

Phases of the moon



Why does the moon have phases?

- The revolution of the Moon around the Earth causes the Moon to appear to change shape.

As the moon travels around the earth we see different amounts of the one side of the moon



The reason we can see the moon is because
it reflects the light from the sun



Only one half of the moon is ever lit

- The moon does not give off its own light.
- Light from the Sun reflects off the surface of the moon.
- This creates “moonlight” we see.

**Why does the moon
have phases?**

- **Like Earth, the
moon rotates on
its axis.**

Why does the moon have phases?

- Even though the moon rotates, the same side of the moon always faces the Earth.

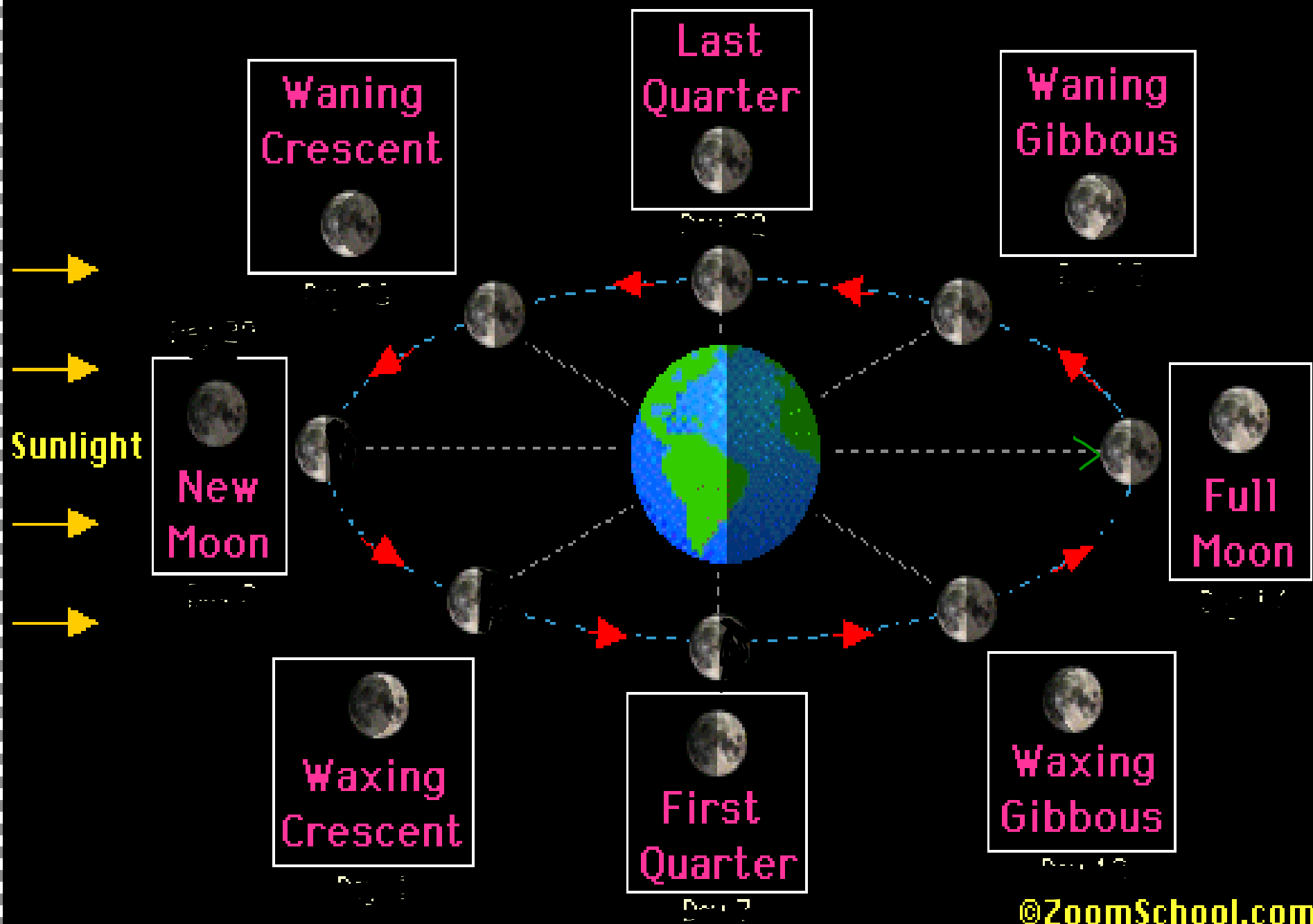
The moon orbits the earth.
It takes 28.5 days for the moon
to go around the Earth once



