

## EarthComm Earth System Evolution: Climate Change and Your Community Activity 3

### This investigation will help you to:

- The Earth's Axial Tilt and the Seasons
- How Do Earth's Orbital Variations Affect Climate?
- Obliquity
- Precession
- Milankovitch Cycles
- To learn more about sunspots and global climate, visit the following web sites:
- To learn more about Milutin Milankovitch, visit the following web site:

#### The Earth's Axial Tilt and the Seasons

- Imagine the Universe- Ask a High Energy Astronomer, NASA  
Visit this site to learn how the Earth's tilt affects the seasons and the relationship between different angles of the Earth and seasons.

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#### How Do Earth's Orbital Variations Affect Climate?

- Astronomical Theory of Climate Change , NOAA  
Learn how the Earth's not-so-circular orbit around the sun affects our climate by exploring this site.
- Global Climate Change: Effect of the Earth's Orbit  
The solar energy received by the earth is both cyclical and variable due to the changes in the earth's orbit and inclination. Explore this site to find out more about these variations and their effect on global climates.

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#### Obliquity

- Ask a High Energy Astronomer, NASA  
How does the earth's tilt affect the changing of the seasons and what different angles cause those different seasons?
- Milankovitch Cycles and Glaciation  
Learn about the connection between eccentricity, axial tilt, and precession in relation to past glaciations by visiting this site.

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#### Precession

- [Precession, NASA](#)

This article describes the development and background behind the idea of precession.

- [Precession, University of Oregon](#)

Did you know that the north star can change as the Earth wobbles on its axis? Visit this site to learn more.

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### Milankovitch Cycles

- [The Seasons and the Earth's Orbit - Milankovitch Cycles, U.S. Naval Observatory](#)

This site explains the role that the three different aspects of Milankovitch Cycles play in the seasons on a periodic basis.

- [Milankovitch Cycles and Glaciation](#)

Learn about the connection between eccentricity, axial tilt, and precession in relation to past glaciations by exploring this web site.

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To learn more about sunspots and global climate, visit the following web sites:

- [The Sun-Climate Connection \(Did Sunspots Sink the Titanic?\), NOAA](#)

This website explores the relationship between solar variability and climate change.

- [The Sun and Sunspots, NWS](#)

Visit this site to learn if the Earth's climate is effected by an increase or decrease in sunspot activity.

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To learn more about Milutin Milankovitch, visit the following web site:

- [On the Shoulder of Giants - Milutin Milankovitch, NASA](#)

Explore the history of Serbian astrophysicist, Milutin Milankovitch, and his theories of Earth motions and long-term climate change by visiting this web site.

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