



CHAPTER: Physical Features of India

Grade: 9

Board: **CBSE**


Book: **NCERT**



1.

Chapter Summary and Placement

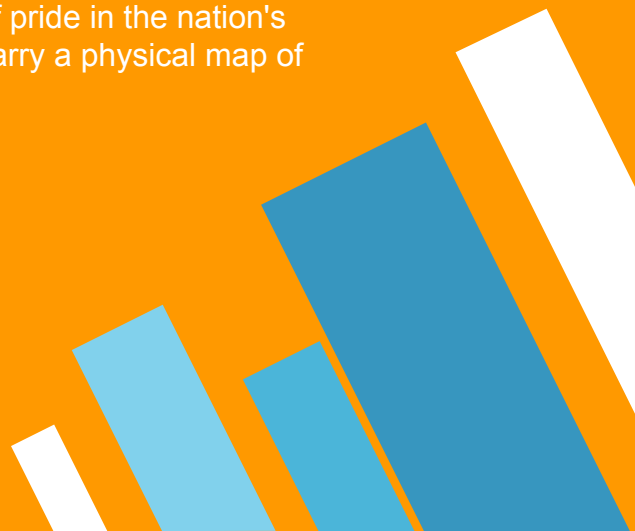
<Read through the following to understand how this chapter is connected with the previous and next grades and also the important concepts covered in it.>





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The location of India on the globe, its longitudinal and latitudinal extent and also its locational advantage on the globe has been discussed in the last chapter. This chapter describes the physical environment that will enable the students to understand and appreciate natural features and to cultivate a spirit of pride in the nation's physical diversity. Since the chapter talks about the physical environment of India, carry a physical map of India to the class.







2.

LEARNING OBJECTIVE

<On completion of the chapter, students will be able to:>





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- 
1. Understand the location of various physiographic divisions and their characteristic features.
 2. Make a comparison between each one of them.
 3. Relate how each physiographic unit is complementary to the other.



3. Previous Knowledge Requirement (Keywords)


The below points should be refreshed before introducing the chapter:

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- 
- 1) Recall the different types of rocks and soils learnt in the previous years
 - 2) Recall the formation of a mountain by continental drifts and folding



4. TEACHING PLAN

Follow this section for getting ideas on teaching the content covered in the chapter. The subtopic given in the first column with the matching learning outcome can be explained using instructions and resources listed subsequently



Subtopic and Learning Objective #1

MAJOR PHYSIOGRAPHIC DIVISIONS

LO:

Understand the location of various physiographic divisions and their characteristic features.

Teacher Activity

1. The teacher may carry a physical map of India to the class. If a big one is not available, carry a small map to the class. Refer **Resource 1**
2. The teacher may ask a few question to the students before starting the session.
 - a) What are the different physical landforms in India?
 - a) Have you ever thought about the causes of the variations?
 - b) What do you know about volcanoes and their formation?
3. After a small discussion the teacher may introduce the chapter by explaining the tectonic plates movements, the volcanic activity.
4. The reason for the diverse physical feature of Indian can also be explained .
5. The teacher can help students locate the himalayan range in the map and then explain the features of the himalayan ranges:

Teacher Activity

- a) The geographic features of Himalayan range.
- b) Locate Himadri and the geographic features of Himadri.
- c) Locate Himachal and explain the geographic features of Himachal.
- d) Locate Shiwaliks and explain the features the Shiwalik range.
- e) Locate a river valley and explain the features of the same.
- f) Locate Purvachal and describe the features of the same.
- 1. Perform **Activity 1** for better understanding of the topic

Check for understanding:

- a) Explain the Shiwalik range.
- b) Explain the features of Purvachal.
- c) Kullu is an example of ____.

Resources Suggested

Marker pen, textbook, **Resource 1**, Physical map of India.

Subtopic and Learning Objective #2

MAJOR PHYSIOGRAPHIC DIVISIONS

LO:

Northern Plains

Teacher Activity

1. The teacher may carry a physical map of India to the class. If a big one is not available, carry a small map to the class. Refer **Resource 2**
2. Locate the northern plains in the map.
3. Explain the geographic features of the northern plains which includes:
 - a) Formation
 - b) Physical features
 - c) In which states the Plain is spread.
 - d) The variations base on the flow of the rivers

Check for understanding:

- a) What kankar and khadar?
- b) How is the northern plain formed?
- c) What are the three broad divisions of the northern plain?