8 Phases of the Moon

- New Moon
- Waxing Crescent
- First Quarter or Half Moon
- Waxing Gibbous
- Full Moon
- Waning Gibbous
- Last Quarter or Half Moon
- Waning Crescent

The Phases of the Moon

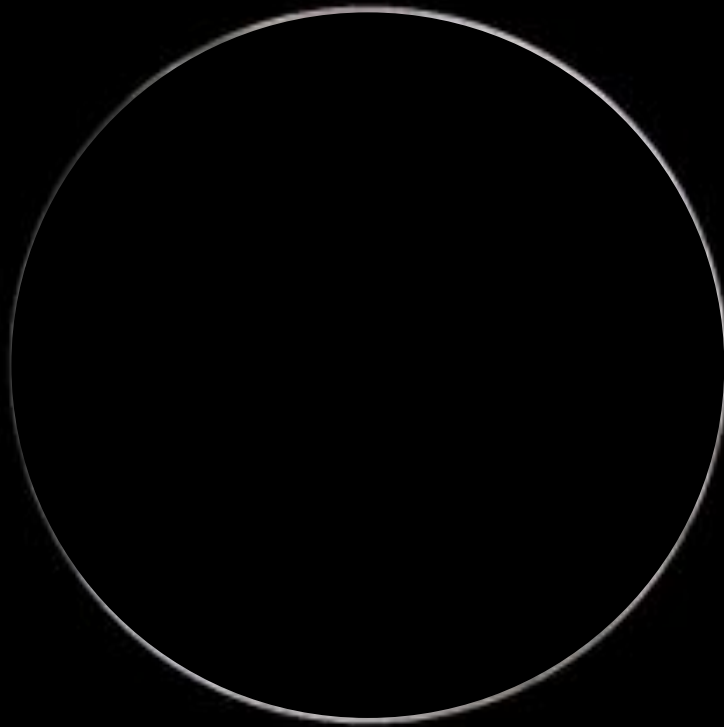


Day 1 - New moon



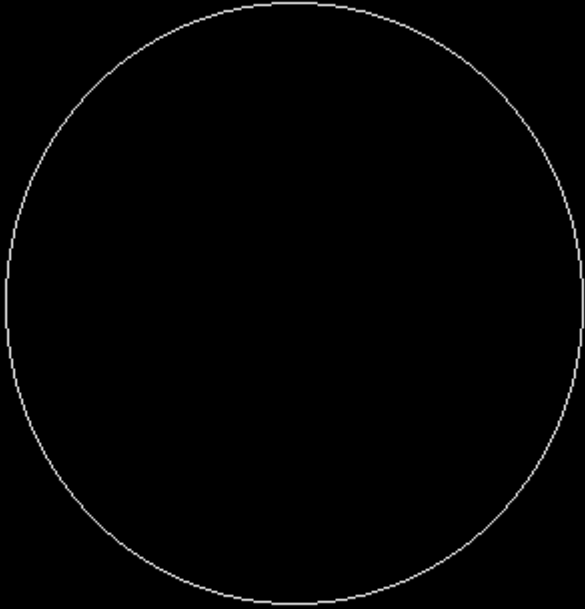
The far (dark) side of the moon is
facing the earth

New moon



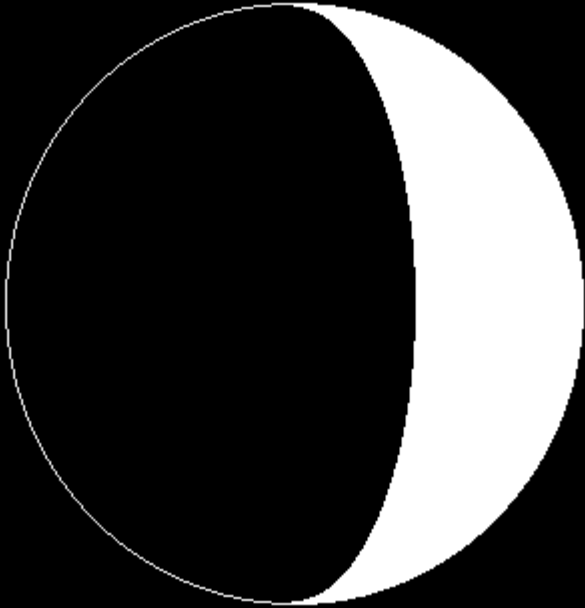
The dark side of the moon is facing the earth

New Moon



- The moon is not visible from Earth.
- The moon is between the Sun and the Earth.
- The far side is facing us.
- This phase lasts one night.

