

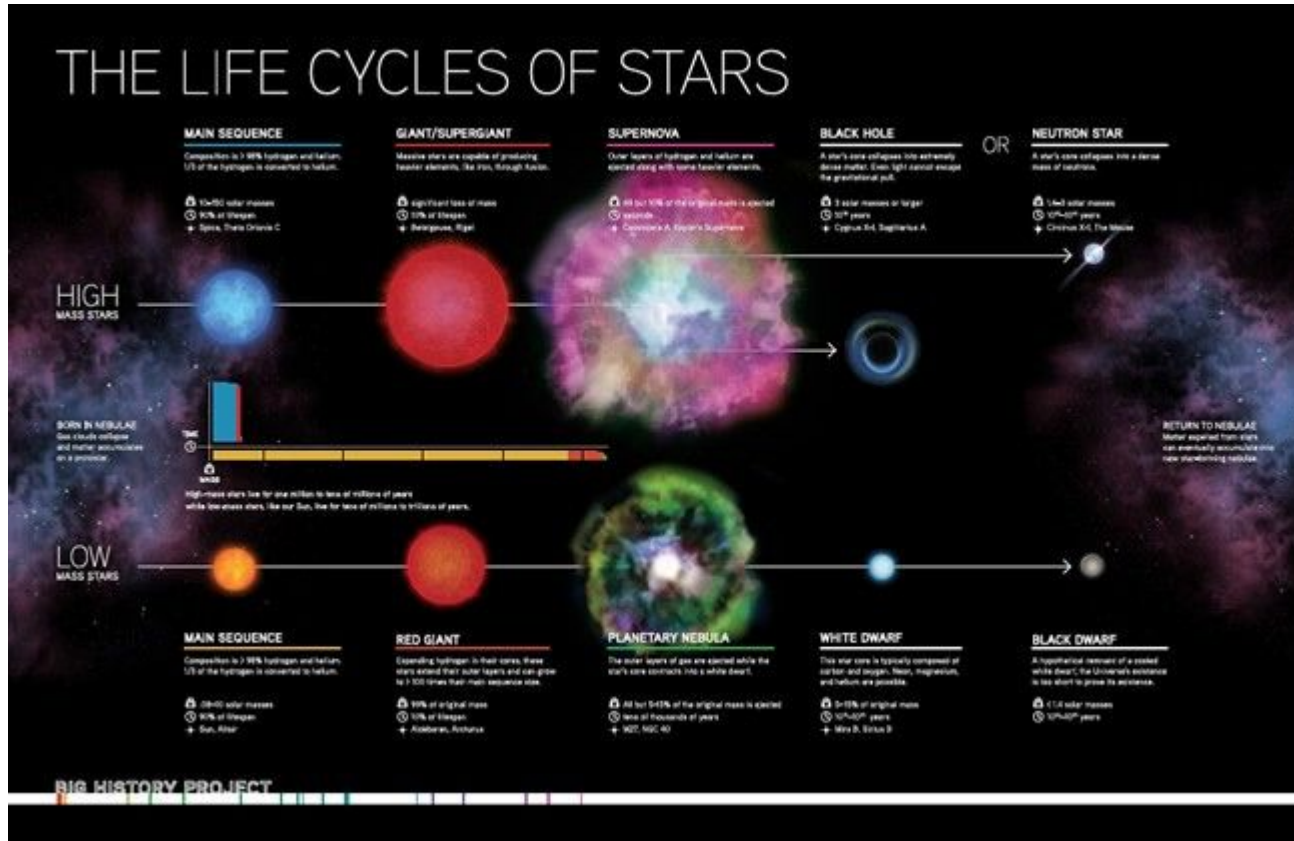
The Original Source of Earth's Energy Resources

