



GEOGRAPHY

STANDARD TEN



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Note For Page 9 : The shades of the national flag may vary due to technical limitations.

Front Cover : Shikara-Srinagar, The Himalayas and rivers, Tiger at Sunderbans, Ajanta Caves, Atlantic Ocean-Brazil, Green Anaconda, Carnival-Brazil, Aerial view of Rio de Janeiro city.

Back Cover : Naldurg Fort- Osmanabad, Arabian Sea-Mumbai, Sinhagad and surrounding region, An Indian Rocket, Equatorial Forest-Amazon river.

1. FIELD VISIT

Rahul is going on a field visit with his classmates and school teachers from Naldurg in Osmanabad district to Alibag in Raigad district. The school has engaged a special bus from State Transport for this purpose. Rahul and his classmates have organized this visit under their teachers' guidance. Let's find out how the students are experiencing the changes occurring in the relief, soil, vegetation and human settlements as they travel from Naldurg to Alibag.

Go through the following conversation between the teachers and the students.

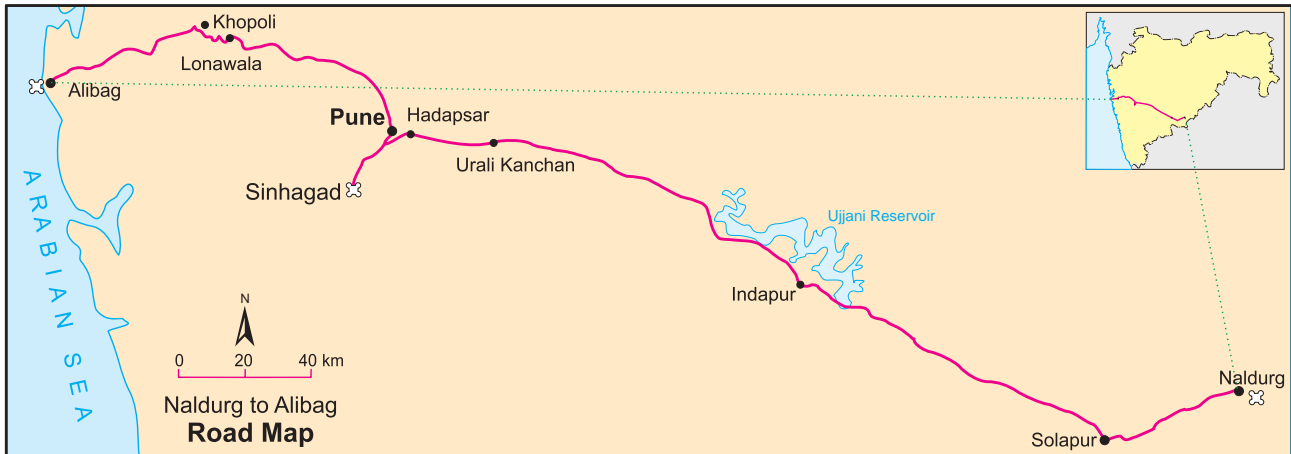


Figure 1.1 : The route of field visit

Besides personal luggage and I-Cards, students are carrying the following items with them.



Figure 1.2 : Items required for field visit

DAY 1- 06:00 hours.

Teacher : Dear students, now we have left Naldurg and are on our way to Solapur. We will have our breakfast at Solapur and lunch near Sinhadag, Pune. Now all of you should observe both the sides along the roads and note down observations in notebooks with reference to these points:

- relief • water bodies • vegetation • soil,
- agriculture • human settlement • settlement patterns.

Rahul : Yes, Madam. I can see that we are experiencing undulating topography and somewhere in between we can find plains. We can also see some agricultural fields.



Discuss

- If you were a part of this field visit, what preparations would you make?
- Suppose teachers ask you to plan the visit. How will you plan the details of the trip?



Figure 1.3 : Nar-Madi Waterfalls at Naldurg

Sakshi : We can see small settlements along the roads. We can also see tea stalls, *dhaabas*, petrol pumps and other shops.

Teacher : Yes Meena, your observations!

Meena : Madam, are we going down the slope?

Teacher : Correct! Now we are in the southern part of the Balaghat Ranges. They are the eastern off-shoots of the Sahyadris. Keep looking at the map given to you and the topography outside. You can easily see the changes occurring in the landscape. Now, tell me about the settlement patterns and housing types.

Suraj : Madam, in rural areas, we see houses in a straight line along the road. The walls of the houses are made of clay while use of mud and wood is visible in making the roofs.

