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Summary Information Sheet

THE MOON

The Moon is our next-door neighbour. It is the only natural satellite of Earth, a ball of rock that spins around its own axis while orbiting the Earth and travelling with the Earth. The Moon is one of the largest natural satellites in the Solar System. It is the only other celestial body so far visited by astronauts.



Crust of granite-like rock
65 km thick

Iron-poor rocky mantle
65-700 km depth

Zone of moonquakes
700-1200 km depth

Partially molten outer
core, iron-rich

Small inner core
1200-1700 km depth

Thick dust layer

Young craters like Tycho
with rays



Phases of the Moon

One revolution
around the Earth
lasts 27.3 days

Surface temperature on
the sunlit side $\sim 100^\circ\text{C}$

Far-side of the Moon - unseen
before the age of space exploration

Craters formed by impacts are
round depressions and are
found almost everywhere.
Sizes range from smaller
than a pinhead
up to $\sim 200\text{ km}$

The mare appear dark
and are lowlands covering
some 20% of the Moon's
total surface. Sizes range
from 700-3000 km

Lunar faults and rilles

Nightside with temperatures
around -175°C

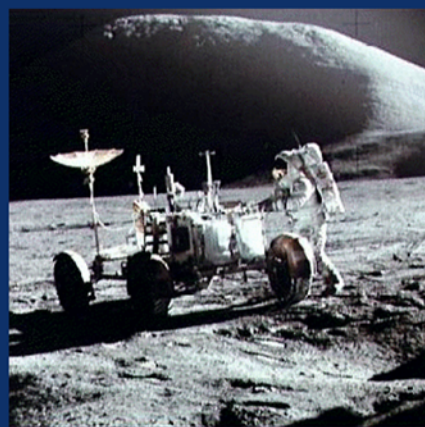
Highlands cover more
than 70% of the surface

Lunar mountains like Leibniz Montes

South polar region (with water ice?)



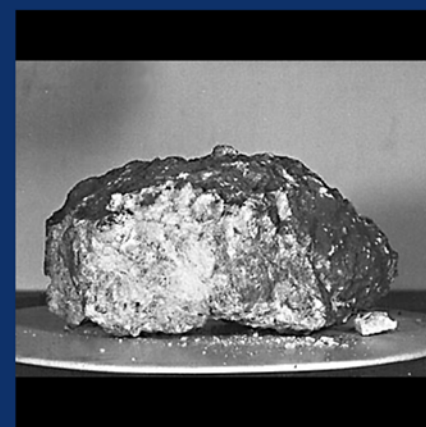
Crater Tycho



Apollo 17 rover and
Hadley Montes



Hyginus Rille



Moon Rock

Physical Data

Property	
Distance from the Sun	
Rotation period	
Equatorial radius	
Mass	
Density	

Moon

150 million km
27 days 8 hrs
1738 km
 $7.35 \times 10^{22}\text{ kg}$
 3340 kg/m^3

For comparison

Earth

150 million km
23 hrs 56 min
6378 km
 $5.97 \times 10^{24}\text{ kg}$
 5520 kg/m^3

Mercury

58 million km
59 days
2240 km
 $3.30 \times 10^{23}\text{ kg}$
 5340 kg/m^3