Ms. Larsh

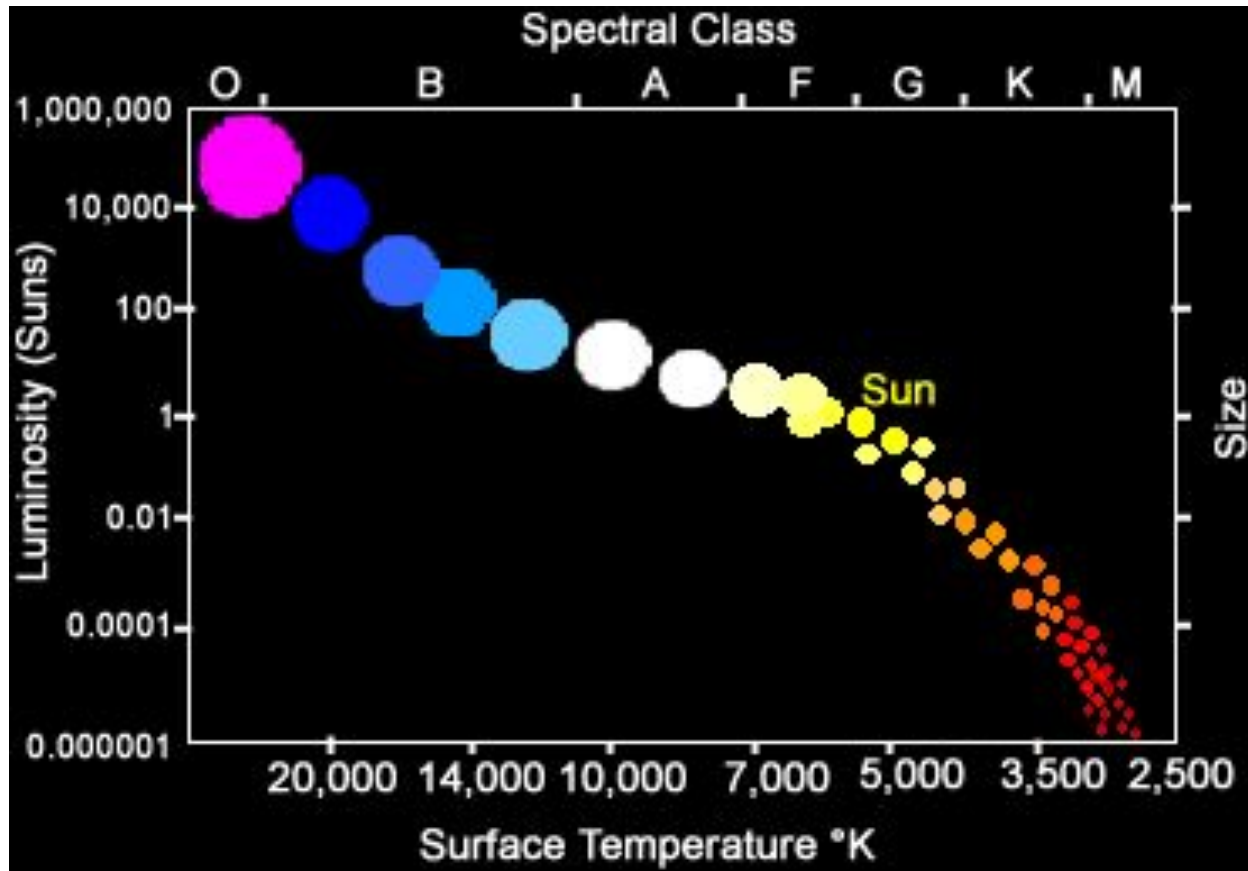
The Sun



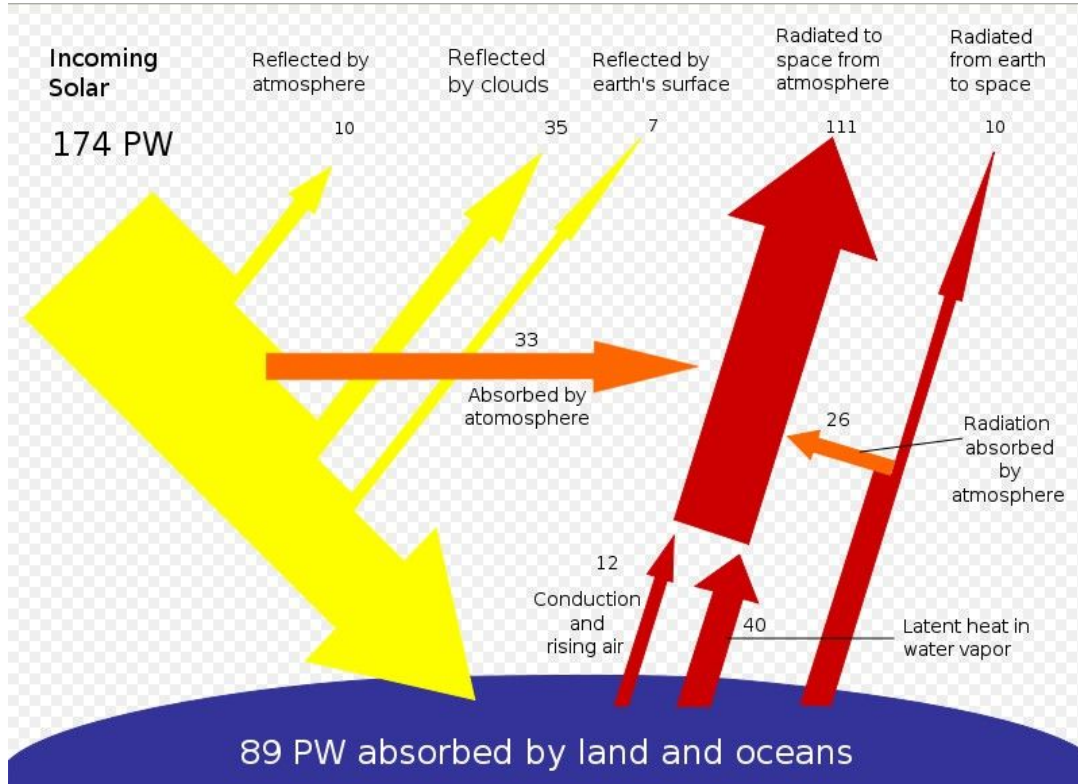
