The Atmosphere Vocabulary

1. Weather

The condition of Earth's atmosphere at a particular time and place.



2. Atmosphere

The relatively thin layer of gases that form Earth's outermost layer.



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3. Barometer

An instrument used to measure changes in air

pressure.



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4. Troposphere

The lowest layer of Earth's atmosphere.



UPPER ATMOSPHERE EXOSPHERE The farthest layer

640 to 64,000 km (400 to 40,000 mi) above Earth's surface The air dwindles to nothing as molecules drift into space.

THERMOSPHERE

Where the temperature rises

80 to 640 km (50 to 400 mi) above Earth's surface

Even though the air there is thin, it absorbs so much solar radiation that the temperature can reach up to 230° C (440° F). Within the thermosphere are the ionosphere and magnetosphere. The ionosphere contains electrically charged particles that can interfere with radio broadcasts. Charged particles in the magnetosphere are affected by Earth's magnetic field and under the right conditions, create the beautiful, shimmering Northern and Southern Lights.

MIDDLE ATMOSPHERE

MESOSPHERE

Where shooting stars blaze

50 to 80 km (31 to 50 mi) above Earth's surface

Space debris begins to burn up as it enters the mesosphere. The temperature drops as you leave

Earth dipping to as low as -90° C (-130° F) at the top of the layer.

STRATOSPHER

Where the protective ozone layer floats

16 to 50 km (10 to 31 mi) above Farth's surface

The concentration of protective ozone peaks at about 22 km (14 mi) up. The stratosphere contains 20 percent of the molecules in the atmosphere and gets warmer as you go away from Earth.

LOWER ATMOSPHERE

TROPOSPHERE

Where weather forms

Up to 16 km (10 mi) above Earth's surface

Storms take place in the troposphere, which contains about 75 percent of the atmosphere. The troposphere extends eight km (five mi) up from Earth's surface at the North and South Poles and 16 km (10 mi up) at the Equator. It gets cold near the top, as low as -75° C (-103° F).

5. Stratosphere

The second-lowest layer of Earth's atmosphere.



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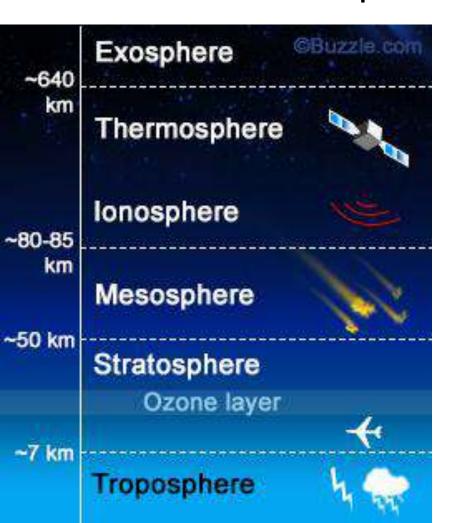
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6. Mesosphere

The layer of Earth's atmosphere immediately

above the stratosphere.



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7. Thermosphere

The outermost layer of Earth's atmosphere.



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8. Ionosphere

The lower part of the thermosphere.



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9. Exosphere

The outer layer of the thermosphere.



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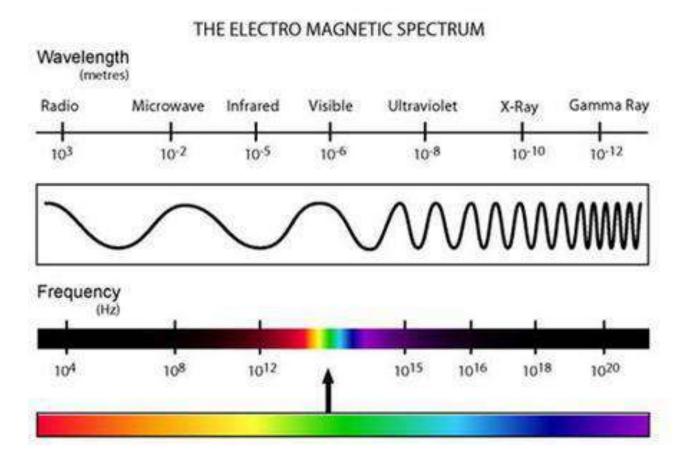
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10. Electromagnetic waves

A wave that can transfer electric and magnetic energy through the vacuum of space.



11. Thermal energy

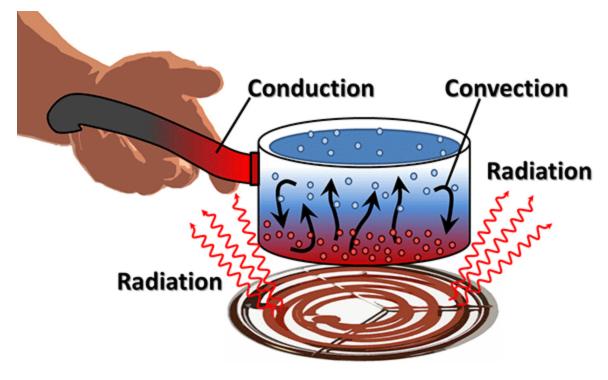
The total kinetic and potential energy of all the particles of an object.



https://modernize.com/wp-content/uploads/2015/12/thermal-energy-how-it-works.jpg

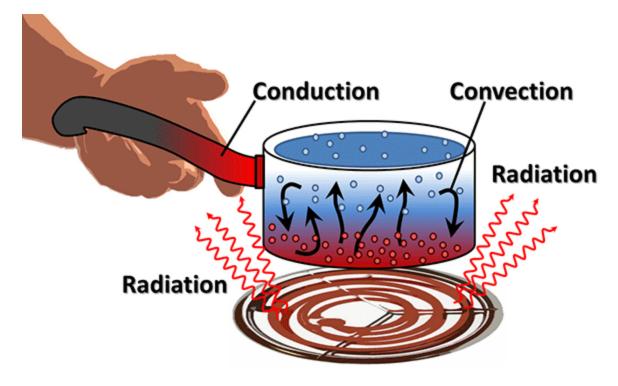
12. Convection

The transfer of thermal energy by the movement of fluid.



13. Conduction

The transfer of thermal energy from one particle of matter to another.



14. Wind

The horizontal movement of air from an area of high pressure to an area of lower pressure.



https://www.mobil.com/industrial/~/media/global/industrial/industry-solutions/industry-sectors/wind-energy/wind-turbines-sustainability-surface-xs.jpg

15. Anemometer

An instrument used to measure wind speed.

