

# The Earth movements: Revolutions

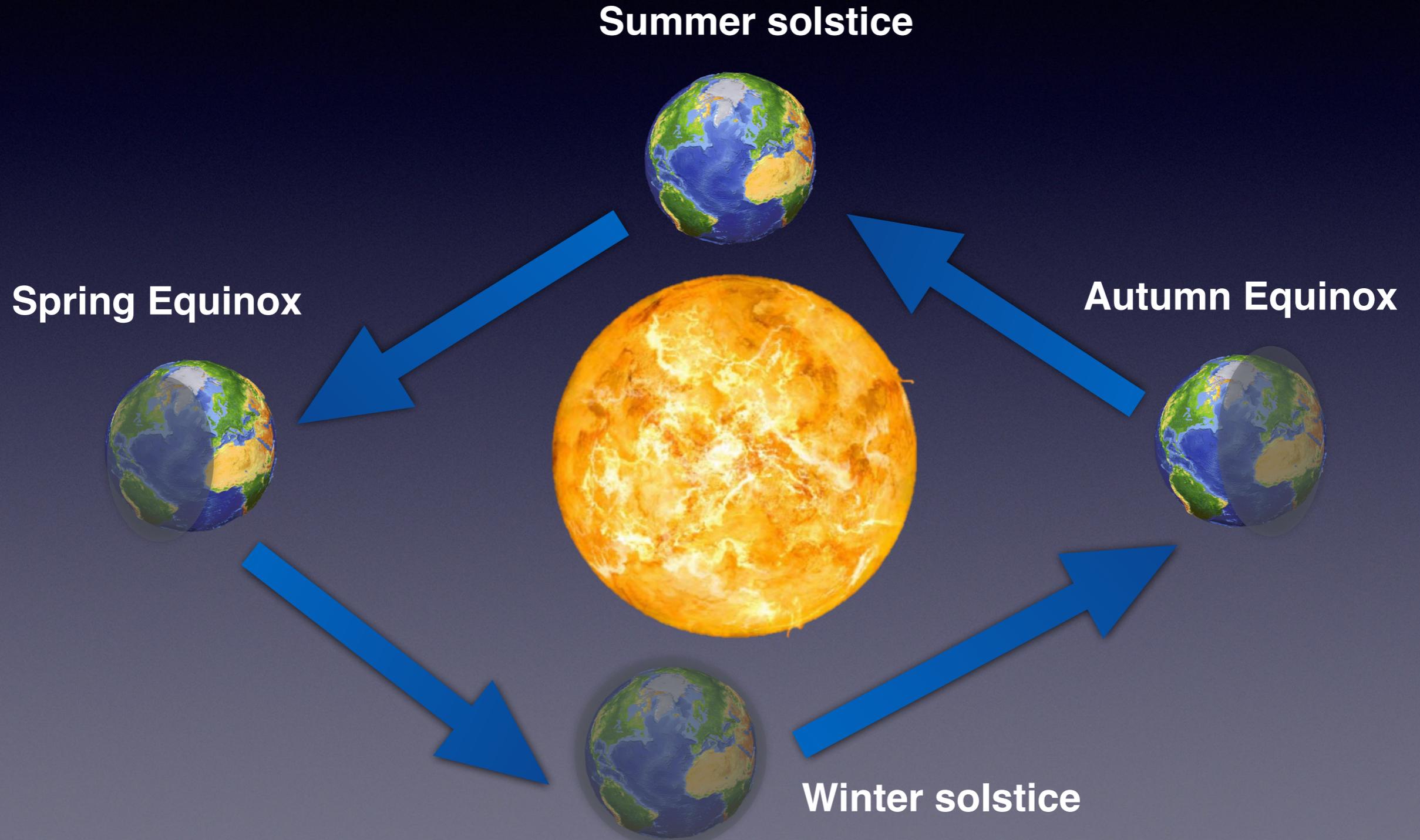
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IES Delgado Brackenbury  
Las Cabezas de San Juan  
(Curso 18/19)

# Natural phenomena

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The Earth's elliptical orbit around the Sun is called revolution. This orbital movement also explains some natural phenomena and time standards.