Recap: Sun = **Low-Medium** Mass Star



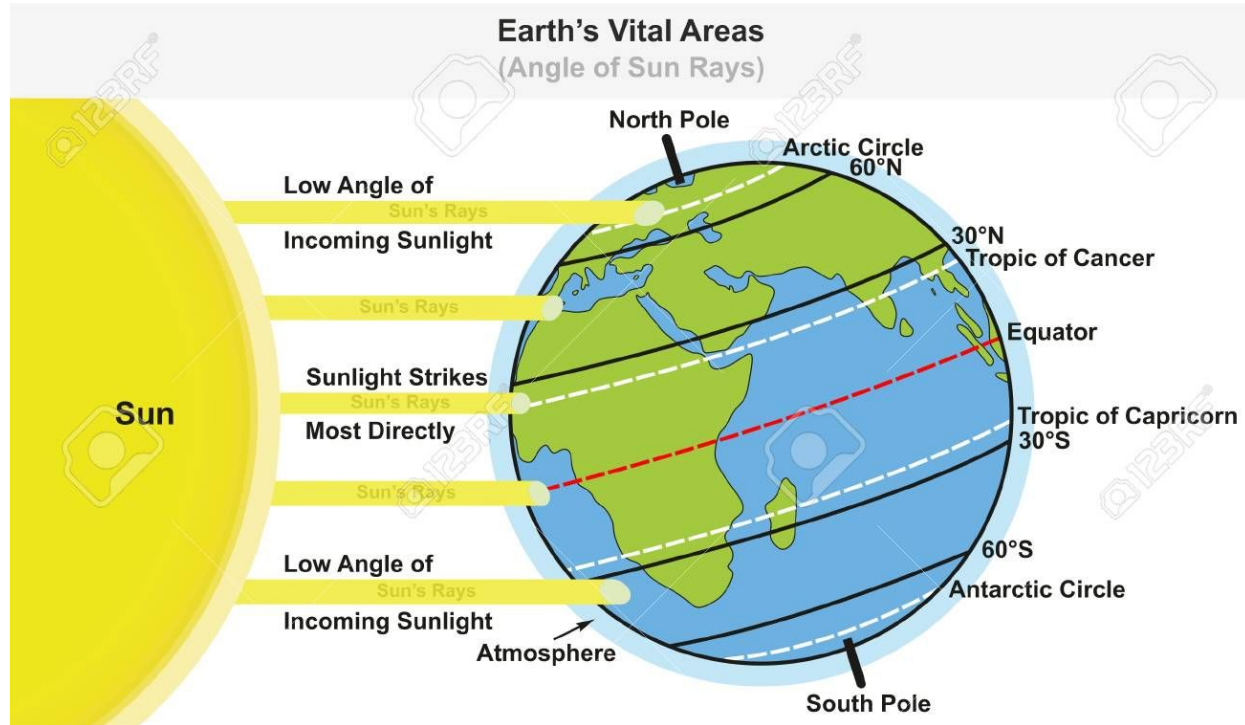
Recap: The Sun is in