Resources Suggested

NCERT , Resource 2

Subtopic and Learning Objective #3

MAJOR PHYSIOGRAPHIC DIVISIONS

LO:

Peninsular Plateau

Teacher Activity

1. The teacher may carry a physical map of India to the class. If a big one is not available, carry a small map to the class. Refer **Resource 3 for images..**
2. Locate the peninsular plateau on the map.
3. Explain the geographic features of the peninsular plateau.
4. Differentiate between the western and eastern ghats

Check for understanding:

- a) What is the distinct feature of peninsular plateau?
- b) Explain the central highlands.
- c) What is the peninsular plateau composed of?

Subtopic and Learning Objective #3

MAJOR PHYSIOGRAPHIC DIVISIONS

LO:

The Indian Desert

Teacher Activity

- a) The teacher may carry a physical map of India to the class. If a big one is not available, carry a small map to the class. Refer **Resource 4 for images**.
- b) Locate a few deserts of India on the map.
- c) Explain the geographic features of the Indian deserts..
- d) Locate Luni river on the map.

Check for understanding:

- a) The Indian desert lies towards the western margins of the _____. (Aravali Hills)
- b) ____ (Luni) is the only large river in the sandu area of Rajasthan.

Subtopic and Learning Objective #5

MAJOR PHYSIOGRAPHIC DIVISIONS

LO:

Coastal Plains

Teacher Activity

1. The teacher may carry a physical map of India to the class. If a big one is not available, carry a small map to the class. Refer **Resource 5 for images**.
2. Locate the coastal strips along the side of Bay Of Bengal and Arabian Sea.
3. Explain the three sections of the coast namely the the konkan, the Kannada plain and the Malabar coast.
4. Locate all the three sections, mentioned above on the map.

Check for understanding:

- a) The northern part of the plains along the Bay of Bengal is known as _____. (Northern Circar)
- b) _____ is an important feature of the Eastern coast. (Lake Chilika)

Subtopic and Learning Objective #5

MAJOR PHYSIOGRAPHIC DIVISIONS

LO:

Island

Teacher Activity

1. The teacher may carry a physical map of India to the class. If a big one is not available, carry a small map to the class. Refer **Resource 6 for images**.
2. Locate Lakshadweep and Andaman Nicobar islands on the map.
3. Explain the geographical features of both the islands.

Check for understanding:

- a) The _____ is a storehouse of minerals(plateau)
- b) The elongates group of islands in the bay of Bengal is the _____. (Andaman and Nicobar islands)
- c) The active volcano of India is _____.(Barren island)

Activity 1

Name of the activity – Map work

Type of activity – Individual

Learning Objective: Understand the importance of ranges in the himalayan mountains

Use it for – Locating the places on a map.

Materials – paper, pencil, eraser.

Teacher instructions:

1. The teacher may discuss the topic of assignment after the explanation of the topic. This activity can be given as a home work.
2. The student should draw an outline of the map in a sheet of paper and mark the following places or ranges on it.
3. An explanation about the physical feature of that place can be written in a separate page in a table format.
4. The location to be marked are:
 - a) Himadri b) Himachal c) Pir Panjal range d) Kullu valley e) Nainital f) Shiwalik range g) Kali and tista rivers h) Purvachal

Activity 2

Name of the activity – Exhibition Models

Type of activity – Group

Learning Objective: Understand the major physiographic divisions of India.

Use it for – Better understanding of the features of the physiographic divisions discussed in the chapter

Materials – Plaster of paris, Textbook, Paper, pen, color, materials necessary to make greenery, mountains, water etc.

Teacher instructions:

1. The teacher may discuss the topic of assignment after the explanation of the topic.
2. This activity can be given as a home work.
3. The students can form six groups and select any of the physiographic division.
4. They should create a model with suitable materials and all the features should be depicted in the model.
5. The students should be given enough time to prepare the models.
6. The created models should be displayed in the class and explain the geographical features in detail.

