Energy Budget of the Atmosphere

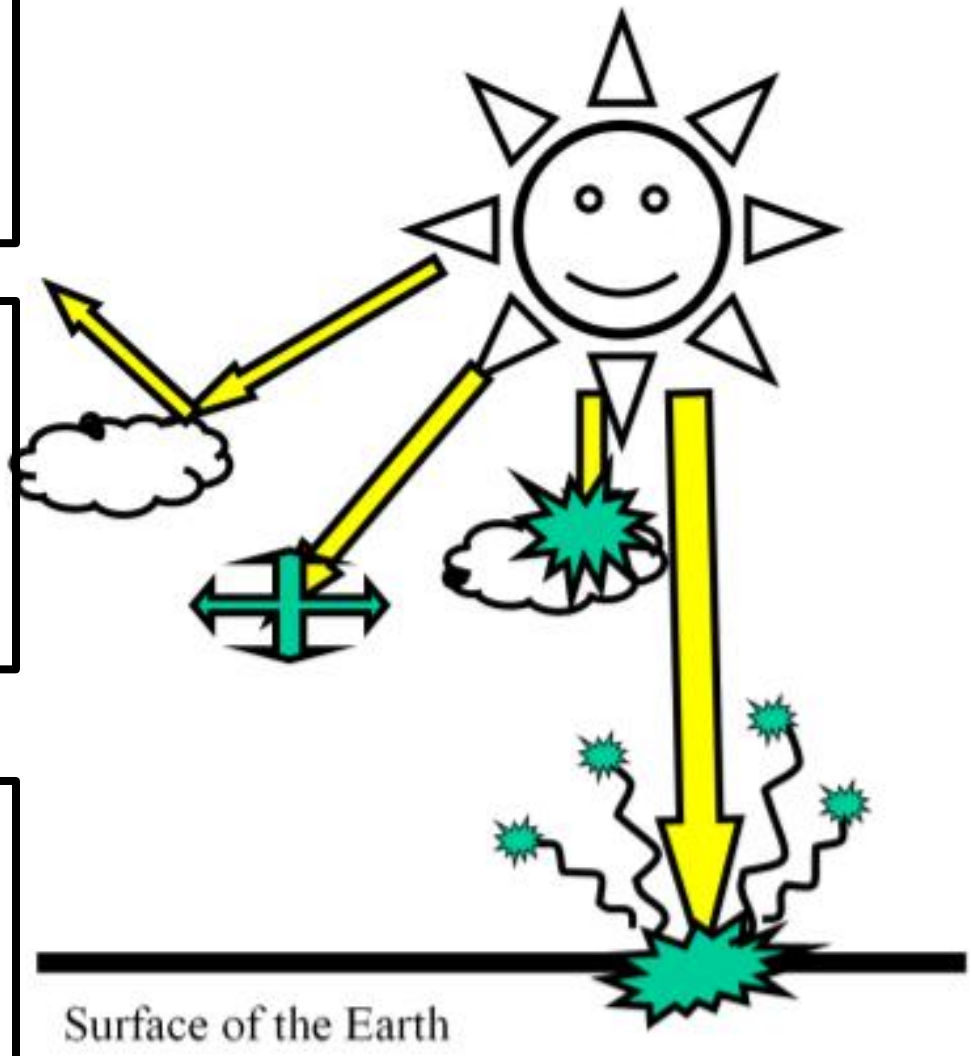
Energy from the sun that reaches the Earth's surface is in the form of