its Main Sequence



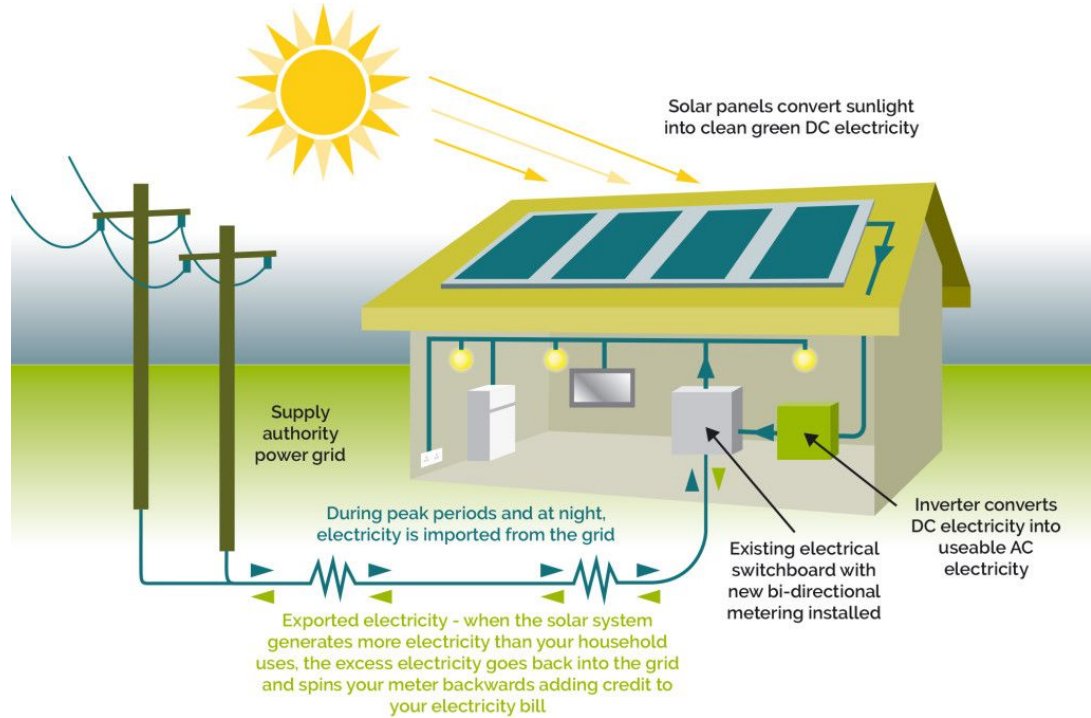
The Sun + Earth's Tilt = Seasons & . . .



