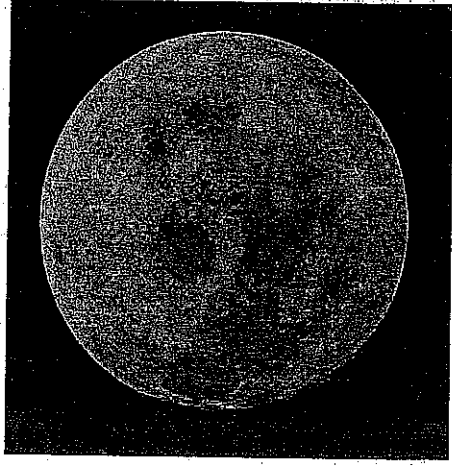
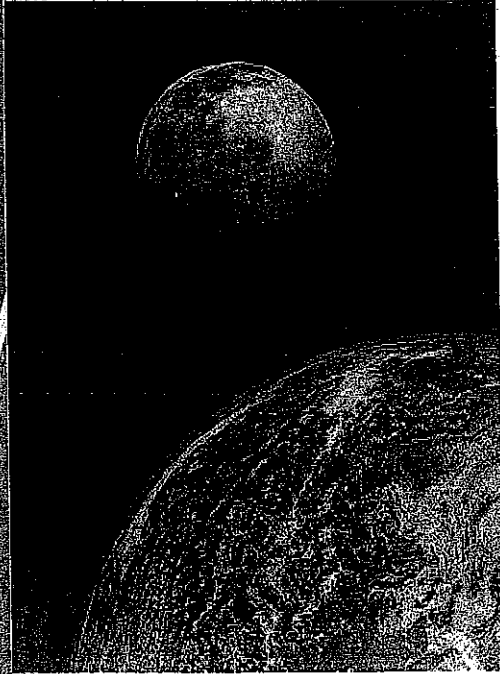


Oh hey, what do you know. Earth only has **ONE** moon!! (What does it orbit?)



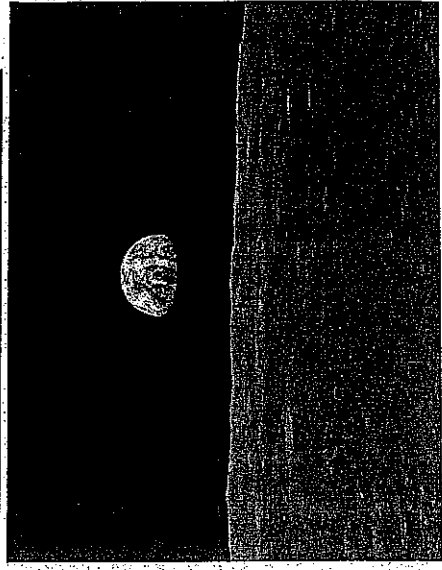
6th

Phases of the Moon

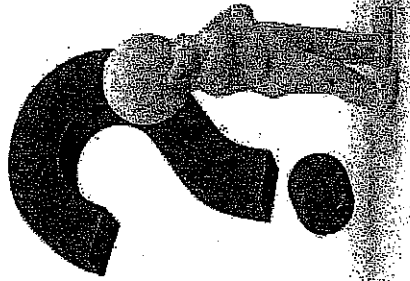


The moon orbits earth
(can someone remind us what it means to "orbit"?)

It takes approximately 28 days for the moon to orbit the earth.

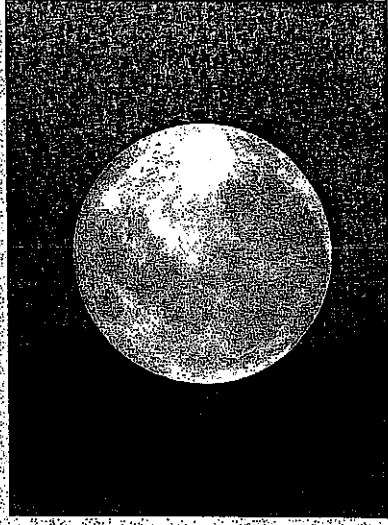


What color do you think the moon is??

