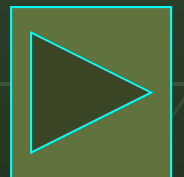




*EARTH & SUN
RELATIONSHIP*

Reasons for Seasons



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- HEMISPHERES – HOW SEASONS DIFFER

NORTHERN VS SOUTHERN HEMISPHERE

- TEST YOUR KNOWLEDGE



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- SEASONS MOVIE

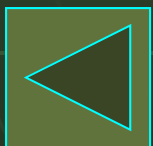
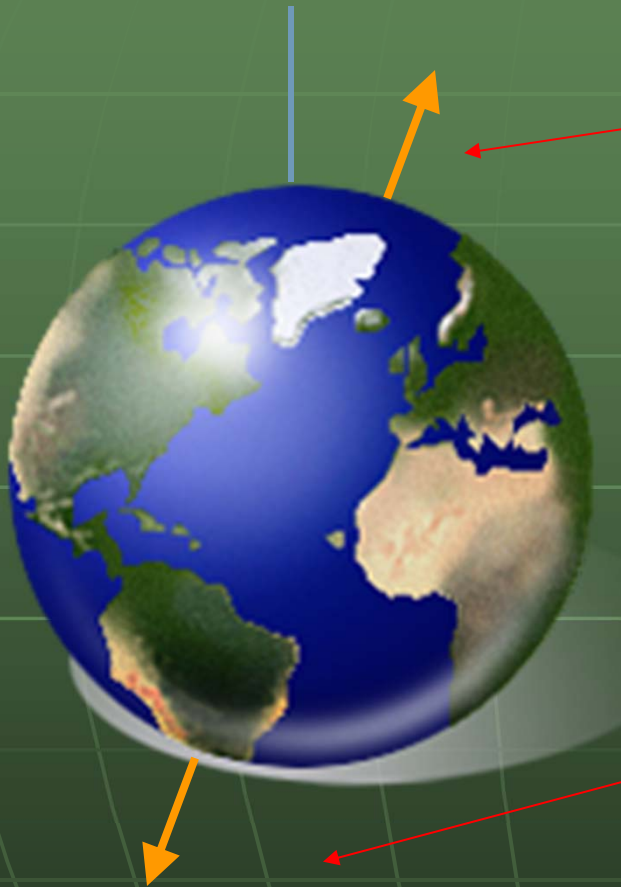


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AXIS

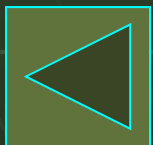
An imaginary line around which an object rotates.

In a rotating sphere, such as the Earth the two ends of the **axis** are called poles.

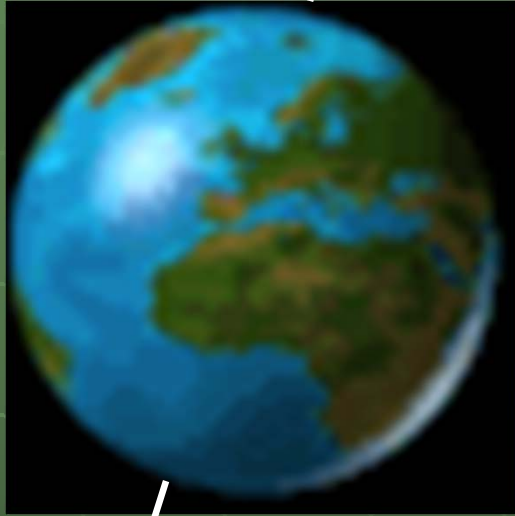


TILT

The Earth's axis is tilted about **23.5°** from vertical.

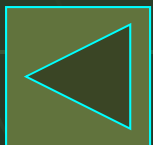


ROTATION



The Earth rotates completely around on its axis once every 24 hours - that's a rate of **1000 mph!**

The time it takes for the Earth to complete a full rotation is what we call a **day.**



REVOLUTION

The **orbit** of the Earth around the Sun is called an Earth revolution.

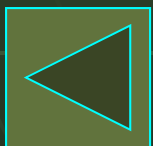
It takes **365.26 days** to complete one revolution cycle.

One complete revolution cycle is what we call a **year**.

Click on the earth to view the earth revolving around the sun. Once there: Select Play.