Resource 1



Resource 1

Himadari



Resource 1

Himachal



LESSON: HIMALAYAS

Resource 1

shivalik



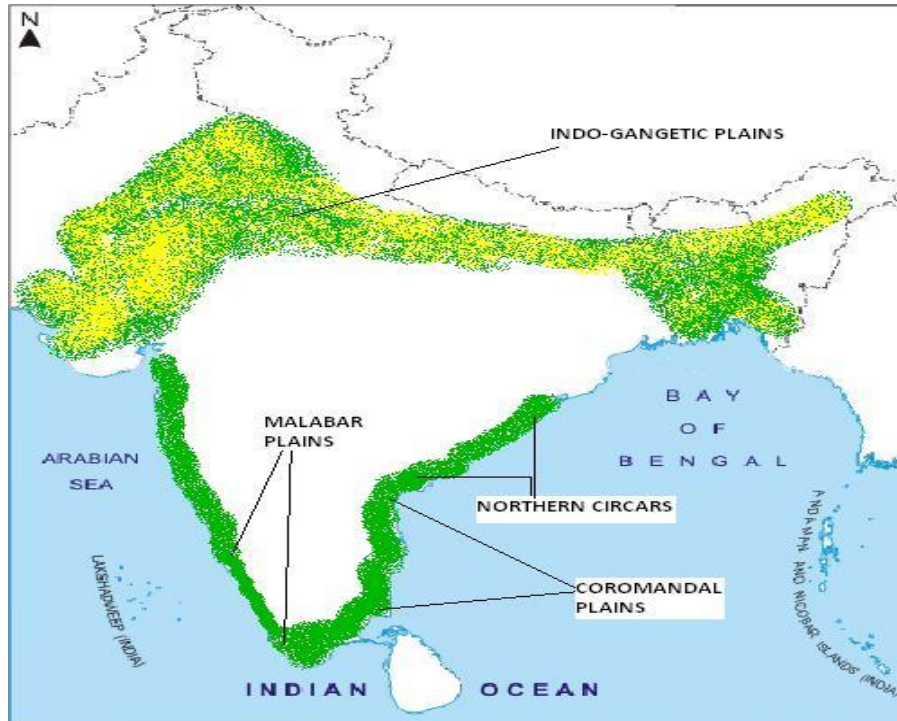
Resource 1

Pataka hills of purvachal



Resource 2

Northern Plains



Resource 2

Northern Plains



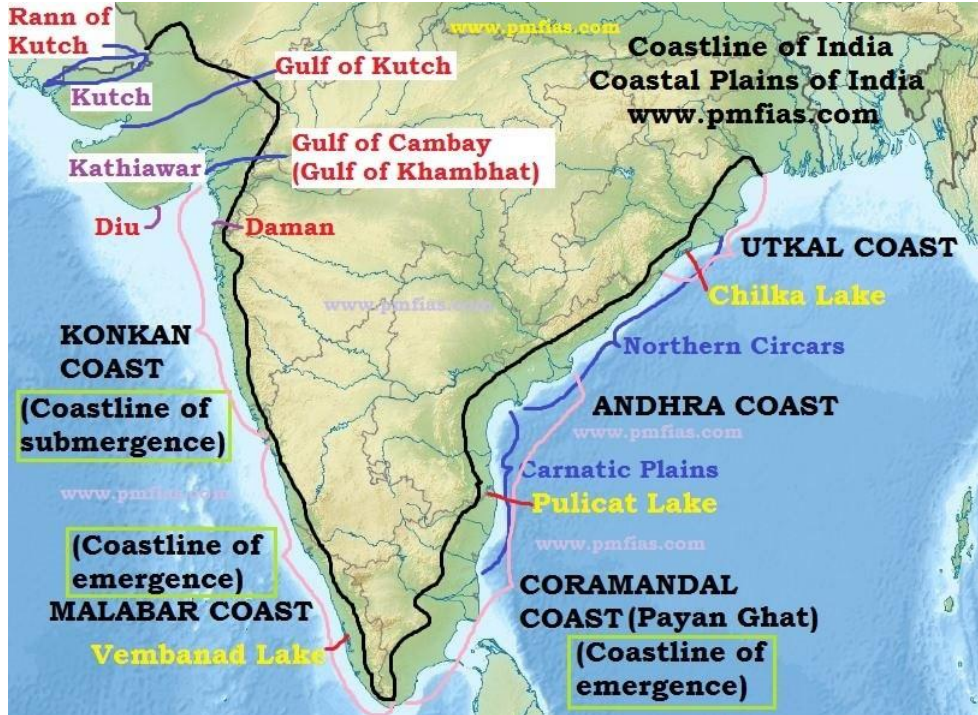
Resource 2

Indian Desert



Resource 2

Coastal Planes



Resource 2

Andaman and nicobar Islands



Resource 2

Lakshwadeep





5. WORKSHEETS

Print or copy the worksheet questions on the blackboard and ask the students to attempt them. They can be given as homework or a class test as well.

Worksheet 1

Use it like: An assignment, homework

Answer the following questions in brief:

1. Explain a volcanic activity.
2. What is divergent and convergent boundary. How does the plates in that areas behave?
3. Explain the variation of Indian Peninsula.
4. Explain the geographic features of the northern plain?
5. What are distributaries?
6. What are the three sections of the northern plain and what are the features?
7. What are the types of plains?
8. What makes the northern plain ideal for agriculture?
9. How is the Peninsular plateau formed?
10. Explain the geographic features of the peninsular plateau?
11. Compare the eastern and the western ghats.
12. Describe the features of the Indian Deserts.
13. Explain the features of the coastal plains of India.

Worksheet 2

Fill in the blanks:

Use it like: checking students understanding in class, a mini test

1. The coastal region and island groups provide sites for ____ and ____.
2. ____ island is the administrative headquarters of Lakshadweep
3. The central stretch of the peninsular plain is called the ____.
4. The ____ is the largest salt water lake in India
5. The Indian desert lies towards the western margins of the ____.
6. The eastward extensions of the peninsular plateau are locally known as ____.
7. ____ and ____ is separated by a fault from the Chotanagpur Plateau.
8. The ____ extends between Ghaggar and Teesta rivers.
9. The ____ marks the easternmost boundary of the Himalayas.
10. The ranges of Himadri are mainly composed of ____.



6. SOLUTIONS

This section gives you sample answers for activities and questions listed above.



Worksheet 1

1. The movement of the plates results in the building up of stresses within the plates and the continental rocks above, leading to folding, faulting and volcanic activity.
2. The tectonic plates come towards each other and form convergent boundary. Some plates move away from each other and form divergent boundary. In the event of two plates coming together they may either collide and crumble, or one may slide under the other. At times, they may also move horizontally past each other and form transform boundary. The movement of these plates have changed the position and size of the continents over millions of years. Such movements have also influenced the evolution of the present landform features of India.
3. The land of India displays great physical variation. Geologically, the Peninsular Plateau constitutes one of the ancient land masses on the earth's surface. It was supposed to be one of the most stable land blocks. The Himalayas and the Northern Plains are the most recent landforms. From the view point of geology, Himalayan mountains form an unstable zone. The whole mountain system of Himalaya represents a very youthful topography with high peaks, deep valleys and fast flowing rivers. The northern plains are formed of alluvial deposits. The peninsular plateau is composed of igneous and metamorphic rocks with gently rising hills and wide valleys

Worksheet 1

4 The northern plain has been formed by the interplay of the three major river systems, namely– the Indus, the Ganga and the Brahmaputra along with their tributaries. This plain is formed of alluvial soil. The deposition of alluvium in a vast basin lying at the foothills of the Himalaya over millions of years, formed this fertile plain. It spreads over an area of 7 lakh sq. km. The plain being about 2400 Km long and 240 to 320 Km broad, is a densely populated physiographic division.

5 The rivers in their lower course split into numerous channels due to the deposition of silt. These channels are known as distributaries.

6 The Northern Plain is broadly divided into three sections. The Western part of the Northern Plain is referred to as the Punjab Plains. Formed by the Indus and its tributaries, the larger part of this plain lies in Pakistan. The Indus and its tributaries–the Jhelum, the Chenab, the Ravi, the Beas and the Satluj originate in the Himalaya. This section of the plain is dominated by the doabs. The Ganga plain extends between Ghaggar and Teesta rivers. It is spread over the states of North India, Haryana, Delhi, U.P., Bihar, partly Jharkhand and West Bengal to its East, particularly in Assam lies the Brahmaputra plain.

7 The Northern plains can be divided into four regions. The rivers, after descending from the mountains deposit pebbles in a narrow belt of about 8 to 16 km in width lying parallel to the slopes of the Shiwaliks. It is known as bhabar. All the streams disappear in this bhabar belt. South of this belt, the streams and rivers re-emerge and create a wet, swampy and marshy region known as terai. This was a thickly forested region full of wildlife. The forests have been cleared to create agricultural land and to settle migrants from Pakistan after partition.

Worksheet 1

8 The northern plain has been formed by the interplay of the three major river systems, namely– the Indus, the Ganga and the Brahmaputra along with their tributaries. This plain is formed of alluvial soil. The deposition of alluvium in a vast basin lying at the foothills of the Himalaya over millions of years, formed this fertile plain. The largest part of the northern plain is formed of older alluvium. They lie above the flood plains of the rivers and present a terrace like feature. This part is known as bhangar. The soil in this region contains calcareous deposits locally known as kankar. The newer, younger deposits of the flood plains are called khadar. They are renewed almost every year and so are fertile, thus, ideal for intensive agriculture.

