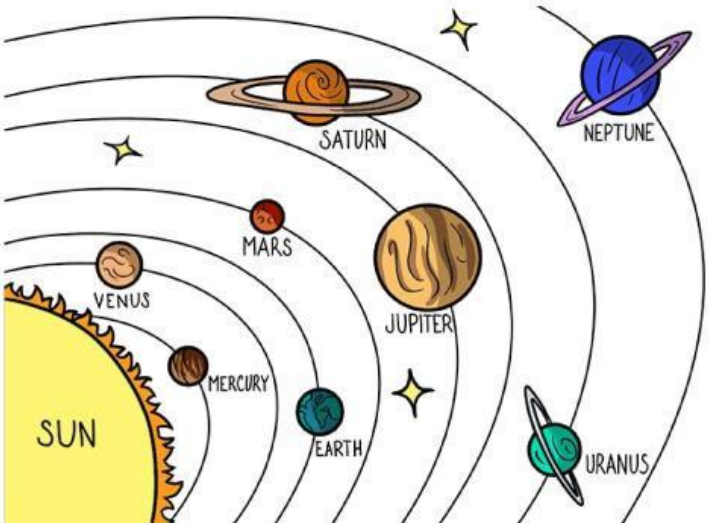

In Context
What do you know about Mars?
Turn and talk to a neighbor.
LIVEWORKSHEETS

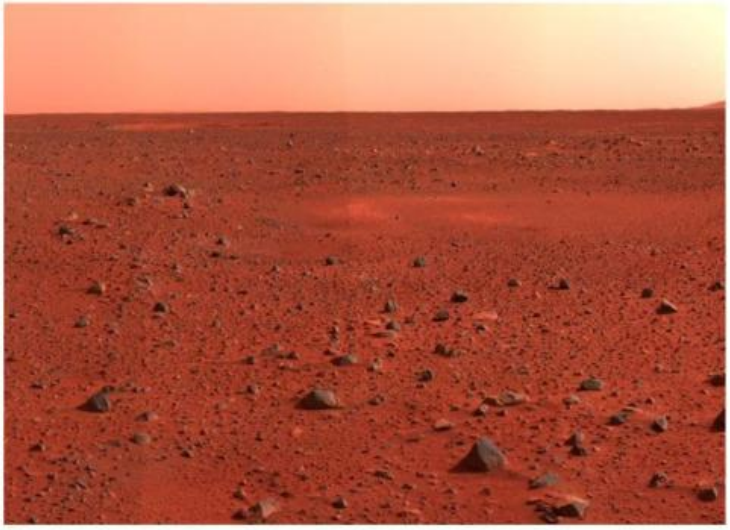
Mission to Mars



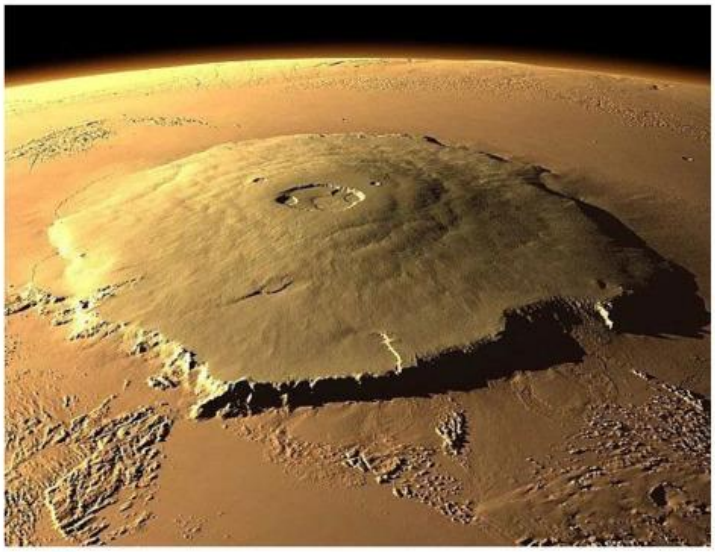
Mars is a planet that has fascinated humans for centuries. It's the **fourth planet** from the sun, and it's often referred to as the **"Red Planet"** due to its distinctive rusty color. Mars is similar to Earth in some ways - it has a rocky surface, a thin atmosphere, and polar ice caps - but it's also different in many ways!

Red color

If you look at pictures of Mars, you'll notice that it's a reddish color. This is because the **soil** and **rocks** on Mars contain a lot of **iron**, which **oxidizes** (or rusts) in the presence of oxygen. This gives the planet its distinctive color.



