

CLASS 9

SCIENCE

REVISION NOTES

Class 9 Science Chapter 13 Earth as a System: Energy, Matter and Life – Revision Notes

Quick revision notes for Class 9 Science Chapter 13 (Earth as a System: Energy, Matter and Life). These Class 9 Science Chapter 13 notes are ideal for quick revision just before exams.

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Class 9 Science Chapter 13 – Solutions and Important Questions

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Five Spheres

Geosphere: solid Earth (rocks, minerals).

Hydrosphere: all water (oceans, rivers, groundwater).

Atmosphere: gases surrounding Earth.

Cryosphere: frozen water (ice, glaciers, permafrost).

Biosphere: all living organisms.

Solar Radiation

Sun's energy (electromagnetic spectrum) drives weather, climate, photosynthesis.

Differential Heating & Wind

Uneven surface heating → pressure differences → wind (high → low pressure).

Biogeochemical Cycles

Water cycle: evaporation → condensation → precipitation → collection.

Carbon cycle: atmosphere ↔ organisms (photosynthesis/respiration) ↔ oceans/fossil fuels.

Nitrogen cycle: atmosphere (N₂) ↔ soil (fixation) ↔ organisms ↔ atmosphere (denitrification).

Oxygen cycle: released by photosynthesis, consumed by respiration/combustion.

Human Impact

Fossil fuels → excess CO₂ (carbon cycle disruption).

Fertiliser overuse → nitrogen cycle disruption.

One-Line Summary

Earth functions as one interconnected system of five spheres, powered by solar radiation, with differential heating driving winds and matter continuously recycled through the water, carbon, nitrogen, and oxygen cycles — cycles that human activity increasingly disrupts.

Class 9 Science Chapter 13 – Solutions and Important Questions

Need full answers or more practice? See the [Class 9 Science Chapter 13 Solutions](#) and [Class 9 Science Chapter 13 Extra Questions](#).

See also: [Chapter 1](#) | [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Chapter 5](#) | [Chapter 6](#) | [Chapter 7](#) | [Chapter 8](#) | [Chapter 9](#) | [Chapter 10](#) | [Chapter 11](#) | [Chapter 12](#) | [Chapter 13](#)

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