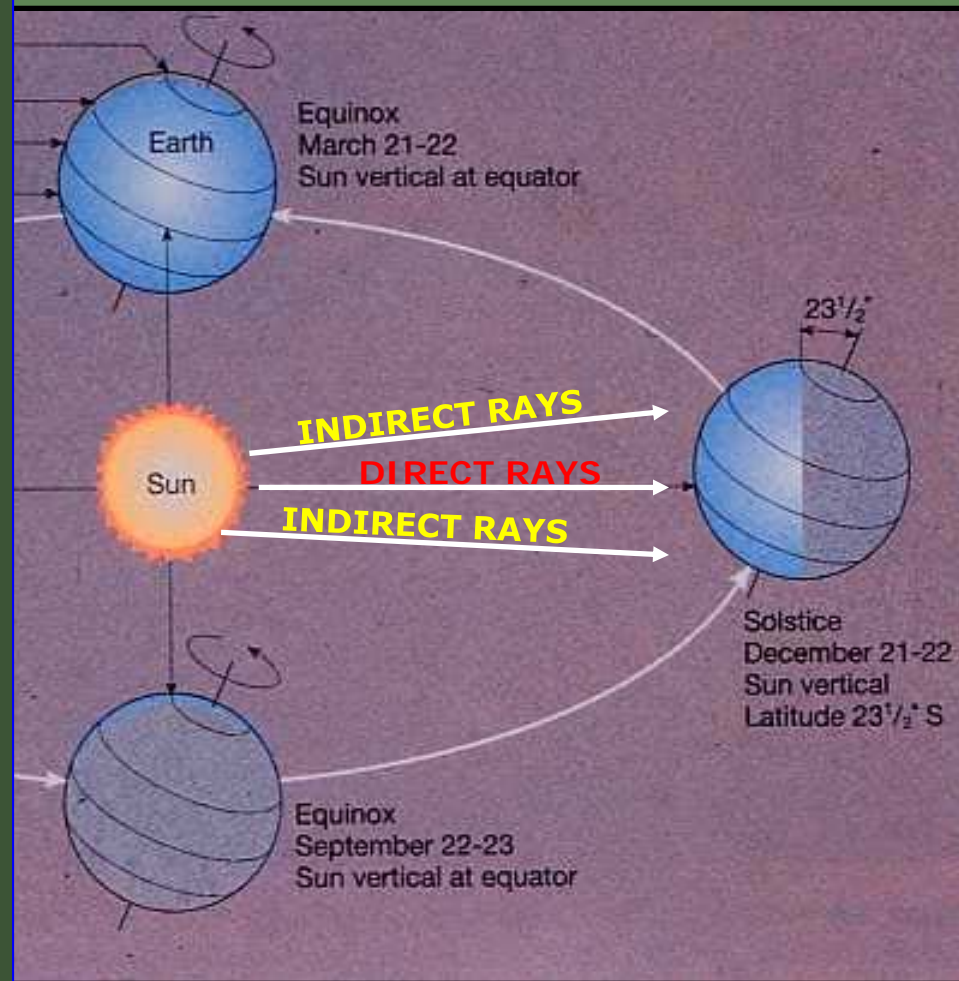


(LINK)



DIRECT RAYS – The sun's rays that reach the Earth at little or no angle and provide the most radiation (heat).

INDIRECT RAYS – The sun's rays that reach the Earth at an angle. Because of the angle and the larger surface area covered the radiation (heat) is reduced.



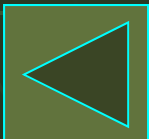
Click on this link to view the sun's rays and the Earth at different months throughout the year