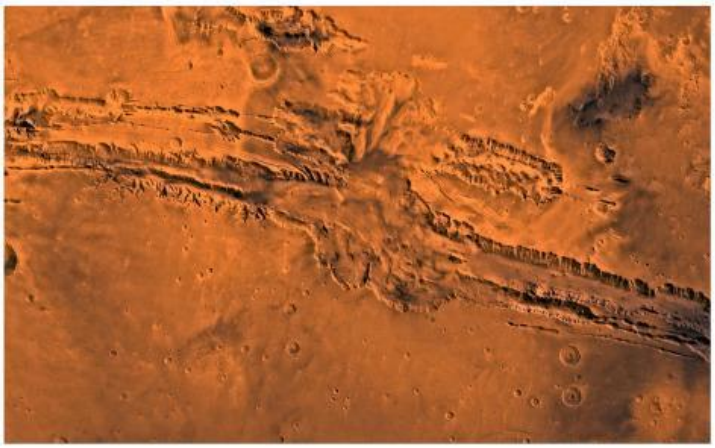
Mountains



Mars has some of the biggest mountains in the solar system. One of them, called **Olympus Mons**, is over 13 miles (21 kilometers) high - that's more than three times as high as Mount Everest, the tallest mountain on Earth!

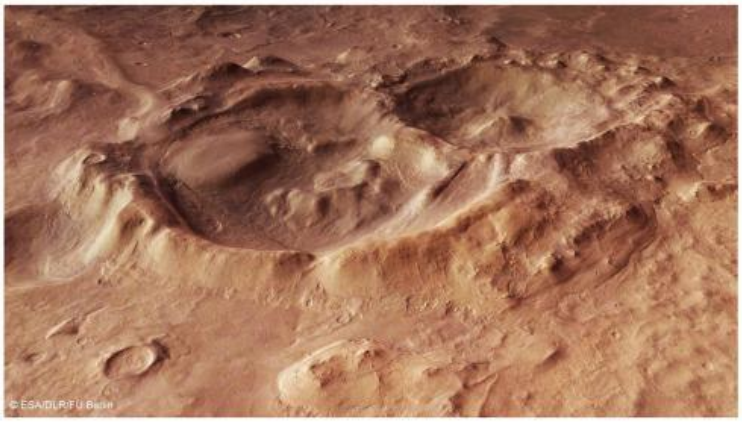
Canyons

Mars also has some really big canyons. The biggest one is called **Valles Marineris**, and it's over 2,500 miles (4,000 kilometers) long. That's about as long as the distance from the east coast of the United States to the west coast!



Craters

Mars is covered in craters, which are caused by **asteroids** or **comets** hitting the planet's surface. Some of the craters on Mars are really big - one of them, called the **Hellas Basin**, is over 1,200 miles (2,000 kilometers) wide.



Dust storms

Because Mars has a **thin atmosphere**, it can get really dusty. Sometimes, huge **dust storms** cover the whole planet and make it hard to see anything on the surface.

Research Task

Hello, NASA astronauts! You and your friends are going on a mission trip to Mars. The reason? We don't know much about its surface yet, and you, as brilliant scientists, will be launched to the Red Planet to send us precious information!

In pairs, choose one of the locations below:

- **Olympus Mons** – the biggest volcano in the solar system
- **Valles Marineris** – the biggest canyon in the solar system
- **Borealis Basin and Hellas Basin** – the largest impact craters on Mars
- **North and South Polar Caps** – water ice has been detected under the surface; while clouds of frozen carbon dioxide gas (or 'dry ice') swirl above
- **Nirgil Vallis, Gorgonum Chaos and South Polar Pit** – patterns of canyons and gullies that may have been created due to the movement/presence of water in the past.

Research Task

Before on get on board of your Artemis 1, make you sure you know what to research:

- ❏ Where is the exact location of your destination? Name it!
- ❏ What does the location look like? Take a picture and describe it.
- ❏ Find or draw a map of your destination. Add legends to help us understand better this location!
- ❏ Finally, tell us what to expect in case we travel to this location! How can we be prepared?

Good luck! T- 5,4,3,2,1.... LIFT OFF!

Useful links for research

- Why humans haven't reached Mars
  https://astronomy.com/news/2021/09/why-havent-humans-reached-mars
- How mapping Mars completely changed how we see it
  https://www.nationalgeographic.com/science/article/why-mapping-mars-completely-changed-how-we-see-it
- OLYMPUS MONS https://mars.nasa.gov/gallery/atlas/olympus-mons.html
- Valles Marineris https://www.google.com/mars/ //
  https://www.space.com/20446-valles-marineris.html
- Hellas Basin
  https://drive.google.com/file/d/1o914BalpuM5W8UYapzmRdaqHWloMBpEd/view?usp=share_link
  https://docs.google.com/document/d/1Hbr6D7l4pVONtkNjXDvS7xlFUl9i1rG9Zl9Z5DsVQOg/edit?usp=sharing
- Ice Caps https://marsed.asu.edu/mep/ice/polar-caps //
  https://drive.google.com/file/d/1_ERVPF8T3uVTCpQoq12g6fyLJqTOGer4/view?usp=share_link
- Nirgil Vallis https://drive.google.com/file/d/1Jic_oFTN-Y26LNNuocEL9Im4x6uAQQid/view?usp=share_link