Uneven Heating & Cooling of Earth's Surface



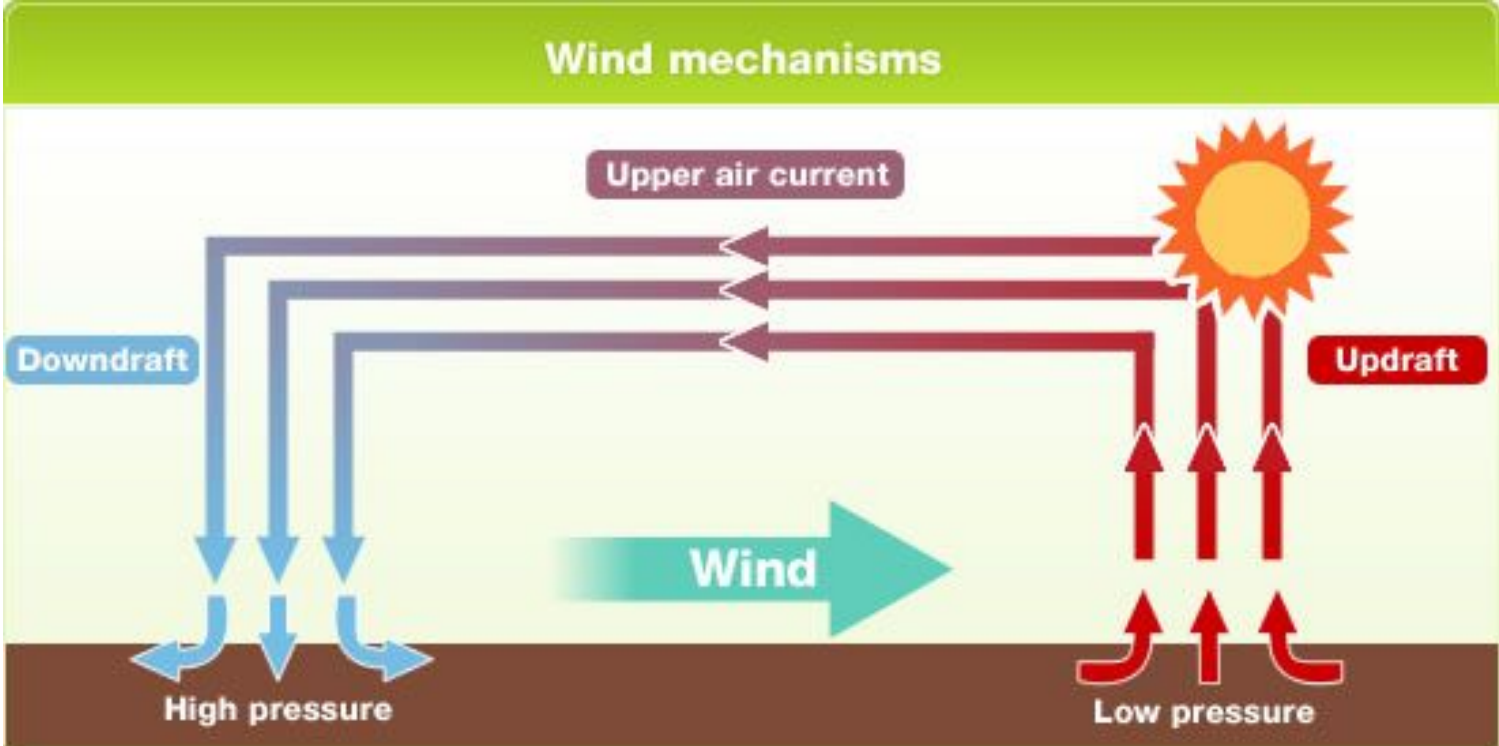
