Phases of the Moon - Read and React

Though we can see the moon's size change throughout the month, it is really always the same size. Yet we see these different sizes or moon phases at regular intervals every month. How does this work?

First it is important to remember two key facts:
1. The moon revolves around the Earth every 27 days, but from Earth it appears to be 29.5 days, because the Earth's motion extends its full revolution.

2. The moon takes the same amount of time to rotate once around on its axis as it does to revolve around the Earth - so the same side of the moon always faces the Earth.

The moon looks different during its revolution around the Earth, because at each position its is getting a different amount of sunlight on its surface. When the moon is positioned between the Earth and the sun, we face the dark side, so cannot see the moon at all. This is called a new moon.

As each day passes and the moon moves at an angle out from between the Earth and the sun, we begin the see a sliver of the moon getting sunlight. By day 4 this is called a waxing crescent.

When the moon has revolved to a 90 degree angle from the Earth and sun, on about day 7, it has reached its first quarter. We can now see half the moon, while the other half sits in invisible shadows.

The next phase, at about day 10, we can see roughly three quarters of the moon. This is called the waxing gibbous phase.

After roughly 2 weeks, the moon is now in position with the Earth sitting between it and the sun, so we see its fully lit side as a full moon. It is not an exact alignment though, or the Earth would block the sun from the moon causing a lunar eclipse.

As it continues on in its revolution around the Earth, the moon begins to move into shadow as the waning gibbous moon by day 18, then the third quarter half moon at day 22, then waning crescent at day 26 and finally the invisible new moon again on day 29.

Like the full moon, the new moon does not block the sun from reaching the Earth, because it is not an exact alignment. On the months where the alignment is exact, we experience a solar eclipse.

Phases of the Moon - Read and React - (10 short answers)

Student Name_____

Though we can see the moon's size change throughout the month, it is really always the same size. Yet we see these different sizes or ***moon phases*** at regular intervals every month. *How does this work?*

The moon revolves around the Earth every _____ days, *but* from Earth it appears to be 29.5 days, because the Earth's motion extends its full revolution.

The moon takes the same amount of time to rotate once around on its _____ as it does to revolve around the Earth - so the same side of the moon always faces the Earth.

The moon looks different during its revolution around the _____, because at each position its is getting a different amount of sunlight on its surface. When the moon is positioned between the Earth and the sun, we face the dark side, so cannot see the moon at all. This is called a _____ ***moon***.

As each day passes and the moon moves at an angle out from between the Earth and the sun, we begin the see a sliver of the moon getting sunlight. By day 4 this is called a _____ ***crescent***.

When the moon has revolved to a 90 degree angle from Earth and sun, on about day 7, it has reached its ***first*** _____. We now see half the moon, while the other half sits in invisible shadows.

The next phase, at about day 10, we can see roughly three quarters of the moon. This is called the ***waxing*** _____ phase.

After roughly 2 weeks, the moon is now in position with the Earth sitting between it and the sun, so we see its fully lit side as a _____ ***moon***. It is not an exact alignment though, or the Earth would block the sun from the moon causing a ***lunar*** _____.

As it continues on in its revolution around the Earth, the moon begins to move into shadow as the ***waning gibbous moon*** by day 18, then the third quarter half moon at day 22, then ***waning crescent*** at day 26 and finally the invisible ***new moon*** again on day 29.

Like the full moon, the new moon does not block the sun from reaching the Earth, because it is not an exact alignment. On the months where the alignment *is* exact, we experience a _____ ***eclipse***.

Phases of the Moon - Read and React KEY

Though we can see the moon's size change throughout the month, it is really always the same size. Yet we see these different sizes or ***moon phases*** at regular intervals every month. *How does this work?*

First it is important to remember two key facts:
1. The moon revolves around the Earth every **27 days**, but from Earth it appears to be 29.5 days, because the Earth's motion extends its full revolution.
2. The moon takes the same amount of time to rotate once around on its **axis** as it does to revolve around the Earth - so the same side of the moon always faces the Earth.

The moon looks different during its revolution around the **Earth**, because at each position its is getting a different amount of sunlight on its surface. When the moon is positioned between the Earth and the sun, we face the dark side, so cannot see the moon at all. This is called a ***new moon***.