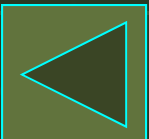
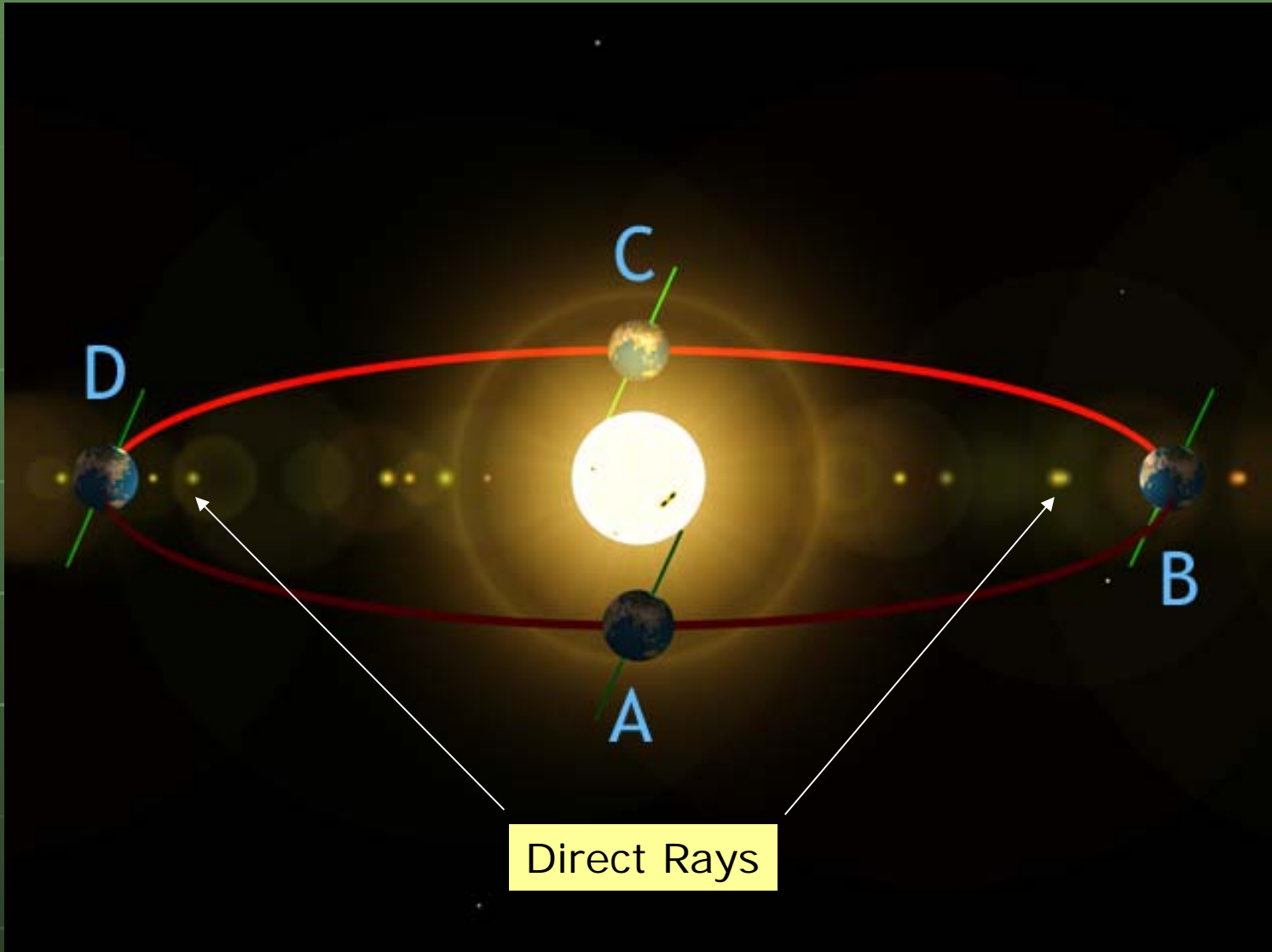
(LINK)



Click on this link to view a nice photo of the sun and the Earth in different seasonal positions.

(LINK)