Solar Energy



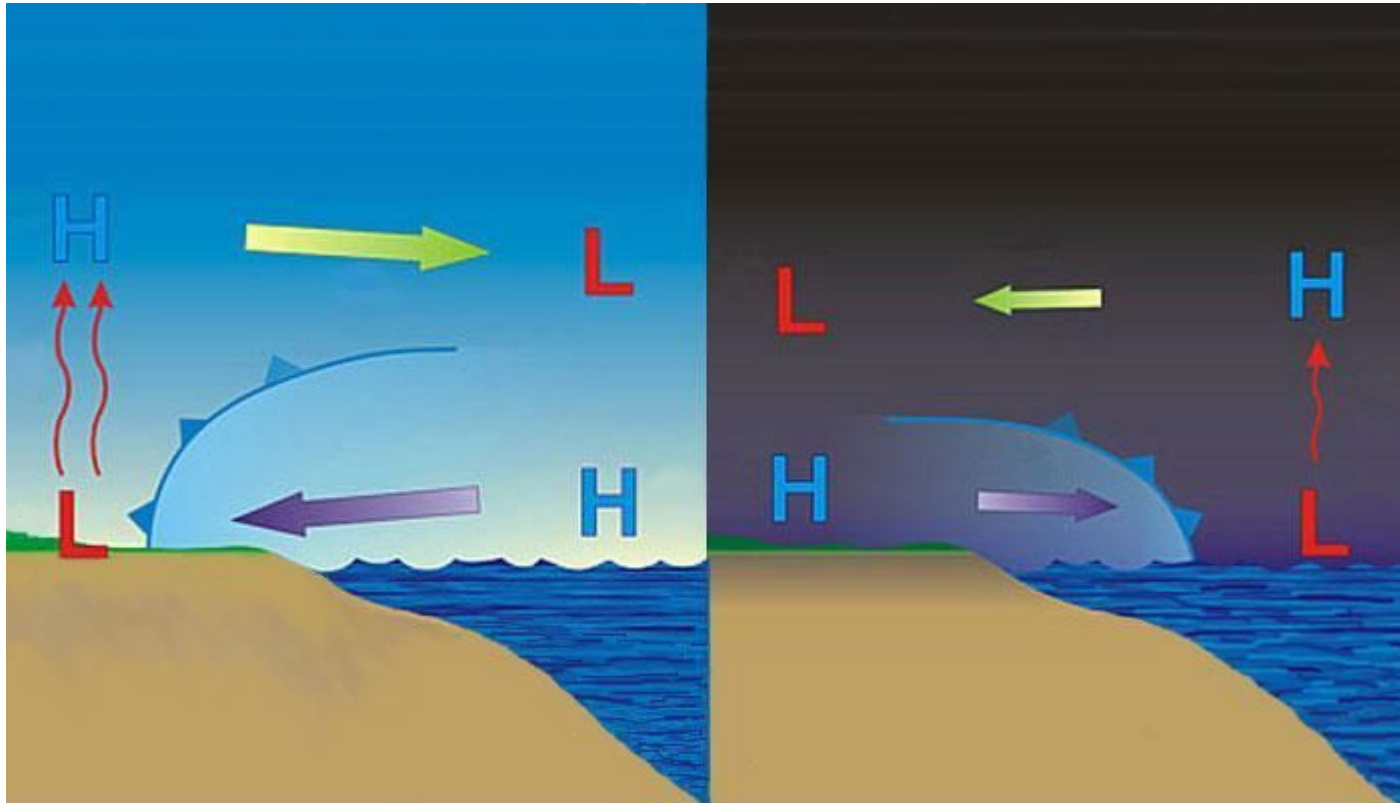
How Does the Sun Generate Wind Energy?