As each day passes and the moon moves at an angle out from between the Earth and the sun, we begin the see a sliver of the moon getting sunlight. By day 4 this is called a ***waxing crescent***.

When the moon has revolved to a 90 degree angle from the Earth and sun, on about day 7, it has reached its ***first quarter***. We can now see half the moon, while the other half sits in invisible shadows.

The next phase, at about day 10, we can see roughly three quarters of the moon. This is called the ***waxing gibbous*** phase.

After roughly 2 weeks, the moon is now in position with the Earth sitting between it and the sun, so we see its fully lit side as a ***full moon***. It is not an exact alignment though, or the Earth would block the sun from the moon causing a ***lunar eclipse***.

As it continues on in its revolution around the Earth, the moon begins to move into shadow as the waning gibbous moon by day 18, then the third quarter half moon at day 22, then waning crescent at day 26 and finally the invisible new moon again on day 29.

Like the full moon, the new moon does not block the sun from reaching the Earth, because it is not an exact alignment. On the months where the alignment is exact, we experience a ***solar eclipse***.

Phases of the Moon - Matching

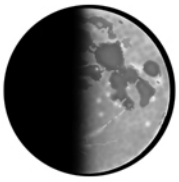
Write in the correct name for each phase of the moon using the names provided on the right.

1. _____

full moon

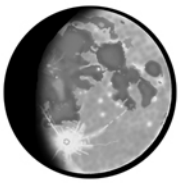
2. _____

new moon



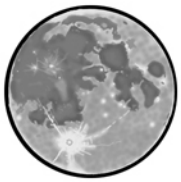
3. _____

waxing crescent



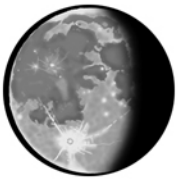
4. _____

waning crescent



5. _____

first quarter

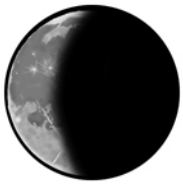


6. _____

last quarter

7. _____

waxing gibbous



8. _____

waning gibbous

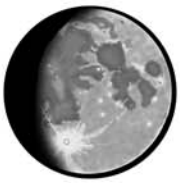
Phases of the Moon - Matching

Choose the correct name for the eight phases of the moon from the list at the bottom.

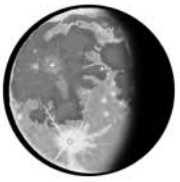

1.

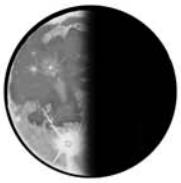

2.

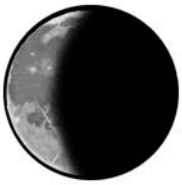

3.


4.


5.


6.


7.


8.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Here is a hint to help you with this:

Is the moon waxing (growing) or waning (shrinking)?

Draw an imaginary line down between the dark and light of the moon. The lighted half now looks like a:

b for born (waxing)

or

d for dying (waning).

b 
waxing crescent

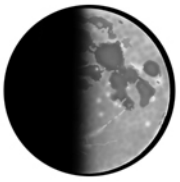
d 
waning crescent

first quarter	new moon	waning gibbous	waning crescent
full moon	last quarter	waxing crescent	waxing gibbous

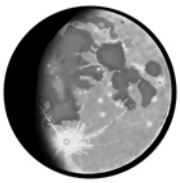
Phases of the Moon - Matching Key and Hints

1. new moon

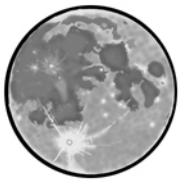
2. waxing crescent



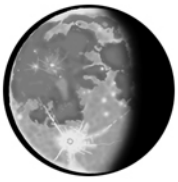
3. first quarter



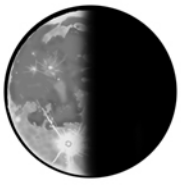
4. waxing gibbous



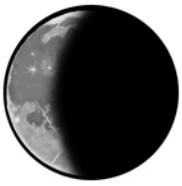
5. full moon



6. waning gibbous



7. third quarter



8. waning crescent

Is the moon waxing (growing larger) or waning (growing smaller)?

HINT: Draw a line down between the dark and light of the moon. The lighted half now looks either like a:

b for born or waxing

d for dying or waning