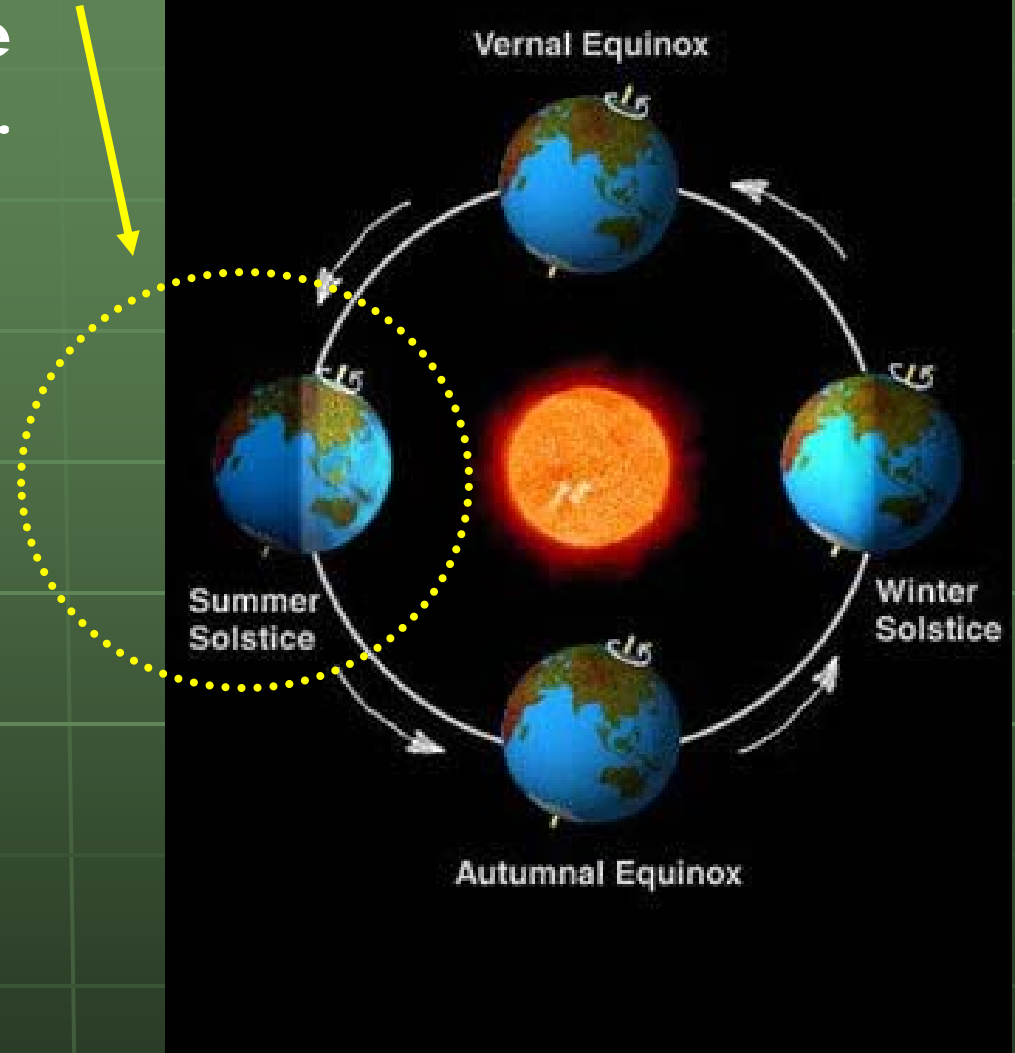
SUMMER SOLSTICE (Northern Hemisphere)

The longest day of the year (near June 21st).

Marks the first day of summer.

Click mouse for a question

QUESTION: Using the diagram, list a reason why it is summer in the Northern Hemisphere when the Earth is at this point?



Click to check your answer

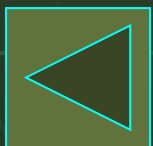
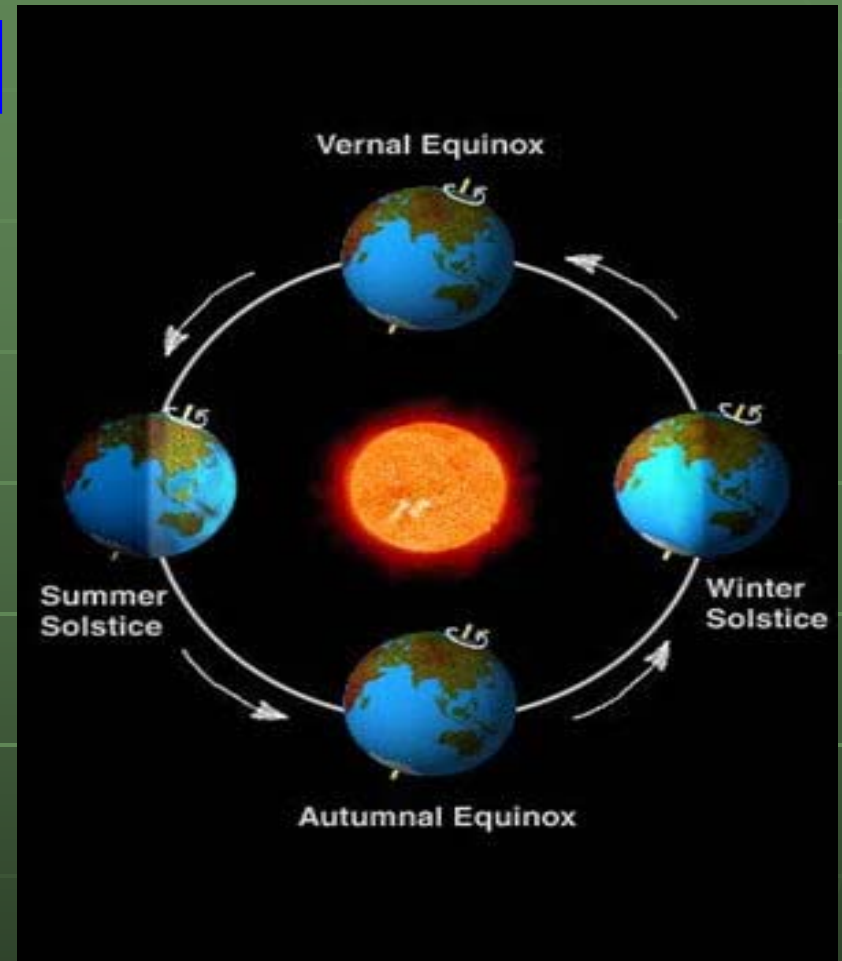