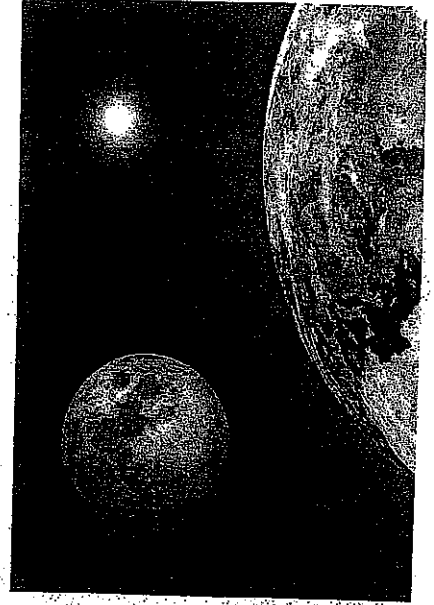


Did you know...

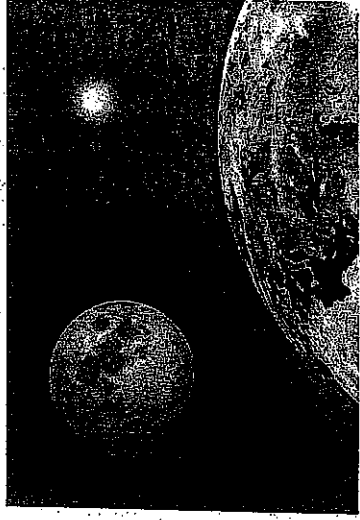
The moon is actually grayish-black in color. It only looks light because it is reflecting the light from the sun!



While the moon is moving around the earth, the earth is ALSO moving around the sun.



While the moon is moving around the earth, the earth is moving around the sun.

