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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

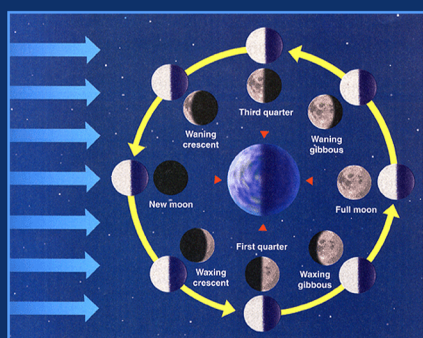
Zone of moonquakes  
700-1200 km depth

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

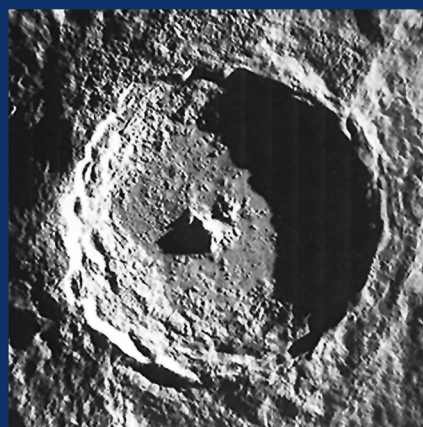
Lunar faults and rilles

Nightside with temperatures  
around  $-175^\circ\text{C}$

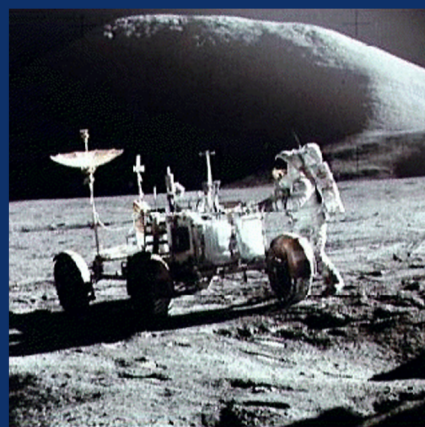
Highlands cover more  
than 70% of the surface

Lunar mountains like Leibniz Montes

South polar region (with water ice?)



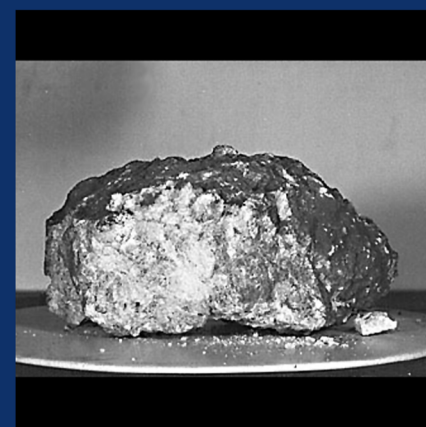
Crater Tycho



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  
 $7.35 \times 10^{22}\text{ kg}$   
 $3340\text{ kg/m}^3$

### For comparison

#### Earth

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

#### Mercury

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