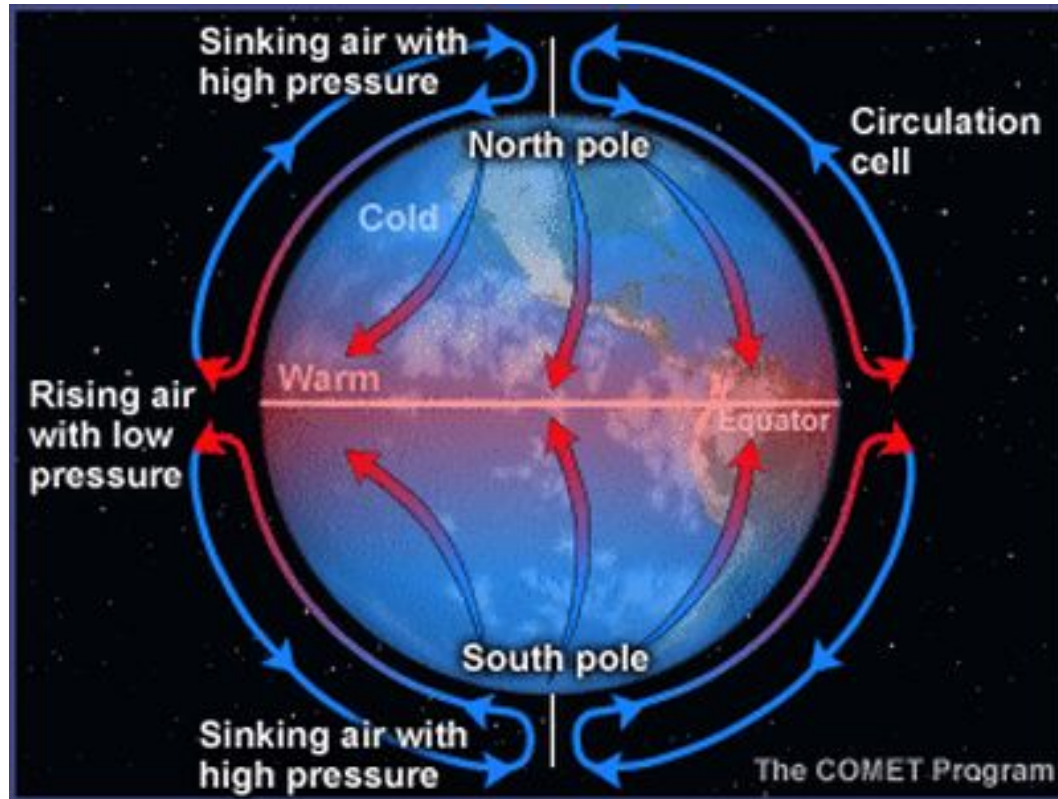
What is Wind?



Movement of Air from **H** to **L**

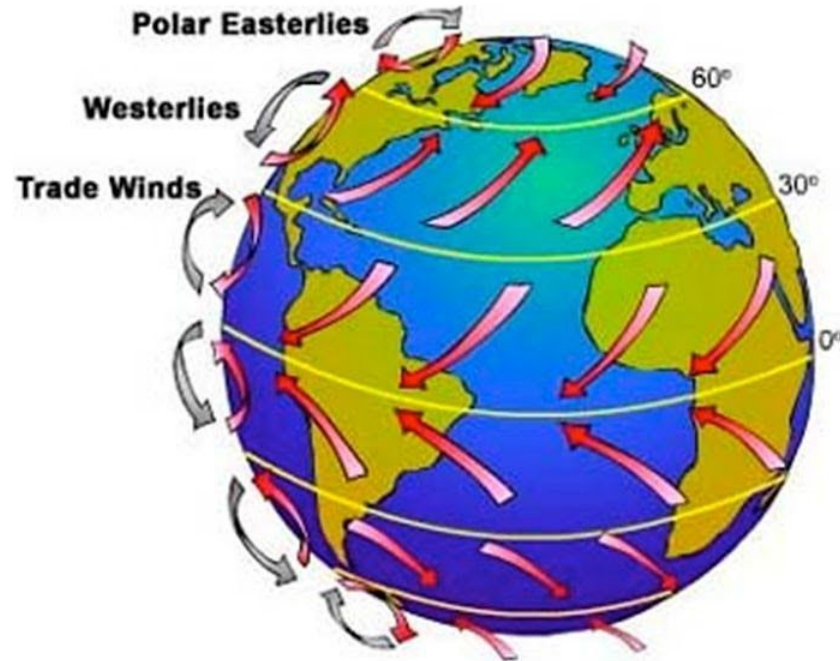


Uneven Heating & Cooling of Earth's Surface



What causes Earth's seasons?