ANSWERS TO THE QUESTION:

During the Summer Solstice:

The Earth is tilted so that the Northern Hemisphere is closer to the sun.

The sun's direct rays will shine on the Northern Hemisphere for a longer amount of time during the Earth's 24 hour rotation.



WINTER SOLSTICE (Northern Hemisphere)

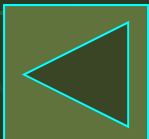
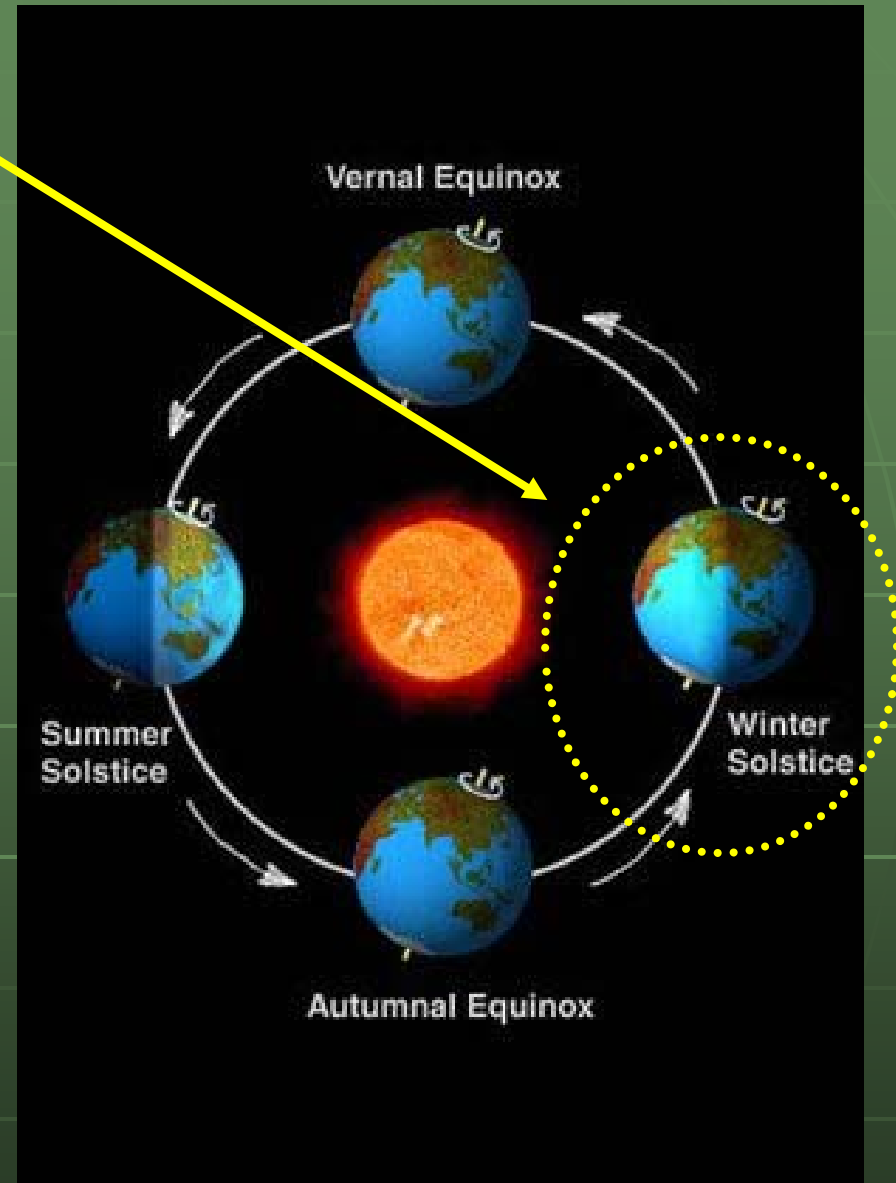
The shortest day of the year (near Dec 21st).

