Class 9 Social Science Chapter 2: Shaping of the Earth’s Surface - Notes, Important Questions and MCQs (2026-27)

Free PDF notes from Nextoper.in | Session 2026-27 | Read online:
https://nextoper.in/class-9-social-science-chapter-2-pdf-notes/

These Class 9 Social Science Chapter 2 notes cover “Shaping of the Earth’s Surface” from the new NCERT textbook Understanding Society: India and Beyond (Part 1, 2026-27): the layers of the Earth, plate tectonics, earthquakes, volcanoes, folding and faulting, weathering and erosion, landforms made by rivers, sea waves, glaciers, wind and underground water, and disasters linked to landforms – with tables, Q&A, 10 MCQs and a free PDF.

Use the table of contents below to jump to the part you need, or read top to bottom for a complete revision of the chapter.

Table of Contents

- Chapter Overview
- Important Topics and Concepts
- Erosional vs Depositional Landforms
- Layers of the Earth
- Important Definitions and Terms
- Short Answer Questions
- Long Answer Questions
- MCQs with Answers
- Quick Revision Points
- Chapter Summary
- Exam Tips and PYQ Pattern
- Frequently Asked Questions
- Conclusion

Want notes for every chapter? Explore the full Class 9 Social Science notes on Nextoper, arranged book-wise and chapter-wise.

Chapter Overview

The Earth’s surface is constantly changing. Forces from inside the Earth – earthquakes, volcanoes, folding and faulting – move the crust and create big features like mountains and plateaus. These are called endogenic forces.

Forces on the surface – weathering and erosion by running water, waves, glaciers, wind and underground water (agents of gradation) – wear down and build up smaller landforms. These exogenic processes shape the places where people live, and some landforms are linked with disasters such as landslides, avalanches, glacial lake outburst floods and dust storms.

Important Topics and Concepts

Interior of the Earth

- Three main layers: crust (thin outer layer – continental and oceanic), mantle (hot, partly molten rock) and core (outer liquid, inner solid, mainly iron and nickel).
- The crust and upper mantle form the rigid lithosphere, broken into large tectonic plates.
- Convection currents in the mantle, driven by heat from the core, move the plates slowly.

Plate Tectonics

- Convergent boundary: plates move towards each other – fold mountains (Himalayas formed as the Indian Plate pushed into the Eurasian Plate), trenches, volcanoes.
- Divergent boundary: plates move apart – mid-ocean ridges, rift valleys.
- Transform boundary: plates slide past each other – earthquakes.
- Most earthquakes and volcanoes occur along plate boundaries, such as the Pacific “Ring of Fire”.

Earthquakes and Volcanoes

- An earthquake is sudden shaking of the ground; ancient Indians called it bhūkampa. The point inside the Earth where it starts is the focus; the point on the surface above it is the epicentre.
- Earthquakes are measured with a seismograph; magnitude on the Richter scale.
- A volcano is an opening through which magma, gases and ash erupt; magma on the surface is lava.
- India’s Barren Island (Andaman Sea) is an active volcano; the mud volcano at Baratang Island is a rare natural feature.
- Folding (bending of rock layers) and faulting (cracking and displacement) also reshape the crust.

Weathering and Erosion

- Weathering: breaking down of rocks in place – physical (temperature changes, frost), chemical (reactions with water, air, acids) and biological (plant roots, animals).
- Erosion: removal and transport of weathered material by agents; deposition is the laying down of this material.
- These processes together are called gradation – they level the land.

Agents of Gradation and Landforms

- Running water: V-shaped valleys, gorges, waterfalls, meanders, ox-bow lakes, floodplains, levees, deltas (Sundarbans – the world’s largest delta).
- Sea waves: sea caves, arches, stacks, cliffs (erosion); beaches and spits (deposition).
- Glaciers: U-shaped valleys and cirques (erosion); moraines (deposition). Glaciers are key sources of fresh water.
- Wind: mushroom rocks, blowouts (erosion); sand dunes and loess (deposition).
- Underground water: caves, sinkholes, stalactites and stalagmites in limestone areas.

Landform-related Disasters

- Landslides: heavy rain, steep slopes, deforestation and construction make slopes unstable.
- Avalanches: sudden sliding of snow on steep slopes.
- GLOFs: sudden release of water from glacial lakes – e.g. the Chamoli (Uttarakhand) flood of February 2021.
- Dust storms: strong winds lift loose, dry soil in arid regions.
- Safety: early warning, afforestation, careful construction and awareness.

Erosional vs Depositional Landforms

Most-asked table.

Agent	Erosional	Depositional
River	V-valley, gorge, waterfall	Floodplain, levee, delta
Sea waves	Cliff, sea cave, arch, stack	Beach, spit, bar
Glacier	Cirque, U-shaped valley	Moraine
Wind	Mushroom rock, blowout	Sand dune, loess
Underground water	Cave, sinkhole	Stalactite, stalagmite

Layers of the Earth

Layer	Features
Crust	Thin outer layer; continental (thicker) and oceanic (thinner)
Mantle	Thick layer of hot, semi-molten rock; convection currents
Outer core	Liquid iron and nickel
Inner core	Solid iron and nickel; very hot

Important Definitions and Terms

Term	Meaning
Tectonic plates	Large rigid pieces of the lithosphere
Endogenic forces	Forces from inside the Earth
Exogenic forces	Forces acting on the surface
Epicentre	Point on the surface above the earthquake focus
Magma	Molten rock below the surface
Weathering	Breaking of rocks in place
Erosion	Wearing away and removal of material
Meander	Loop-like bend of a river
Delta	Triangular deposit at a river’s mouth
GLOF	Glacial Lake Outburst Flood

Short Answer Questions

Q1. Name the three layers of the Earth.