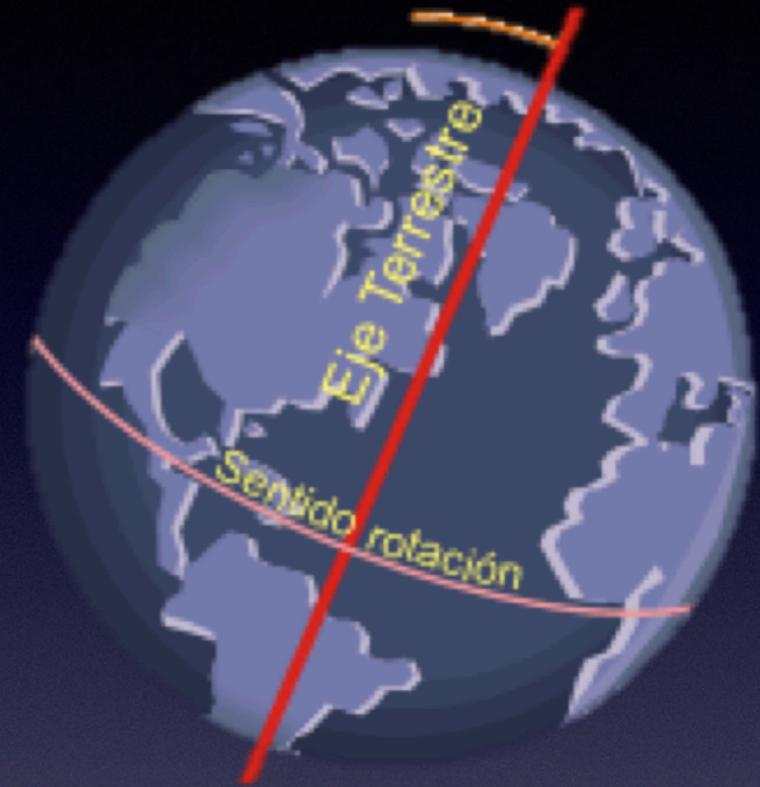


# The Seasons

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Together, the tilt of the Earth's axis of rotation around the Sun mean that the surface of the planet most exposed to solar radiation changes throughout the year.

It also causes opposites seasons on either side of the Equator.



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## Vocabulary

**Tilt** : Inclinação

**Axis**: Eje

**Surface**: Superficie

**Throughout**: Durante

**Around**: Alrededor

# The seasons

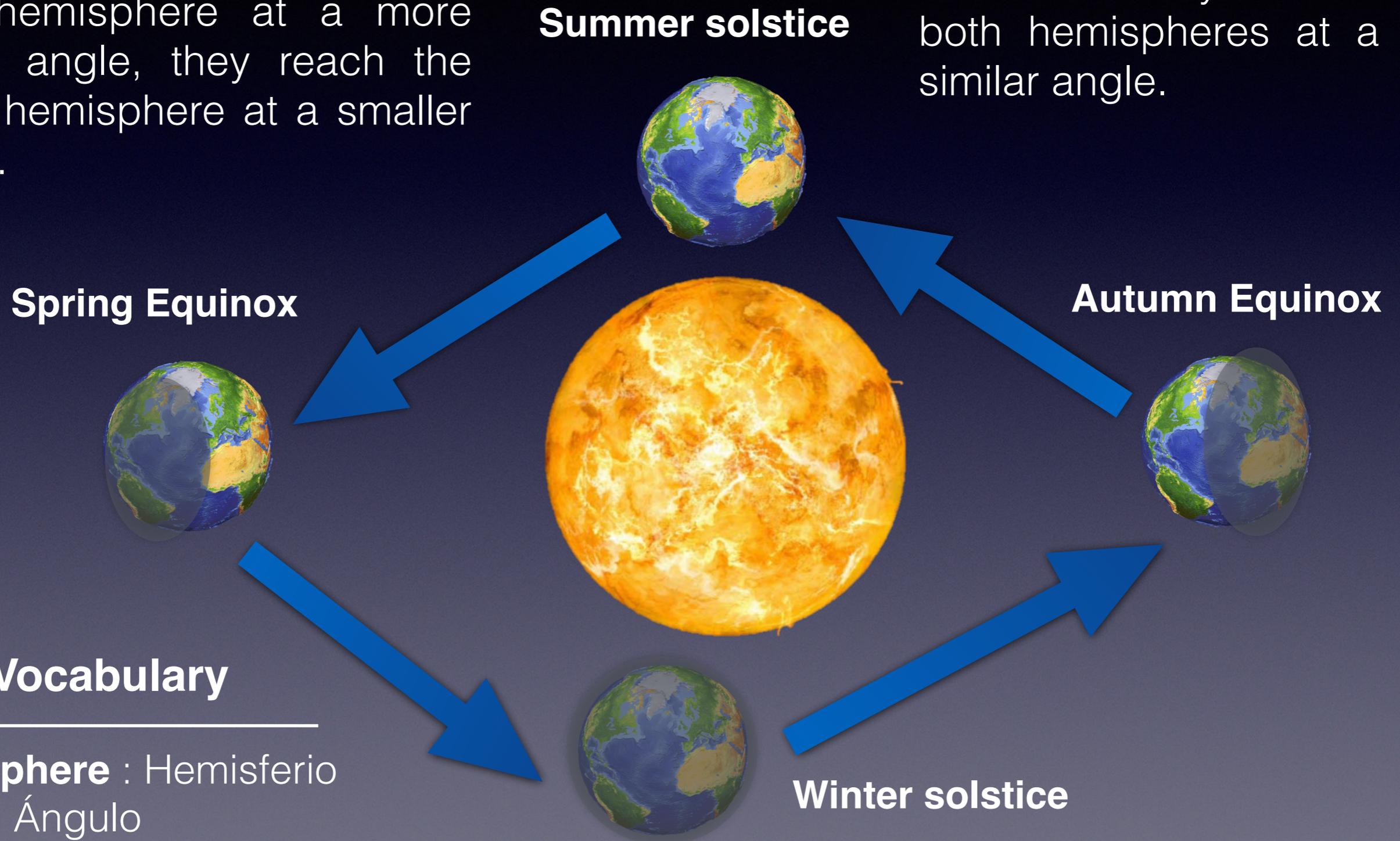
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## Summer and winter.