Marks the first day of winter.

Click mouse for a question

QUESTION: (True or False)

The North Pole receives very little sunlight each day (24 hour rotation) during the Winter Solstice?



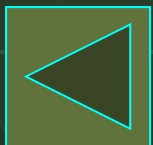
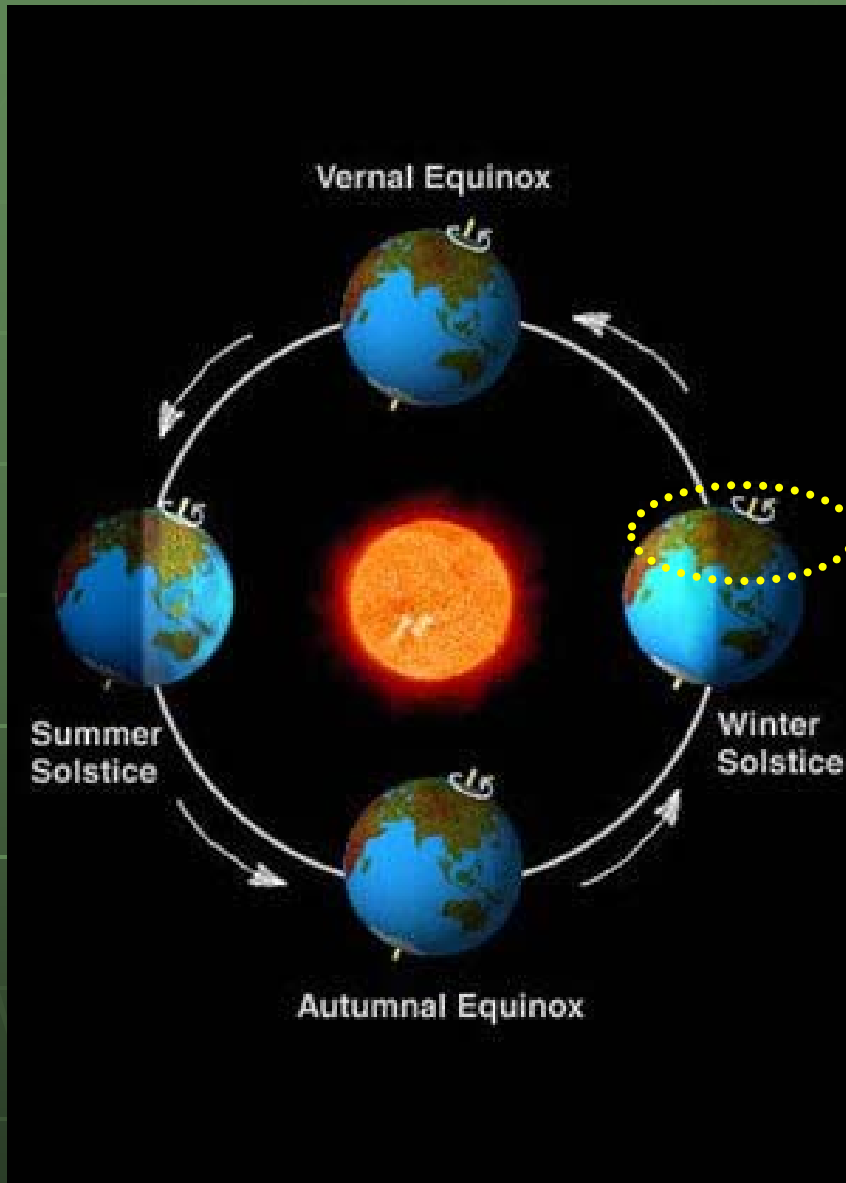
(LINK)

Click to check your answer

TRUE

During the Winter Solstice:

The North Pole is tilted away from the sun.