Global Wind Systems



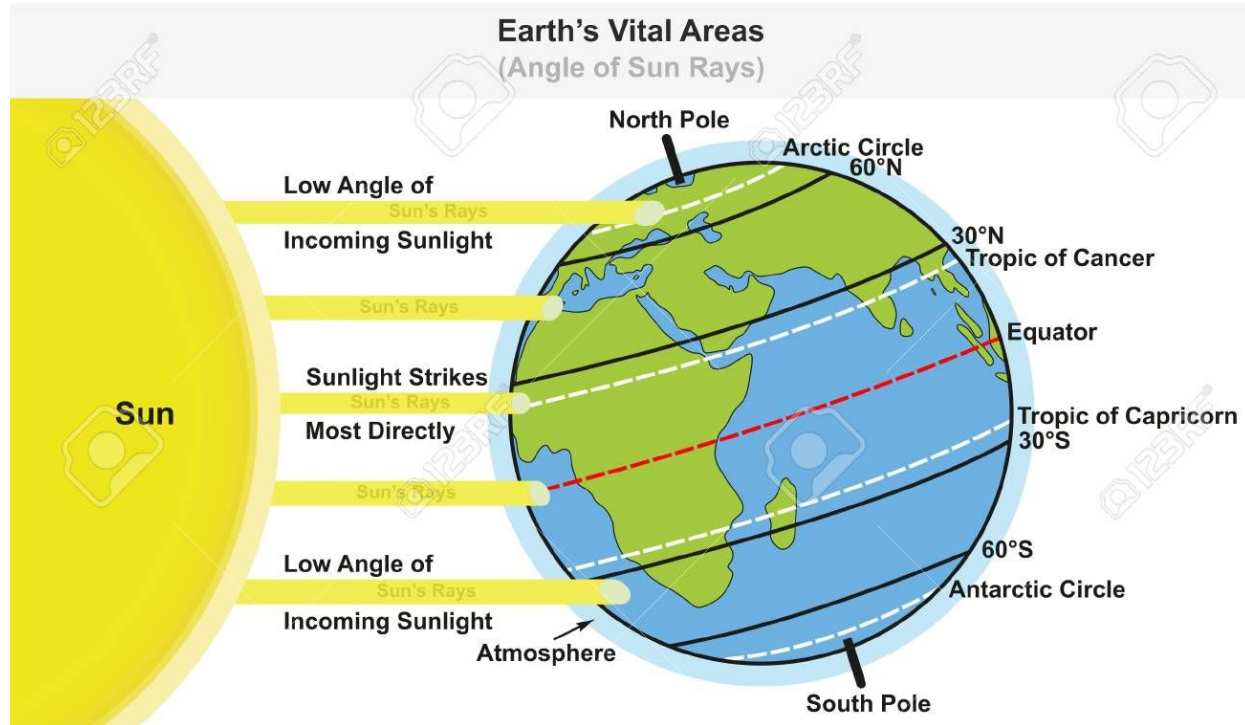
How Does the Sun Generate Wind Energy?

- The uneven heating and cooling of Earth's surface creates places of **L**ow Pressure and other areas of **H**igh Pressure.
- Wind = The movement of air from an area of **H**igh Pressure to an area of **L**ow Pressure
- Therefore, the sun is the original source of wind energy, as well as solar energy

How Does the Sun Generate Hydro Energy?



Uneven Heating & Cooling of Earth's Surface



Seasonal Water Distribution - Snow



Seasonal Water Distribution - Snow Melt



Surface Water



How Does the Sun Generate Hydro Energy?

- The uneven heating and cooling of Earth's surface drives the water cycle
- Water evaporates due to solar radiation/ warm temperatures, and condenses with cooler temperatures. Precipitation is determined by temperature.
 Snow= cold, Rain = warm

How Does the Sun Generate Hydro Energy?

- The seasonal collection of snow in winter and subsequent snowmelt in spring drives Earth's river systems along with gravity
- Snow melt moves from areas of high elevation towards sea level, and thus rivers flow towards oceans

How Does the Sun Generate Hydro Energy?

- Therefore, the sun is the original source of hydro energy via its role in the water cycle, global wind systems/ seasons, and the creation of, or melting of snow that makes up Earth's rivers