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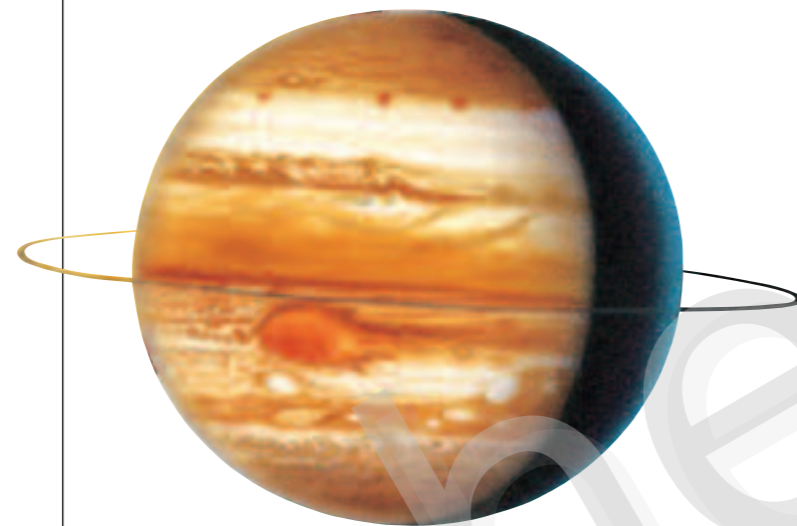
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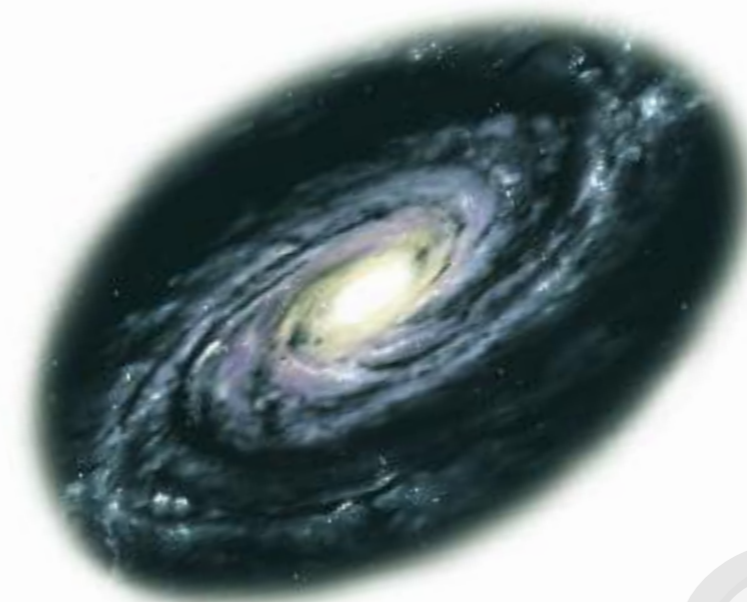
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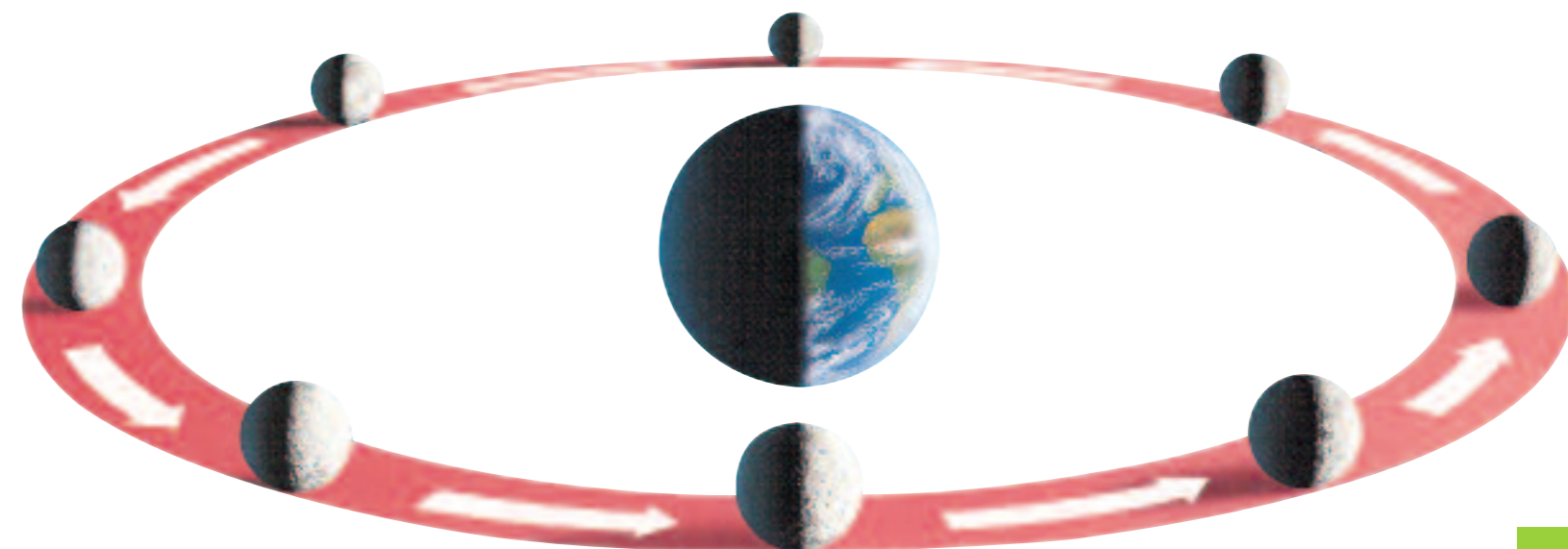
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INTRODUCTION

SPACE is the vast,
dark expanse beyond
our own planet Earth.
Distances in space are
enormous. Even the
nearest star is so far
away, light shining from
it (which travels at about
300,000 kilometres per
second) takes more than
four years to reach us.
And some stars lie
several billion times
farther away!

THE PHASES OF THE MOON

THE MOON is our nearest neighbour in space. It is a ball of rock a quarter the size of the Earth. It orbits our planet in just over 27 days. The same face always points towards the Earth.

When the Sun lights up the whole of the near side of the Moon, we see a Full Moon.



5 Full Moon

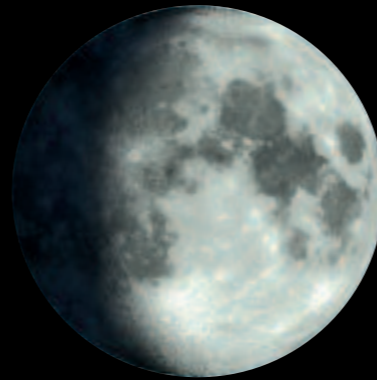
This sequence (above) shows the changing shape of the Moon as it orbits the Earth (below). The numbers show the position of the moon on its 27-day journey.

THE CHANGING MOON

The Moon seems to change shape from one night to the next.

It is really our view of the part of the Moon that is lit up by the Sun that changes. When the face pointed towards us is turned away from the Sun, we cannot see it at all. As the Moon orbits the Earth, more and more of it is lit, until it is fully turned towards the Sun. This is the Full Moon.

4 Gibbous moon



3 Quarter moon



2 Crescent moon



1 New Moon



SOLAR ECLIPSE

By coincidence, the Moon and Sun appear to be about the same size in the sky. So when the Moon passes in between the Earth and Sun, it sometimes blocks out our view of the Sun completely. This is a total eclipse. The Sun's atmosphere, called the corona, shines out from behind the moon.



8 Crescent moon

6 Gibbous moon

7 Quarter moon

3 Quarter moon

2 Crescent moon

4 Gibbous moon

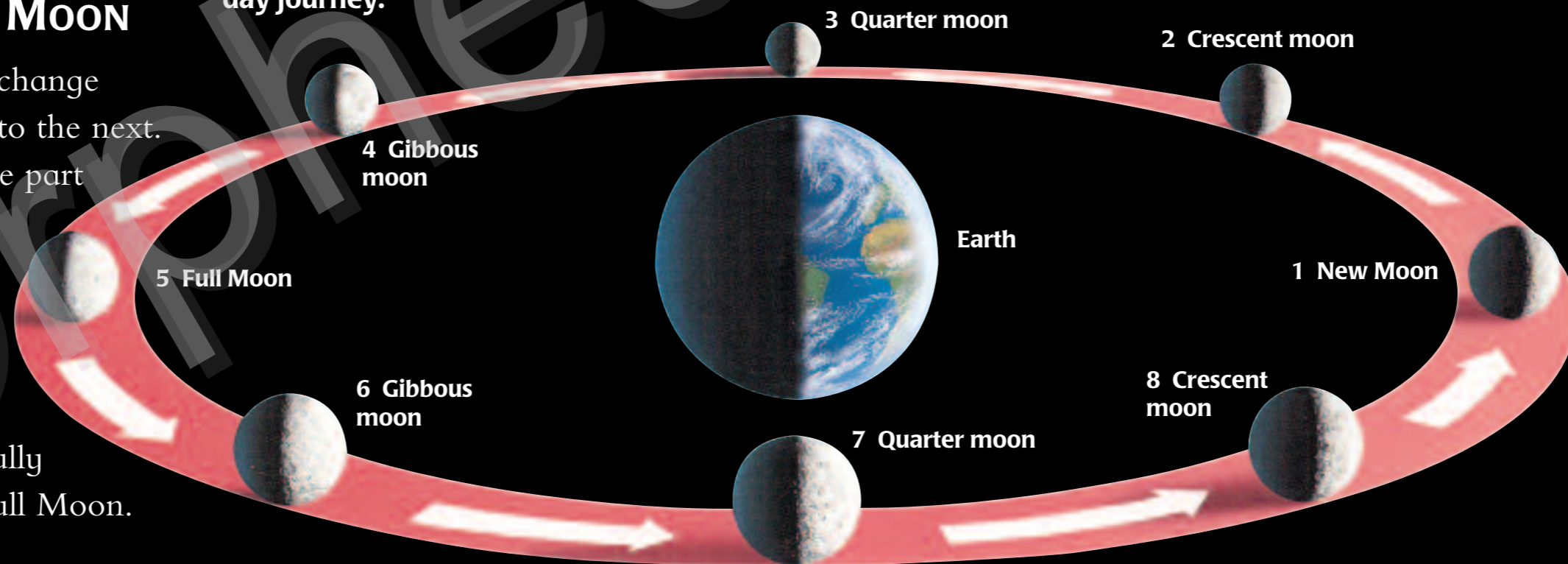
5 Full Moon

6 Gibbous moon

7 Quarter moon

8 Crescent moon

1 New Moon



Light from the Sun