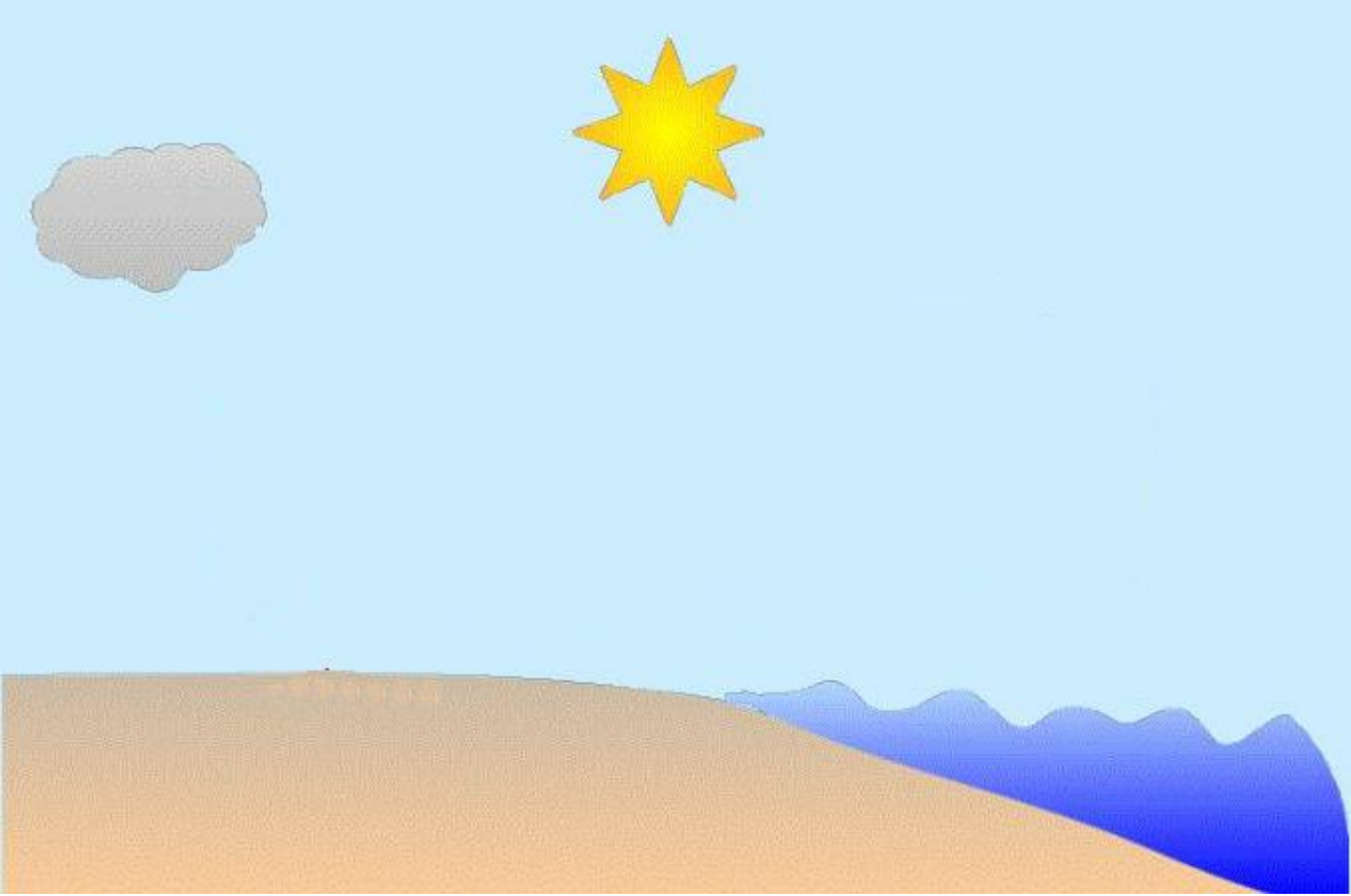
_____
_____
_____

On the way through the atmosphere these forms of energy may be :

_____
_____
_____
_____

The surface of the Earth warms up because _____ **waves from the Sun are** _____ **and transform to** _____ **energy otherwise known as** _____