9 The peninsular plateau was formed due to the breaking and drifting of the Gondwana land and thus, making it a part of the oldest landmass.

10 The plateau has broad and shallow valleys and rounded hills. This plateau consists of two broad divisions, namely, the Central Highlands and the Deccan Plateau. The part of the Peninsular plateau lying to the north of the Narmada river covering a major area of the Malwa plateau is known as the Central Highlands. The Vindhyan range is bounded by the Central Highlands on the south and the Aravalis on the northwest. The further westward extension gradually merges with the sandy and rocky desert of Rajasthan. The flow of the rivers draining this region, namely the Chambal, the Sind, the Betwa and Ken is from southwest to northeast, thus indicating the slope. The Central Highlands are wider in the west but narrower in the east. The eastward extensions of this plateau are locally known as the Bundelkhand and Baghelkhand. The Chotanagpur plateau marks the further eastward extension, drained by the Damodar river.

Worksheet 1

11 The Western Ghats are higher than the Eastern Ghats. Their average elevation is 900– 1600 metres as against 600 metres of the Eastern Ghats. The Eastern Ghats stretch from the Mahanadi Valley to the Nigiris in the south. The Eastern Ghats are discontinuous and irregular and dissected by rivers draining into the Bay of Bengal. The Western Ghats cause orographic rain by facing the rain bearing moist winds to rise along the western slopes of the Ghats. The Western Ghats are known by different local names. The height of the Western Ghats progressively increases from north to south. The highest peaks include the Anai Mudi (2,695metres) and the Doda Betta (2,637 metres). Mahendragiri (1,501 metres) is the highest peak in the Eastern Ghats. Shevroy Hills and the Javadi Hills are located to the southeast of the Eastern Ghats.

12 The Indian desert lies towards the western margins of the Aravali Hills. It is an undulating sandy plain covered with sand dunes. This region receives very low rainfall below 150 mm per year. It has arid climate with low vegetation cover. Streams appear during the rainy season. Soon after they disappear into the sand as they do not have enough water to reach the sea. Luni is the only large river in this region.

Worksheet 1

13 The peninsular plateau is flanked stretch of narrow coastal strips, running along the Arabian Sea on the west and the Bay of Bengal on the east. The western coast, sandwiched between the Western Ghats and the Arabian Sea, is a narrow plain. It consists of three sections. The northern part of the coast is called the Konkan (Mumbai – Goa), the central stretch is called the Kannad Plain while the southern stretch is referred to as the Malabar coast. The plains along the Bay of Bengal are wide and level. In the northern part, it is referred to as the Northern Circar, while the southern part is known as the Coromandel Coast. Large rivers such as the Mahanadi, the Godavari, the Krishna and the Kaveri have formed extensive delta on this coast.

14 Lakshadweep covers small area of 32 sq km. Kavaratti island is the administrative headquarters of Lakshadweep. This island group has great diversity of flora and fauna. The Pitti island, which is uninhabited, has a bird sanctuary. In the Bay of Bengal, extending from north to south we have Andaman and Nicobar Islands. They are bigger in size and are more numerous and scattered. The entire group of islands is divided into two broad categories – The Andaman in the north and the Nicobar in the south. It is believed that these islands are an elevated portion of submarine mountains. There is great diversity of flora and fauna in this group of islands too. These islands lie close to equator and experience equatorial

Worksheet 2

Fill in the blanks:

1. Fishing, port activities
2. Kavaratti
3. Kannada plain
4. Chilika Lake
5. Aravali Hills
6. Bundelkhand
7. Karbi-Anglong Plateau, North Cachar Hills
8. Ganga plain
9. Brahmaputra
10. highly compressed and altered rocks



6. EXTRA RESOURCES

Carry out the following suggested activities/ tasks if you have the time and resources to do them



Extension Activity 1

Purpose: Helping the students to implement the knowledge they have learnt about forests, wildlife and their conservation.

The teacher may perform a group activity by dividing the students into small groups and discuss the topic based on the report provided in the link below:

<https://timesofindia.indiatimes.com/home/environment/developmental-issues/India-losing-135-hectares-forest-daily-RTI/articleshow/20531915.cms>

Reference Video Link

The students can be suggested to watch the following videos/ shown in class:

<https://www.youtube.com/watch?v=fH9DXc7D3yA>

<https://www.youtube.com/watch?v=VmLYUwtR1Ik>