Renuka : In this area, we can mainly see dry grass. Trees which have shed their leaves are visible in some places.

Teacher : Good observation, Suraj and Renuka ! Such settlements are called 'linear settlements'. We have learnt that in seventh standard. The houses which you saw are called mud and wood houses (*dhabyaachee ghare*). These are the traditional houses built by a specific method. The vegetation here belongs to the dry deciduous type. They shed their leaves during a specific season.

(After some time, they reach Solapur city)

Teacher : Now we have reached Solapur city. In urban areas, the population density is high. We see multi-storeyed houses. They are made from a mixture of cement, sand, rubble and water. They are constructed using bricks. Shops with modern amenities like shopping malls, big restaurants, etc. are found along the roads.

(Students started observing the distinctive characteristics of the urban area. After sometime, the teachers asked Rahul to distribute the breakfast packets among the students. They had their breakfasts.)

Teacher : Now we are crossing Solapur city. Dear students, see the cultivation around. What do you see? Observe and tell.

(Children observed on both sides of the road and started writing down their observations in their notebooks. This continued for a long time.)

Savitri : Madam, I find that the fields are greener here. When we had left Naldurg, we had seen shrub crops and there was



Figure 1.4 : Mud and wood houses (*dhabyachi ghare*)



Figure 1.5 : Roads and shops

- What precautions will you take continuously during the field visit?



Figure 1.6 : Vegetation of the semi-arid region

- Collect more information about mud and wood houses (*dhabyaachee ghare*).



Figure 1.7 : Cultivation of pulses

- Correlate pulse cropping with low rainfall.

some sugarcane but now I can see that it is mainly sugarcane being cultivated here.

Teacher : Correct! When we had left Naldurg, we had seen cultivation of *moog*, *urad* and other pulses but now it is mainly sugarcane. This is because of the availability of irrigation facilities.

Savitri : Yes, madam. We had crossed a canal some time ago and now I can see a large reservoir here. Which is this reservoir, madam?

(Near Indapur, the teachers asked the bus driver to stop at the side of the road. The students got down in a line and gathered around the teachers in a disciplined way)

Teacher : Refer to your maps. As shown there, what you can see to our right are the backwaters of the Ujni dam built on the river Bhima. This dam is mainly used for supplying drinking water. It is also used for power generation, fishing, irrigation, etc. (Some students clicked pictures of the surroundings. They boarded the bus and their journey started again.)

Pooja : Madam, this seems to be a plain area.

Teacher : Yes, we are going through a plain region. This is a part of the Deccan Plateau itself. As we go westwards, we will notice major changes in the relief and vegetation. (After few hours of journey, they left the main road near Hadapsar and turned towards Sinhagad. There were many big and small hotels at the foothills. They stopped at an open space at the roadside and had their lunch. They relaxed for a while.)

Nazma : I also noticed that when we left Naldurg, trees like jujube (bor) and babool, etc. were visible but here different trees are seen.

Teacher : Good ! While crossing Naldurg, we saw semi-arid thorny type of vegetation. Change in type of vegetation is an indicator of change in the amount of rainfall in that area. We see that anjan (ironwood), banyan and peepal trees are more in number here. Alright, now we have reached the foothills of Sinhagad. Now we will climb to the top and you will see the off-shoots of Western Ghats. You will only carry your I-card, notebook, pen, binoculars, camera, cap, map and water bottle. Keep your luggage and other items in the bus itself.

(When they started climbing the Sinhagad fort, it was



Figure 1.8 : Sugarcane Field



Figure 1.9 : Ujni Dam Reservoir

Obtain information regarding multi-purpose projects.



Figure 1.10 : Types of trees

Vegetation is an indicator of difference in precipitation'. What are the other indicators of difference in precipitation?

quite sunny at first, then it became cloudy. Later, it also started drizzling and students enjoyed eating steamed groundnuts, buttermilk and curd on the way. They clicked photographs of various physical features, the vegetation around, birds, the aerial view of Pune city and the various structures of the fort. Afterwards, teachers asked them to gather at one place)

Teacher : We have now reached the fort of Sinhagad. How will you collect information about it?

Neha : Madam, we saw a board at the entrance which gave us information about the Sinhagad Fort. We have also clicked its pictures.

Teacher : Good, Neha. Now who will tell the differences in the relief features now?

Qasim : Madam, we can see that now the undulating plains have turned into rugged topography with hills. This is a high hill. We are at a higher altitude and hence can even experience clouds.