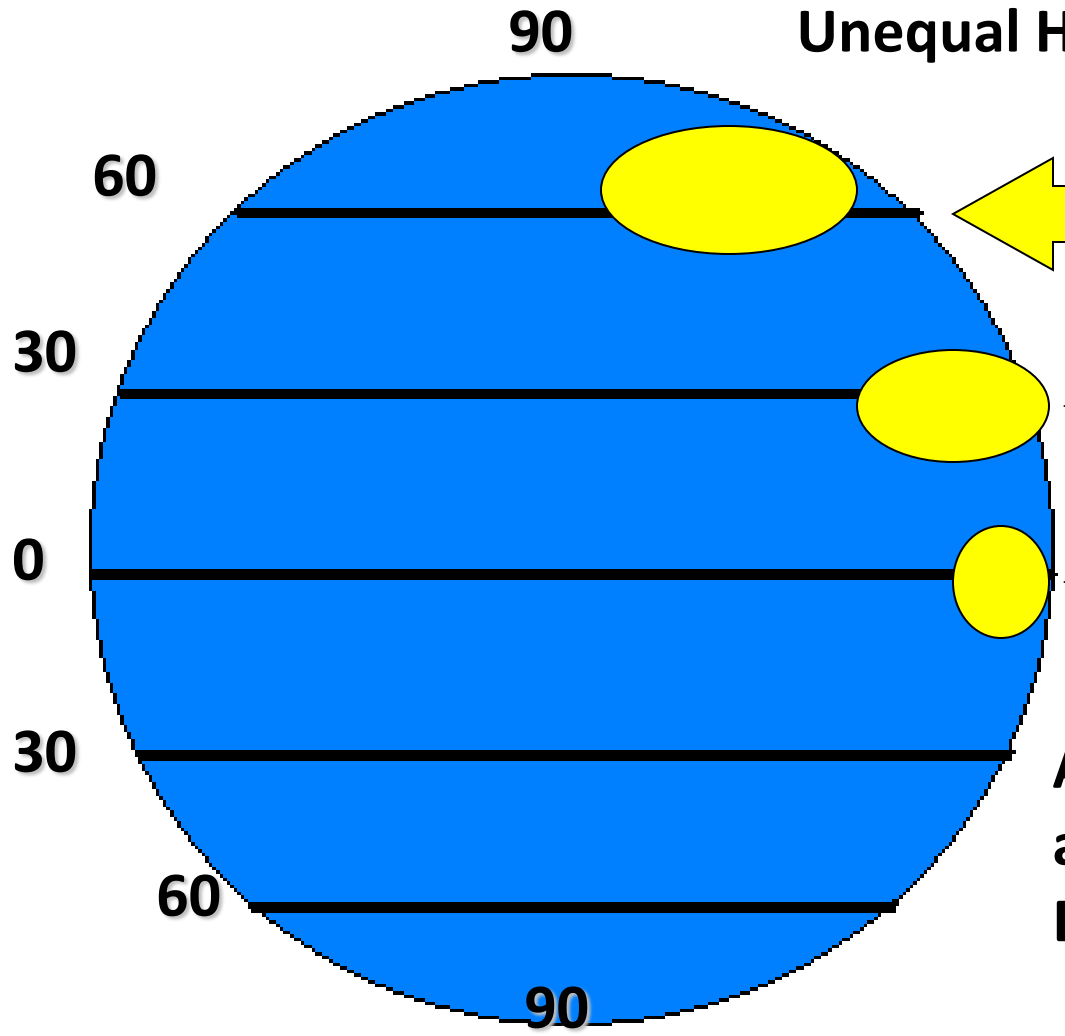
Air Pressure is

When air becomes _____ than surrounding air it will _____ and create _____ pressure in that area.	When air becomes _____ than surrounding air it will _____ and create _____ pressure in that area.

Anything that changes the _____ of the air will affect the pressure.

