its Sojourner rover performed chemical analyses of soil and rocks. – The Spirit landing site was rocky, similar to terrain encountered by previous landers, though close study revealed that most rocks in the lander's vicinity appeared to have been significantly altered by water long ago. – The Gas Exchange experiment provided a nutrient solution to any residents in a Martian soil sample and looked for gases indicating metabolic activity.