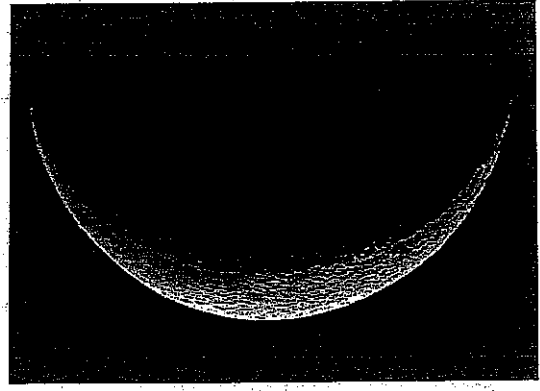


This causes the moon to have different phases

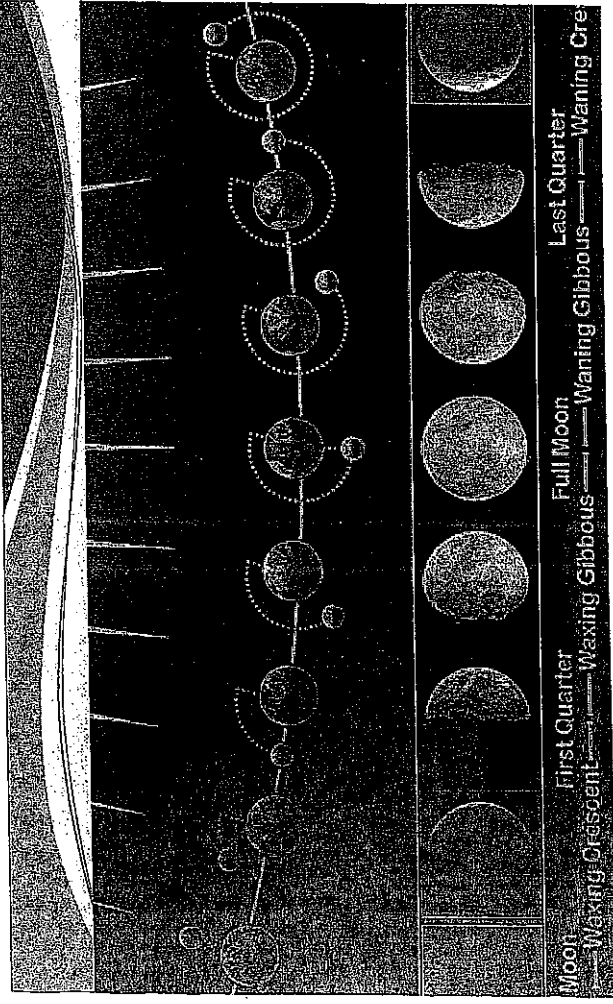
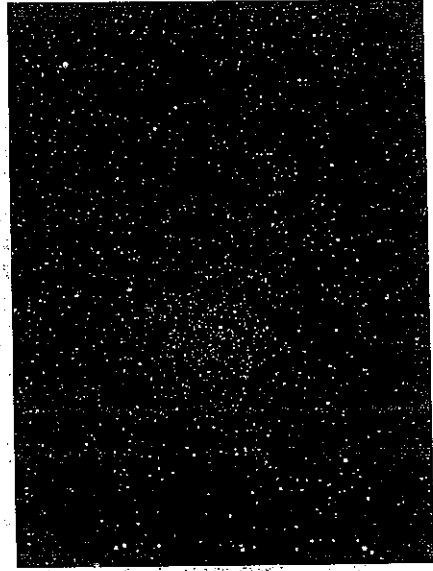
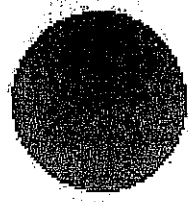
The moon goes through these phases:

- New moon
- Crescent
- Half
- Gibbous
- Full

A crescent moon looks like a fingernail

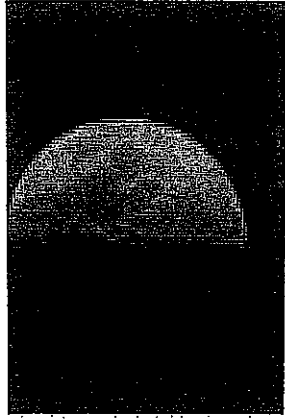
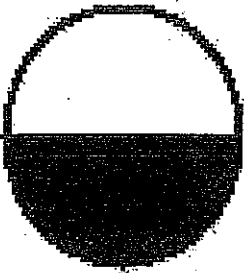


A new moon can NOT be seen at all

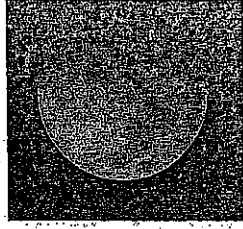


Waxing Crescent — First Quarter — Waxing Gibbous — Full Moon — Waning Gibbous — Last Quarter — Waning Crescent

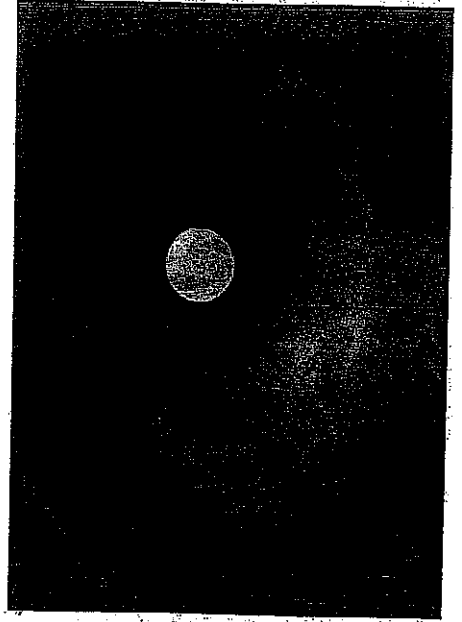
A Half moon is, well, half a moon!



