

Name:

Date:

Period:

Movin' Around

Questions:

Notes:

Why is the equator warmer than the poles?

The solar _____ heats the surface of the earth

Heat is transferred to air molecules that come in contact with the ground by _____.

What happens when the molecules become heated?

What type of energy does this show?

Why does the warm air rise?

Convection current -

The part of a convection current that moves across the surface of the earth is called _____.

The rising air creates an area of _____ pressure
_____ pressure means the air is not putting much pressure on the Earth's surface.

The more dense sinking air creates an area of _____ pressure.

_____ pressure means the air is putting pressure on the Earth's surface.

Summary:

Name:

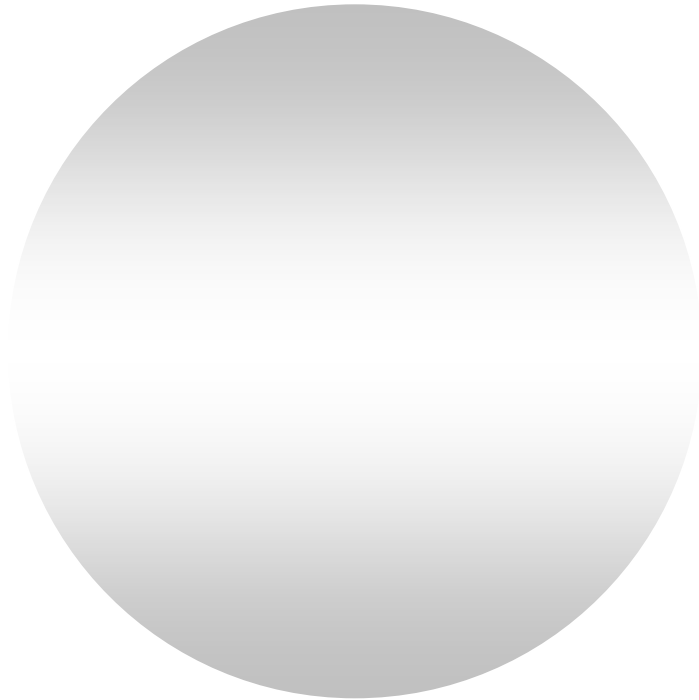
Date:

Period:

The Wind

- Winds are the result of _____ heating of the Earth's surface
 - Molecules always move from areas of _____ pressure to areas of _____ Pressure

Illustrate the Global Wind patterns below.



Global circulation depends on _____ heating over the globe.

The system is driven by strong equatorial heating, causing _____ PRESSURE. (Label the Equator)

Summary:

Name:

Date:

Period:

Equatorial air descends over the tropics, where _____ PRESSURE dominates; where it diverges at ground level. This tropical air blows towards the _____, completing the equatorial cell. (Illustrate this cell on the circle above)

Some of the sinking air at the Tropical High moves towards the mid-latitudes where it meets cold, dense polar air blown out from the polar _____ PRESSURE. (Label the Poles)

These contrasting tropical and polar air masses meet at the POLAR FRONT _____ PRESSURE BELT, where the warmer air is forced upwards by the polar air. (Illustrate this on the circle above)

And Then The World Turns

- Pressure gradient wind blows from _____ pressure towards _____ pressure.
- The earth's rotation diverts this wind direction _____. This force is called the _____.
- The Coriolis force diverts wind the the _____ in the northern hemisphere; to the _____ in the south.

Trade Winds – pattern of air movement in the _____; Goes to the _____

Westerlies – pattern of air movement in the _____; Goes to the _____

Easterlies – pattern of air movement at the _____; Goes to the _____ - _____

Label "Trade Winds", "Westerlies" and "Easterlies" on the circle above.

Summary:

Name:

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Jet Stream – is a band of fast moving _____ in the stratosphere.

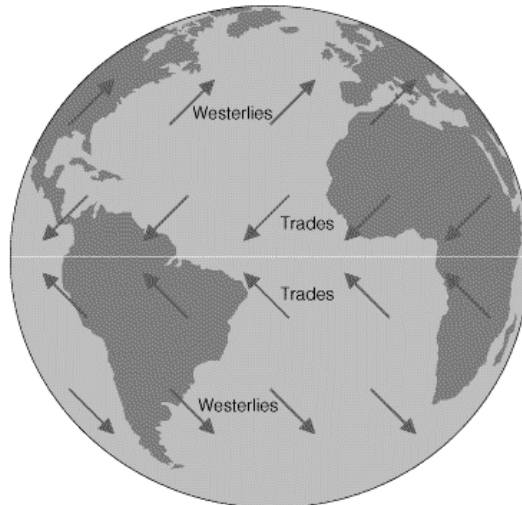
Formed where _____ winds meet the _____ winds. Pressure systems always move from _____ to _____.

Summarizing Convection

- What is convection?
- Where does convection occur?
- In what states of matter does convection occur?

Ocean Currents

- **Atmospheric Currents**
 - Depend on _____
- **Ocean Surface Currents**
 - Depend on _____



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Draw the Ocean currents that result from the winds shown on the map above.

Summary: