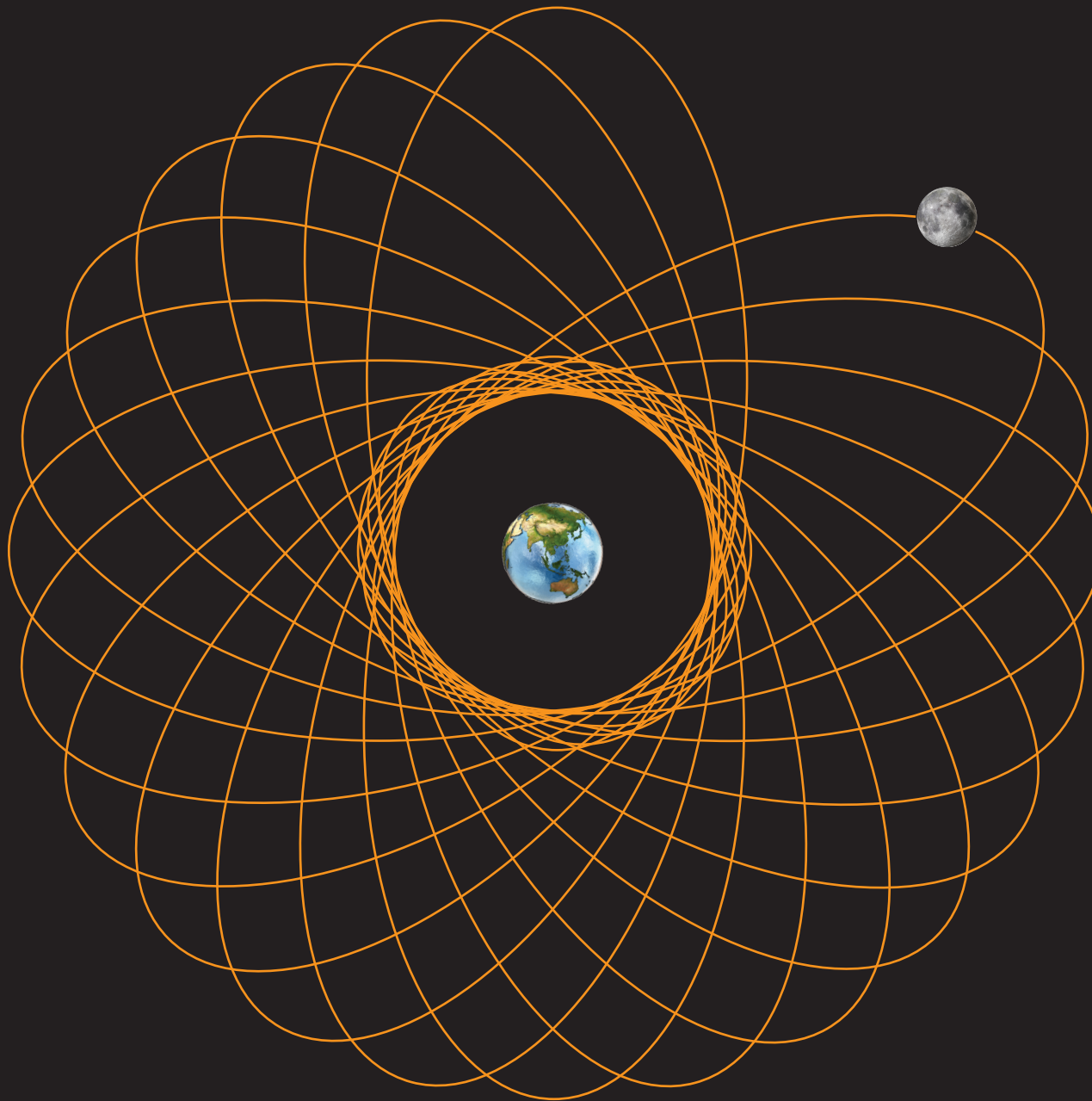


# Our View of the Moon

## Discussion Questions:

- 1) How does the Moon's orbit affect our view of the Moon?
- 2) Why do we only see one side of the moon?
- 3) What is a Supermoon?
- 4) What is a Blue Moon?
- 5) What is a Blood Moon?



# The Moon's Orbit


The Moon's anticlockwise orbit around the Earth follows an elliptical path that changes very gradually over time.

It takes many thousands of years for the moon to return to its original starting point.

The Moon's orbital path around the Earth is not round but elliptical. Therefore, there are times when the Moon is closer to the Earth. At these times the Moon might look slightly bigger to us.







A Supermoon can be a full moon or a new moon. It occurs when the Moon is at its closest distance to the Earth. The moon looks bigger from our view point on Earth at this time.

A Micromoon is a full moon or new moon that takes place when the Moon is at its furthest distance from the Earth. The moon will look smaller at this time.

# What is a Supermoon?



# Why do we only ever see one side of the Moon?

The Moon and the Earth spin in the same direction. It takes the same amount of time for the Moon to rotate on its axis once as it takes for the Moon to orbit around the Earth. (It takes about 27.5 days.)

The result of this slow rotation means that the same side of the Moon is always facing toward Earth.

The far side of the Moon (or the dark side of the Moon as it is also known) was not seen until photographs were taken from the Soviet probe 'Luna 3' on October 7 1959.





# What is a Blue Moon?

A Blue Moon is a rare occurrence. It only happens once every two to three years.

There are usually three full moons in each season- spring, summer, autumn (fall) and winter. (Generally one per month.) But if a fourth full moon occurs in one of the seasons we call this full moon a Blue Moon.

If two full moons occur in the same month this is also called a Blue Moon. The Moon doesn't look any different. There is just an extra full moon in the month or season.

However, another type of Blue Moon can occur very occasionally. This happens when very small particles of dust or smoke are in the atmosphere. These particles disperse red light and leave the moon actually looking blue! This can sometimes occur after a big dust storm or a volcanic eruption.



# What is a Blood Moon?

The moon often turns reddish brown during a total eclipse. This is caused by the Earth's atmosphere. Blue light is easily scattered by particles in the atmosphere. Red light is not easily scattered and passes through the atmosphere. It is this red light that we can see reflecting on the Moon.

A total eclipse of the Moon is often referred to as a "Blood Moon" because of this rusty red/brown hue.