Waxing Crescent



- Waxing means that the bright side is increasing.
- The right side is the bright side.
- Less than one half of the moon is illuminated.
- This phase includes any visible moon from a small sliver to almost half.
- Lasts more than one day.

Day 4 – Waxing Crescent



Wax on: the lighted portion increases
as if more light was being added on.

Waxing Crescent

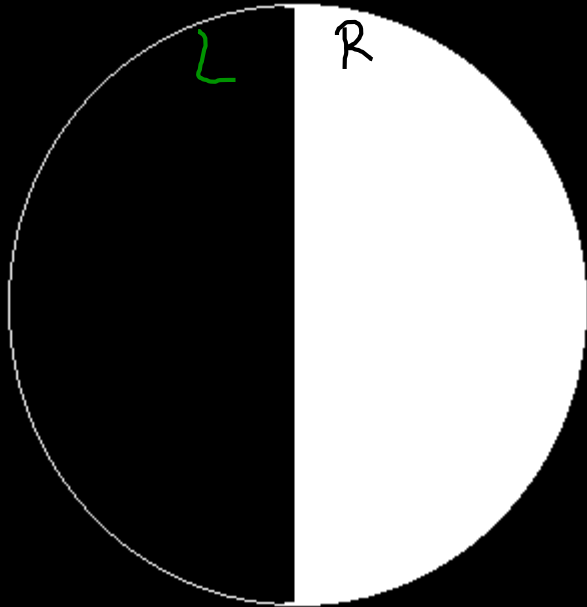


We begin to see part of the right side of the moon that is lit up

Day 7 – First quarter



First Quarter or Half Moon



- The entire right side of the moon is illuminated.

- The moon looks like a half circle.

- The illuminated side is increasing.

- This phase only lasts one night.

First Quarter

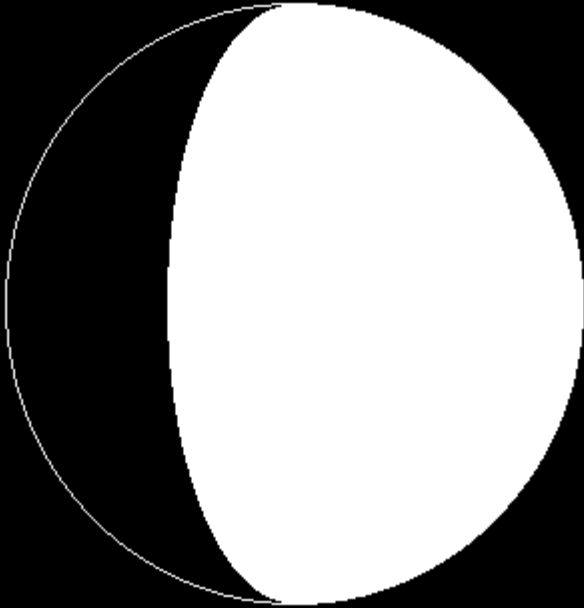


Confused!? It's obviously a half moon but is called a quarter moon because it has gone quarter of the way around the Earth

Day 10 – Waxing Gibbous



Waxing Gibbous



- Gibbous means that more than one half is visible, but it is not quite full.
- This phase includes the night after the first quarter to the night before the full moon.

Waxing Gibbous



The moon is now in a position where we can see most of the side that is lit up

Day 14 – Full moon

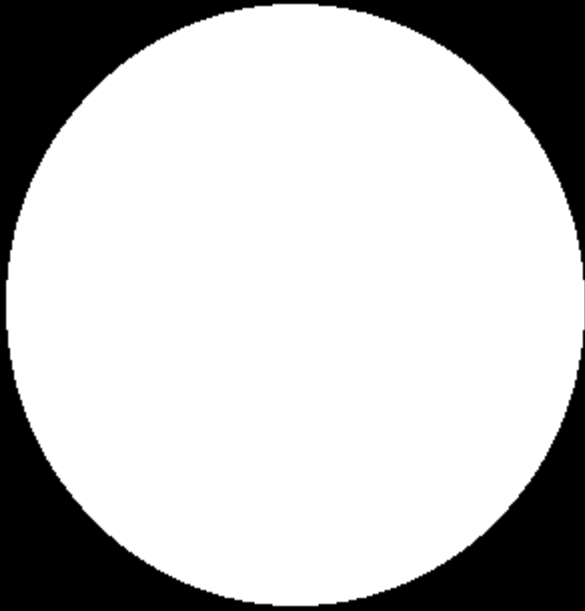


Full moon



The moon is pretty much opposite the sun now and so we can see all of the part that is lit up

