

Perseverance Rover

Studying rocks and minerals on Mars's surface and subsurface will help geologists understand what sort of environments existed on Mars millions of years ago and whether these would have been able to support life.

How will Perseverance study Mars's geology?

- 1** A camera able to take panoramic and stereoscopic (3D) images will look at the geology of Martian rocks and minerals to reconstruct past environments.
- 2** An instrument able to take images and measure chemical composition of rocks will be able to look at different minerals from a distance.
- 3** UV radiation will be used by an instrument called a UV Raman spectrometer to search for different minerals and organic compounds in the surface rocks. Organic compounds could be indicators of past life on Mars.
- 4** An instrument called an X-ray fluorescent spectrometer will be used to analyse the individual chemical elements present in the Martian surface. This will be done in much more detail than ever before.
- 5** Sensors will be used to measure temperature, wind speed, pressure and humidity on Mars. They will also look at the size and shape of dust particles.
- 6** Ground-penetrating radar will be used to study the rocks below the surface on a centimetre scale resolution.

