

# Class 2b: Temperature and insolation

What is temperature?

# How does heat energy move?

- *Conduction*
- *Convection*

# How does heat energy move?

- *Adiabatic* cooling and warming

# How does heat energy move?

- *Latent heat* (“hidden” heat)

# Solar energy

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# Energy pathways

- *Insolation*



# Energy pathways

# Ozone and UV light

# Ozone and UV light

# Energy pathways

# ***Greenhouse effect***

Why is the sky blue?

# Energy pathways

- Does energy reach all parts of the Earth's surface equally?

# Latitude and insolation



# Spatial variation of insolation

- High latitudes (above  $60^\circ$ )

# Spatial variation of insolation

- Middle latitudes ( $30^{\circ}$ - $60^{\circ}$ )
- Low latitudes (below  $30^{\circ}$ )

Land vs. water

# Land vs. water

- *Continental* vs. *maritime* climates