Full Moon

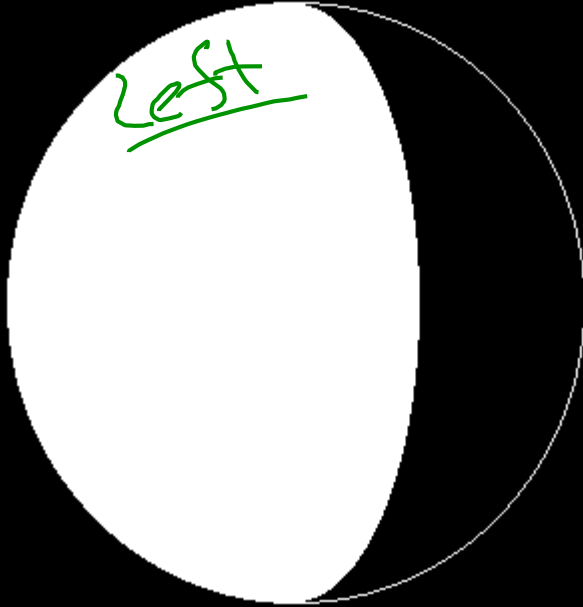


- The moon is full and bright. It looks like a large circle.
- The illuminated side is facing us.
- Only happens one night per cycle.

Day 18 – Waning Gibbous



Waning Gibbous



- The moon appears more than half but not quite full.

- Waning means that the illuminated side is decreasing.

- The left side is the bright side.

Waning Gibbous

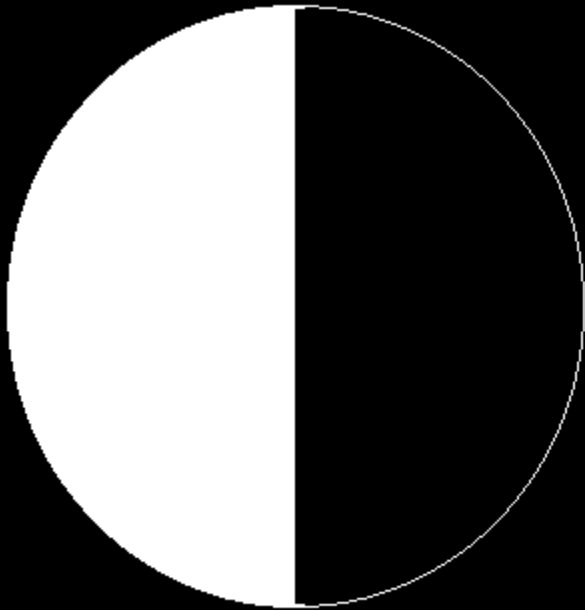


The moon is now in a position where we can see most of the lit side of the moon

Day 21 – Last quarter



Last Quarter or Half Moon



- Left Half of the moon is illuminated.

- The illuminated side is decreasing.

- This phase also only lasts for one night.

Last Quarter



The moon is in the last quarter
of it's way around the earth

Day 24 – Waning Crescent

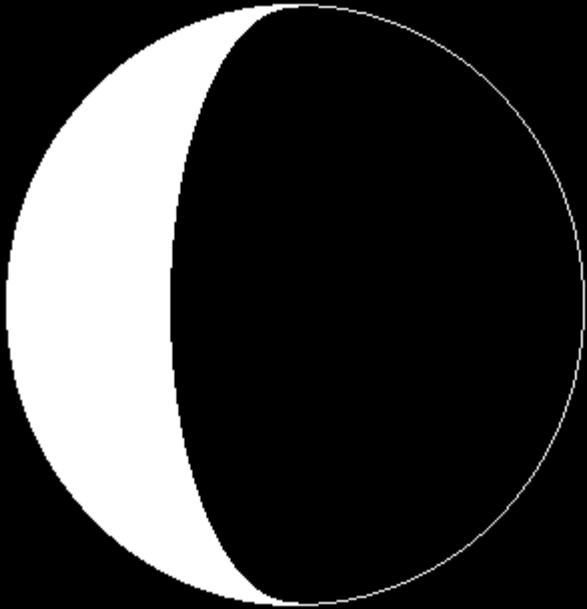


Waning Crescent



We are starting to lose sight of the side of the moon that is lit up

Waning Crescent



- Less than one half of the moon is illuminated.
- The moon will continue to become smaller and smaller.

Day 28 - New moon



The dark side of the moon is facing
the earth again