Temperature	Elevation	Moisture

Unequal Heating of the Earth's Surface

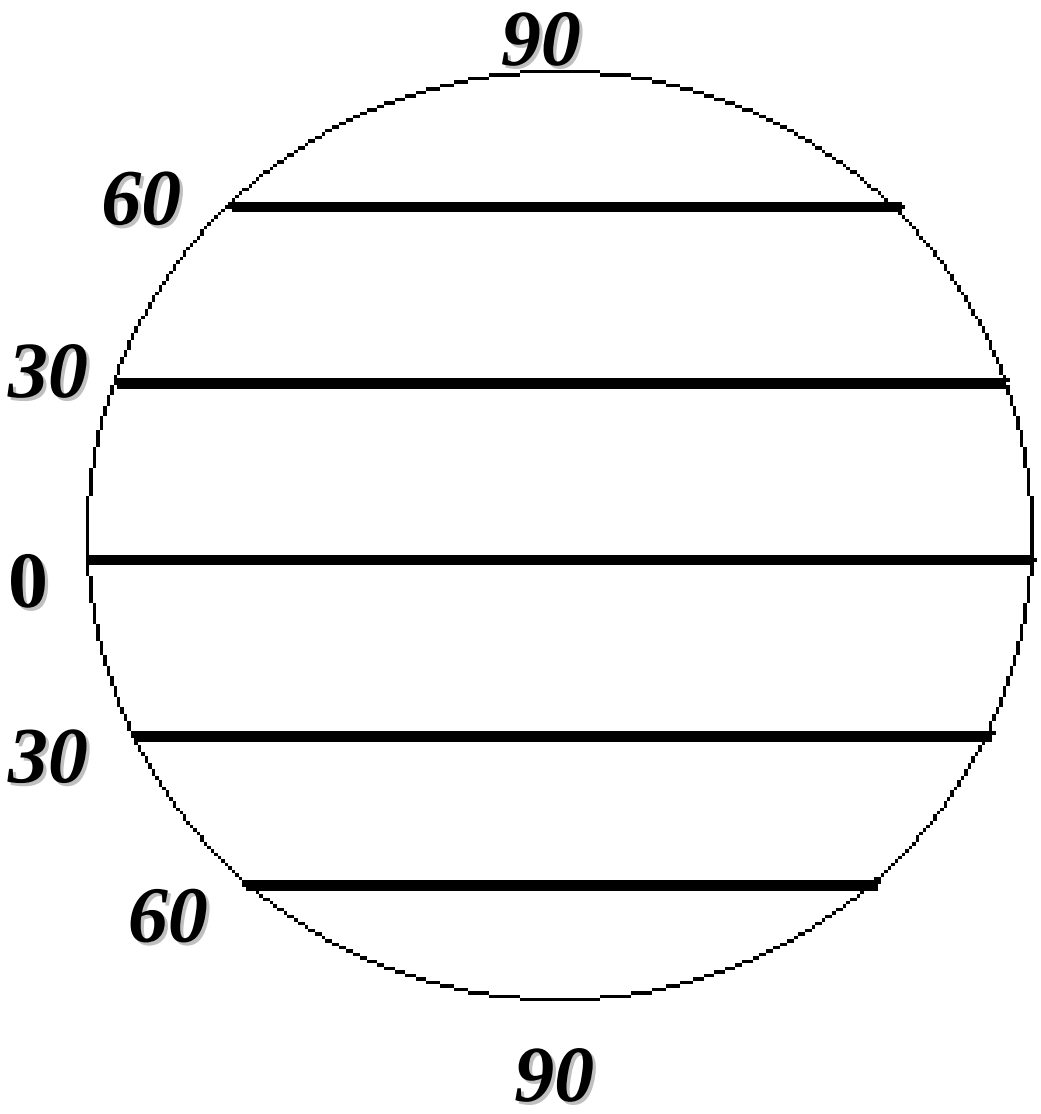


Incoming Solar Radiation

At any given time the same amount of energy comes to the Earth everywhere!

Incoming energy from the sun is spread over a larger area as one moves away from the equator.

Result: Less energy per square meter at the surface, leads to uneven heating at the surface.


90
60
30
0
30
60
90

Since it is _____ and there is more _____ at the equator the air is _____ dense than air around it so it will_____ creating a _____ pressure system. This pressure system is called the _____	Since it is _____ and there is less _____ at 30 degrees latitude the air is _____ dense than air around it so it will_____ creating a _____ pressure system. This pressure system is called the _____

Winds blow from _____ pressure to _____ pressure

Between the equator and 30 degrees the Global Wind is called the _____

Since the world is turning on its axis the winds global wind here is bent and blow from _____ to _____

The air at 60 degrees is cool but there is A LOT of _____so the air is _____ dense than air around it so it will_____ creating a _____ pressure system. This pressure system is called the _____	Since it is _____ and there is less _____ at 30 degrees latitude the air is _____ dense than air around it so it will_____ creating a _____ pressure system. This pressure system is called the _____

Winds blow from _____ pressure to _____ pressure

Between the 30 degrees and 60 degrees the Global Wind is called the _____

Since the world is turning on its axis the winds global wind here is bent and blow from _____ to _____

The air at 60 degrees is cool but there is A LOT of _____so the air is _____ dense than air around it so it will_____ creating a _____ pressure system. This pressure system is called the _____	The air at the Poles is incredibly _____ and _____ this makes it _____ dense than air around it so it will_____ creating a _____ pressure system. This pressure system is called the _____

Winds blow from _____ pressure to _____ pressure

Between the 90 degrees and 60 degrees the Global Wind is called the _____

Since the world is turning on its axis the winds global wind here is bent and blow from _____ to _____

Summary of Global Wind Systems

0 to 30 degrees latitude	30 to 60 degrees latitude	60 to 90 degrees latitude
• _____, _____ air at 0 degrees is _____dense so it _____ creating _____ pressure • _____, _____ air at 30 degrees is _____dense so it _____ creating _____ pressure • Since wind blows from _____ pressure to _____ pressure A Global Wind Belt called the _____ are formed here. • Since the world is turning the _____ force cause the wind here to blow From _____ to _____	• _____, _____ air at 0 degrees is _____dense so it _____ creating _____ pressure • _____, _____ air at 30 degrees is _____dense so it _____ creating _____ pressure • Since wind blows from _____ pressure to _____ pressure A Global Wind Belt called the _____ are formed here. • Since the world is turning the _____ force cause the wind here to blow From _____ to _____	• _____, _____ air at 0 degrees is _____dense so it _____ creating _____ pressure • _____, _____ air at 30 degrees is _____dense so it _____ creating _____ pressure • Since wind blows from _____ pressure to _____ pressure A Global Wind Belt called the _____ are formed here. • Since the world is turning the _____ force cause the wind here to blow From _____ to _____

The United States is in the _____so the Prevailing winds in the US blow from _____ to _____