When the Sun's rays reach one hemisphere at a more direct angle, they reach the other hemisphere at a smaller angle.

## Spring and autumn.

The Sun's rays reach both hemispheres at a similar angle.



## Vocabulary

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**Hemisphere** : Hemisferio

**Angle**: Ángulo

# The length of day and night.

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Autumn and spring equinoxes: the two times of the year when the Sun's rays reach the Equator perpendicularly. On these dates, day and night have the same length.

Summer and winter solstices: the two times of the year when the sun's rays reach one of the two tropics perpendicularly. The day is longest on summer solstice and the night is longest on winter solstice.

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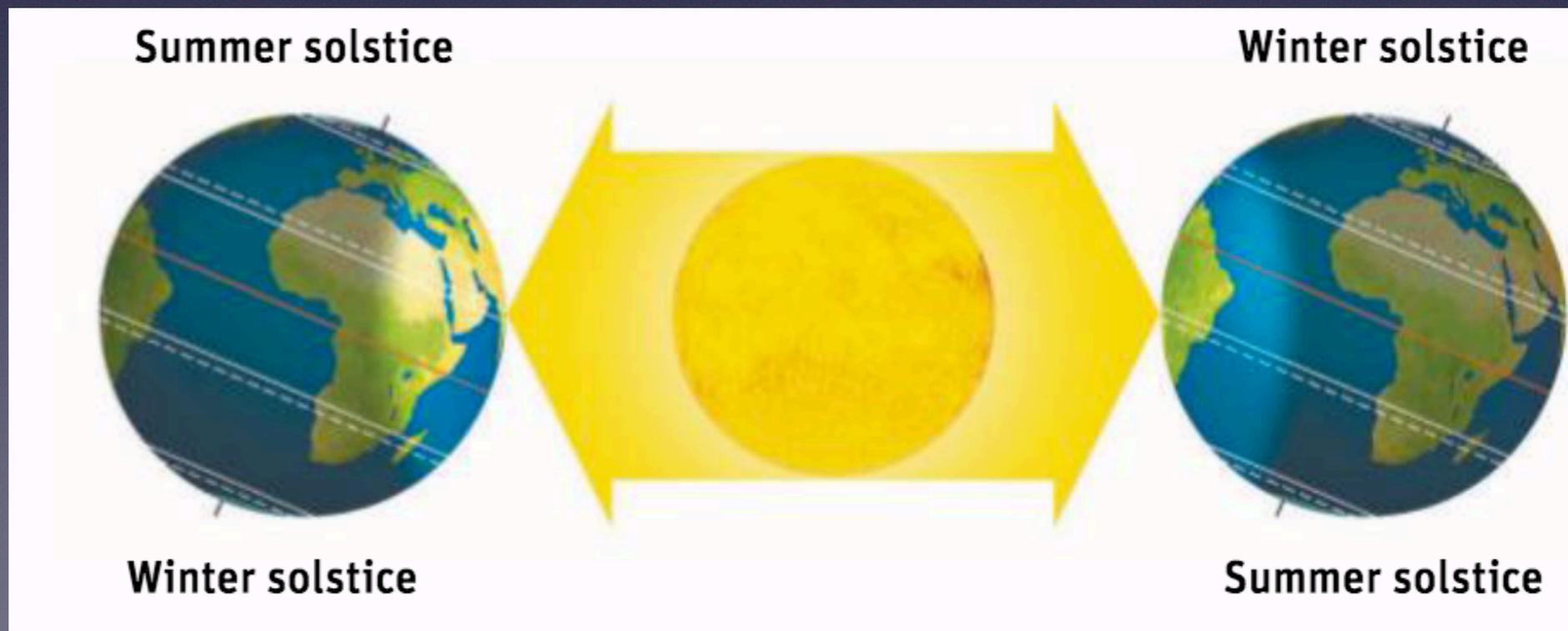
## Vocabulary

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**Rays** : Rayo

**Solstice**: Solsticio

**Equinox**: Equinoccio



# Time Standards

## The calendar and leap years.

It takes the Earth approximately 365 and 6 hours to complete its orbit.

According to our calendar, there are 365 in a year. We add an extra day to the month of February every four years to allow for the extra 6 hours.

A year with 366 is called a leap year.

*How many years do we need to add a day to february? Why?*

<b>FEBRUARY 2012</b>						
<b>SUN</b>	<b>MON</b>	<b>TUE</b>	<b>WED</b>	<b>THU</b>	<b>FRI</b>	<b>SAT</b>
			<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>
<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>			

# Exercises

Which area on Earth receives the most sunlight: the Equator or the South Pole? Why?

Why does the Sun never set in summer at the North Pole? What is happening at the South Pole in the meantime?

Explain in your own words why the Earth's revolution is related to the seasons.

You're planning a trip to Sydney, Australia and you want to go when the days are long. When would be the best time to travel?

When are the days longest in your country? And nights?