



Seasonal Insolation

Name: _____

Directions: Use the [Net Radiation Dataset](#) provided by the NASA Earth Observatory to investigate the relationship between the time of the year and the amount of solar energy that different portions of the earth receive at a given time. (Note - When you open the link make sure that the last full year's data available is chosen to be examined - as in, if it is 2021 then choose to examine 2020's data)

When you open the link take a second to examine the information available and identify the coloration on the map and how information is being portrayed on the map.

Change through the different months using the bar along the bottom of the map (click on different months to see the amount of W/m² of energy that an area receives) - Answer the following Question using information from the different maps

*For context - the Southern Hemisphere is everything south of the equator, the Northern Hemisphere is everything North of the equator (you might have to look up the location of the equator)

1. During what month does the Southern Hemisphere receive the most direct energy from the sun?

2. During what month does the Northern Hemisphere receive the most direct energy from the sun?

3. During which months does the equator receive the most direct energy, giving the Northern and Southern Hemisphere roughly equal amounts of energy?

_____ & _____

4. Do some internet research and figure out when the Winter and Summer Solstices are, and then the Autumnal (fall) and Vernal (spring) Equinoxes. How do they connect to your answers from questions 1-3.

Summer Solstice: _____

Winter Solstice: _____

Vernal Equinox: _____

Autumnal Equinox: _____



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5. How does the amount of energy an area receives from the sun help better explain the seasonal changes in temperature? Make sure you make specific mention of the solstices and equinoxes in relation to the hemispheres.