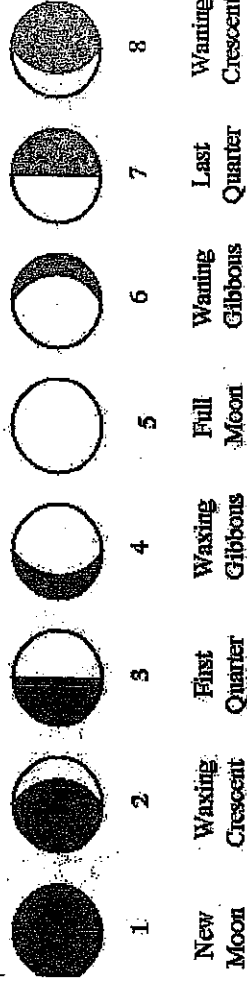
A gibbous moon is almost a whole moon



A full moon is a whole circle



After the moon is full, it goes backwards through the stages until it is a new moon again.



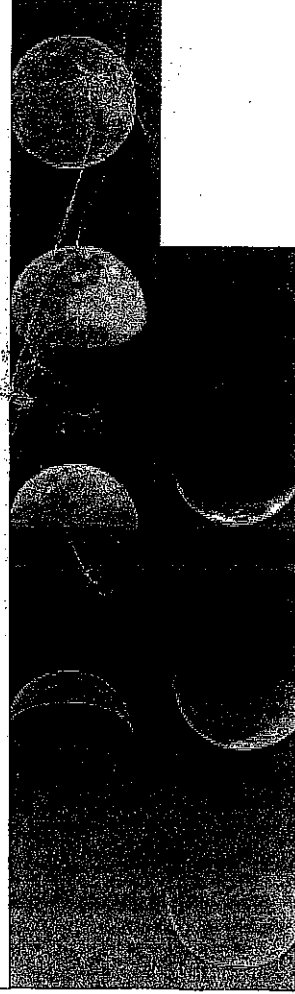
If the moon looks like it is getting BIGGER, this is called waxing



If the moon looks like it is getting SMALLER, this is called waning



Let's practice...



PLANET POWERPOINT

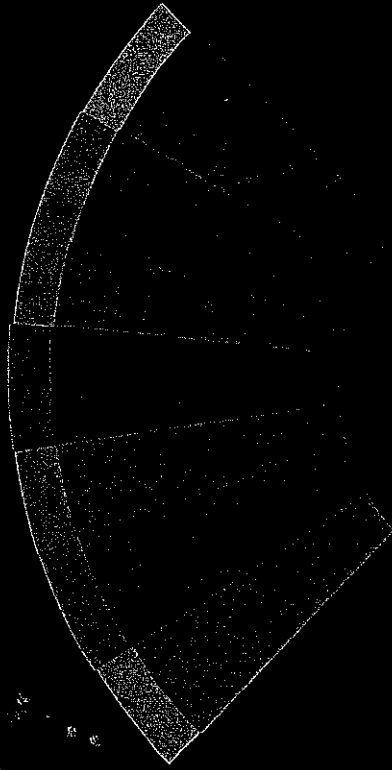


Choose a planet and then following directions below.

Your power point will include the following:

1. Cover/Title Page – this should include the name of your planet, illustration of your planet, your name and date. (25pts.) SLIDE1
2. Introduction – you will give a description of your planet, who discovered it, and when. (at least six sentences) (10pts.) SLIDE2
3. Location – Where is the planet located and how far is it away from the sun. (10pts.) Slide 3
4. Size, Appearance and Temperature (10pts.) SLIDE4
5. Moons and rings (5pts.) If there are no rings or moons please say so, don't just not put anything for this section) SLIDES
6. How would a human fare on your planet? (Please explain in great detail why or why not) (5pts.) SLIDE6
7. Other interesting facts (20pts.) SLIDE7
8. Return this instruction/rubric sheet with report (10pts.) SLIDE8
9. Presentation (5pts.) When we return to school

Note: This is a test grade.



Astronomy

Sun, moon, tides

Characteristics of the moon

- Spherical; made of rock
- Has no atmosphere, no water, and no living things
- Drastic temperature changes
- Earth's natural satellite

Moon and its effects

- One-fourth of the Earth's diameter
- revolves around the earth every 29 $\frac{1}{2}$ days
- the gravity of the moon controls the tides (trans.)