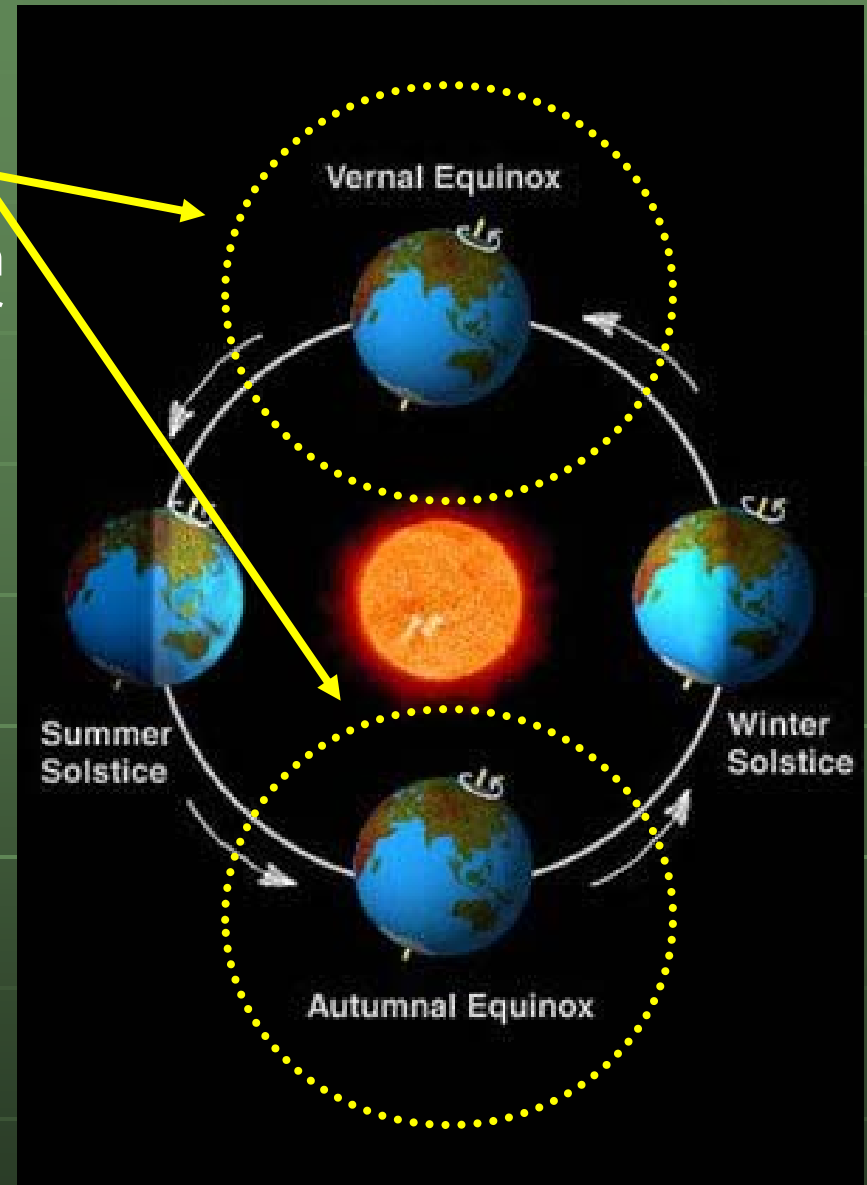


VERNAL & AUTUMNAL EQUINOX (Northern Hemisphere)

Vernal Equinox is about March 21st and marks the first day of Spring

Autumnal Equinox is about Sept 21st and marks the first day of Fall.

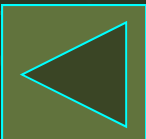
Equinox means the hours of daylight and night are about equal.



Other Equinox Facts



(LINK)



The VERNAL EQUINOX is also known as the:

SPRING EQUINOX or MARCH EQUINOX

The AUTUMNAL EQUINOX is also known as the:

FALL EQUINOX