Crust, mantle and core.

Q2. What causes tectonic plates to move?

Convection currents in the mantle driven by heat from the Earth’s core.

Q3. How were the Himalayas formed?

By the collision of the Indian Plate with the Eurasian Plate at a convergent boundary, which folded the rocks upward.

Q4. Differentiate between focus and epicentre.

Focus is the point inside the Earth where an earthquake starts; the epicentre is the point on the surface directly above it.

Q5. What is weathering? Name its types.

Breaking down of rocks in place; physical, chemical and biological weathering.

Q6. How is an ox-bow lake formed?

A meander loop is cut off from the main river by erosion and deposition, leaving a curved lake.

Q7. Name two landforms made by wind.

Mushroom rocks (erosion) and sand dunes (deposition).

Q8. What is a GLOF? Give an Indian example.

A sudden flood from a glacial lake; the Chamoli flood in Uttarakhand, February 2021.

Long Answer Questions

Q1. Explain plate tectonics and the effects of plate movement.

The lithosphere is broken into plates that float over the mantle.

Convection currents move the plates.

Convergent boundaries form fold mountains and volcanoes (Himalayas).

Divergent boundaries form ridges and rift valleys.

Transform boundaries and plate edges cause frequent earthquakes.

Q2. Describe the landforms made by a river from its source to mouth.

Upper course: V-shaped valleys, gorges, waterfalls by vertical erosion.

Middle course: meanders as the river erodes outer banks and deposits on inner banks.

Ox-bow lakes form when meanders are cut off.

Lower course: floodplains and levees from deposition during floods.

At the mouth: deltas such as the Sundarbans.

Q3. How are landforms linked with disasters? Suggest safety measures.

Steep hill slopes – landslides after heavy rain and deforestation.

Glacial valleys – GLOFs (Chamoli 2021).

Deserts – dust storms.

Measures: early warning, afforestation, safe construction, awareness drills.

MCQs with Answers

1. The outermost layer of the Earth is the(a) mantle (b) core (c) crust (d) lithosphere onlyAnswer: (c) crust

2. Plates move due to(a) wind (b) convection currents (c) tides (d) riversAnswer: (b) convection currents

3. Himalayas are an example of(a) block mountains (b) fold mountains (c) volcanic mountains (d) residual mountainsAnswer: (b) fold mountains

4. Point on surface above earthquake origin(a) focus (b) epicentre (c) crater (d) ventAnswer: (b) epicentre

5. India’s active volcano is on(a) Baratang Island (b) Barren Island (c) Majuli (d) LakshadweepAnswer: (b) Barren Island

6. Ox-bow lakes are formed by(a) glaciers (b) rivers (c) wind (d) wavesAnswer: (b) rivers

7. Mushroom rocks are formed by(a) wind (b) glaciers (c) rivers (d) underground waterAnswer: (a) wind

8. Moraines are deposited by(a) sea waves (b) glaciers (c) wind (d) riversAnswer: (b) glaciers

9. Stalactites are found in(a) deserts (b) limestone caves (c) deltas (d) beachesAnswer: (b) limestone caves

10. Chamoli flood (2021) was a(a) cyclone (b) GLOF (c) tsunami (d) dust stormAnswer: (b) GLOF

Quick Revision Points

- Layers: crust, mantle, core.
- Plates move by convection currents; three boundaries.
- Earthquakes (focus, epicentre), volcanoes (Barren Island).
- Weathering: physical, chemical, biological.
- Agents: river, waves, glacier, wind, underground water.
- Disasters: landslides, avalanches, GLOFs, dust storms.

Chapter Summary

The Earth has a crust, mantle and core. Heat-driven convection currents move tectonic plates, and their movement causes earthquakes, volcanoes, folding and faulting, building large landforms like the Himalayas.

On the surface, weathering breaks rocks and agents of gradation – rivers, waves, glaciers, wind and underground water – erode and deposit material to form valleys, deltas, beaches, moraines, dunes and caves. Some landforms are prone to disasters such as landslides,

Exam Tips and PYQ Pattern

- Erosional vs depositional table is very scoring.
- Draw a labelled diagram of the Earth’s interior.
- Give Indian examples – Himalayas, Barren Island, Sundarbans, Chamoli.
- Learn three plate boundaries with one feature each.
- Map work: mark Barren Island and the Sundarbans.

Frequently Asked Questions

Is this chapter in the 2026-27 CBSE syllabus?

Yes. It is part of the new NCERT Class 9 Social Science textbook “Understanding Society: India and Beyond” (Part 1), prescribed for the 2026-27 session.

Can I download these notes as a PDF?

Yes. Use the free PDF link at the top of this page – no signup needed.

What are agents of gradation?

Running water, sea waves, glaciers, wind and underground water that erode and deposit material to shape landforms.

What causes plate movement?

Convection currents in the mantle caused by heat from the Earth’s core.

Conclusion

Shaping of the Earth’s Surface explains the landforms around us and the hazards they bring. Learn the landform tables, practise the Q&A here and save the free PDF for revision.

More Notes: Class 9 Social Science Chapter 1: Understanding Social Science notes | Class 9 Social Science Chapter 3: Atmosphere and Climate notes | All Class 9 Social Science notes

Author Bio: Written and reviewed by the Nextoper Editorial Team, a group of CBSE social science educators who build chapter notes directly from the NCERT textbook and past board paper patterns.

Freshness Note: These notes follow the NCERT Class 9 Social Science textbook, Understanding Society: India and Beyond (Parts 1 and 2, first edition 2026, NCF-SE 2023), and the CBSE syllabus for the 2026-27 session. Last checked on 23 November 2026.