Questions

- What are three characteristics of the moon?

Types of tides (show trans.)

- Spring tides- gravity of the sun and moon work together (tide is high)
- Neap tides- gravity of the sun and moon PULL against each other (tide is low)

Phases of the moon

- New moon
- Crescent
- First quarter
- Gibbous
- Full moon
- Gibbous
- Third Quarter
- Crescent
- New moon

Questions

What is the difference between a spring tide and a neap tide?

Eclipses (show trans.)

- Solar eclipse- sunlight is blocked by the moon
- lunar eclipse- Earth is between the sun and moon
- moon is visible because of reflected sunlight

Questions

- Why do we see the moon at certain times of the month?
- How are solar eclipses different from lunar eclipses?

Characteristics of the sun (show trans.)

- Made of plasma (high energy form of matter)
- produces energy as a result of nuclear fusion
- core temperature (15,000,000 °C)

Sun

- 150,000,000 kilometers from Earth
- makes up 99% of the mass of the solar system

Questions

- How does the sun produce energy?
- What are three characteristics of the sun?



As the Moon Changes

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Why does the moon have phases?

- The revolution of the Moon around the Earth causes the Moon to appear to have phases.

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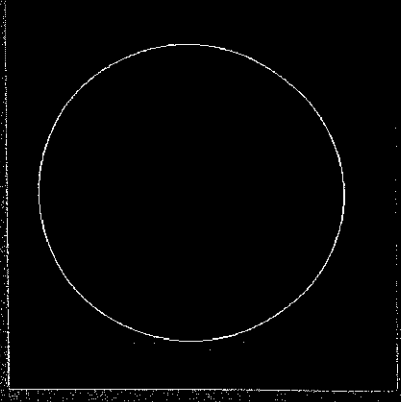
8 Phases of the Moon

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

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New Moon

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



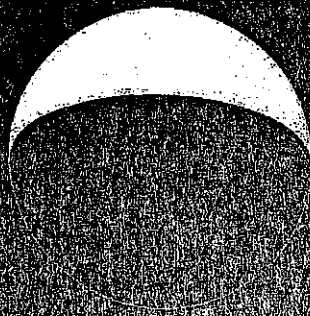
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Waxing Crescent

• 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.



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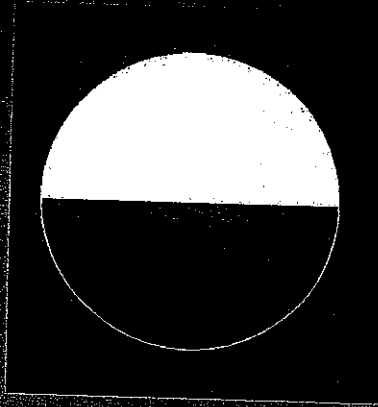
First Quarter or Half Moon

• 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.

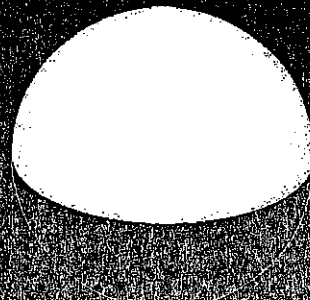


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Waxing Gibbous

• 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.



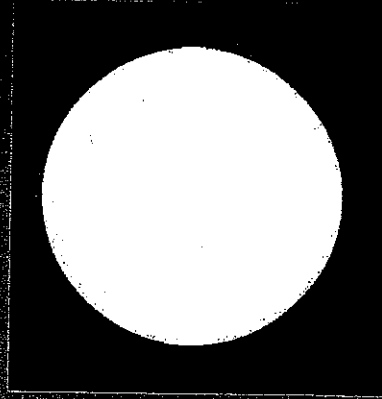
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Full Moon

• The moon is full and bright. It looks like a large circle.

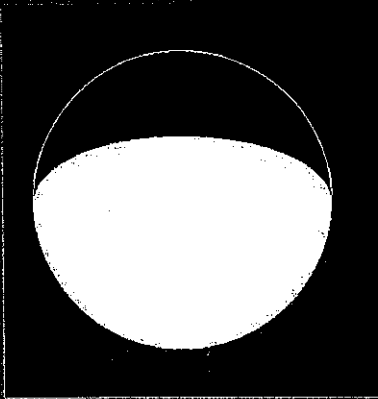
• The illuminated side is facing us.

• Only happens one night per lunation.



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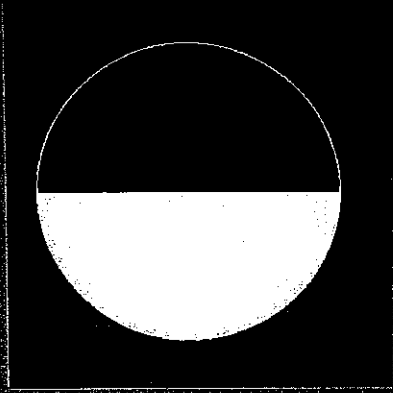
Waning Gibbous



- 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.

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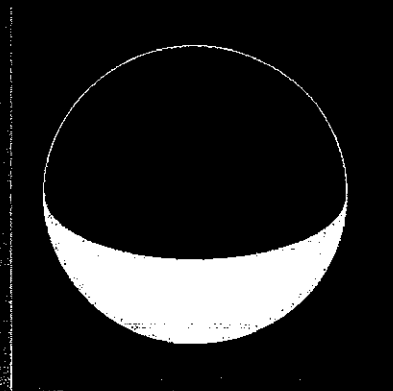
Last Quarter or Half Moon



- Left Half of the moon is illuminated.
- The illuminated side is decreasing.
- This phase also only lasts for one night.

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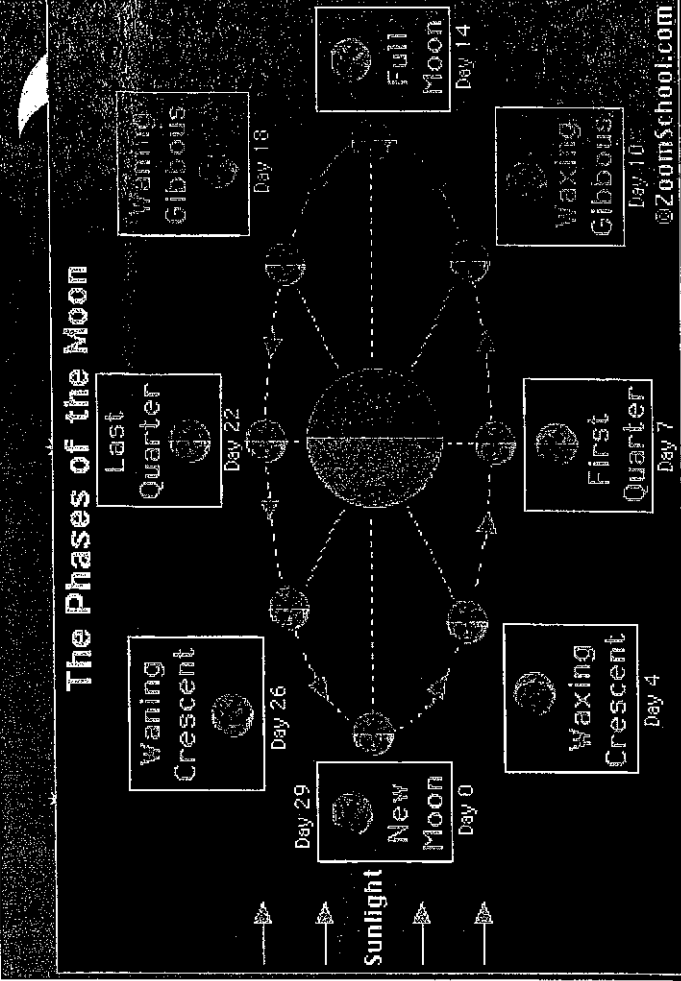
Waning Crescent



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

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The Phases of the Moon



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