Teacher : Very good Qasim! You can notice many physical features like rock pinnacles, valleys and hills and layers formed from volcanic eruption. Have you recognized the rock found here? You might have seen some debris of landslides at places while climbing. Now, tell me about the agricultural pattern around!

Rahul : Madam, this is basalt, an igneous type of rock. We had learnt about it in Class 6.

Mary : We saw mainly pulses being cultivated at the place where we live. Between Solapur to Pune, we saw sugarcane. Now we see mainly paddy fields.

Teacher : Correct. It is because of the good amount of rainfall here. Can you recall seeing a similar fort-like structure before? What difference do you see between both of them?

Wahida : Madam, we can compare this with the Naldurg fort itself. But it is not situated on a hill like Sinhagad. We do not have to climb up a slope to see it.

Teacher : Very good. Now, we have reached the top of the fort. This is a hill fort as it has been built on a hill. This was built with the view of security and to keep an eye on the surroundings. Naldurg is a fort on the land. All such forts are the heritage of our State.

Come here and look down. The water body that you can see in front is the reservoir of the Khadakwasla



Figure 1.11 : Sinhagad Entrance Gate



Figure 1.12 : Rocks (debris)

- How will the terrain below appear to the birds from the sky?



Figure 1.13 : Khadakwasla Dam as seen from Sinhagad

- Out of which process has the plateau of Maharashtra formed ? What is the main type of rock seen here?



Figure 1.14 : Layers of Rocks

dam which serves water to areas in and around Pune. Now we will go to the Kalyan Drawaja (Gate). Come here and see this structure. This is called Devtake. (sacred tank). Water coming from a natural spring gets stored here. Even today it serves water all the year round to the people who stay at the fort above.

All students: (expressing surprise) : Oh my God! How can water be available continuously at this height since centuries?

(The teachers took them to a stall which served *pithla-bhakri*. Students observed that there were many similar stalls. Tourists were being served different food items there. After spending little time at Sinhagad fort, students came down the foothills and boarded the bus. The bus started towards Pune city where they had an overnight halt. In the city, they had evening snacks and tea and got ready to roam in the markets.)

Teacher : We will be visiting places in Pune like Shaniwarwada, and famous market places like Tulsibaug and Mahatma Phule mandai (market). There are wholesale and retail markets here. You can do shopping here. Make sure you write down all your observations.

(After the city-tour they had dinner and returned to the place of their night halt)

DAY 2 - 07:00 hrs

(After breakfast, they proceeded to Alibag)

Teacher : Now, we are on the Mumbai-Pune Expressway. Can you see the change in the relief again? We will stop at Rajmachi point near Lonavala.

Tushar : Yes, madam. Even though we are driving on a plain road, we can see hilly regions all around. The frequency of houses is becoming less.

(After Lonavala, they stopped at Rajmachi point and the teacher gave information about various relief features)

Teacher : These are the slopes of the Western Ghats. We call these hilly areas Sahyadris too. From here you can observe the difference in slopes- the gentle slope to the east and the steep slope to the west. Towards the west, you can see many cliffs and waterfalls about which you have learnt in Class IX. This region is also the source of river Ulhas, a major west-flowing river.



Figure 1.15 : Paddy cultivation

- Gather information about forts. Consider the following points for it- determination of location, period of construction, construction style and security mechanism.



Figure 1.16 : Devtake



Figure 1.17 : Food items at Sinhagad

(The students took photographs of these features, it started raining again and their journey resumed.)

Namdeo : (Looking at the map) Madam. We are crossing the Ghat section and now are we going to Khopoli?

Teacher : Correct Namdeo, This is known as the Bhore or Khandala ghat in the Western Ghats. We will now enter the western coastal plains of India. Observe the trees, soil and houses that you see.

Shiv : Madam, we can see dense forests comprising of thick vegetation in the Ghats. We can see trees with broad leaves. We had seen such trees in the Sinhagad region too.

Teacher : These are the teak trees. This region is a region of deciduous trees. There are many *vanrais* and *devrais*. (woodlands and sacred groves)

(After crossing the Ghats, the dense forest became sparse. Paddy fields and huge industrial estates were now visible.)

Nazma : Madam, I can feel a change in the weather. It is getting hotter and I have started perspiring.

Teacher : You feel the change in the air. Because of increase in humidity in the air, we start perspiring and skin becomes sticky. As we go near the sea, this will increase.

Namdeo : Madam, it has started raining in this region. Also, the amount of rainfall seems to be more. It might be happening because of this.

Teacher : Namdeo, correct observation. Because of heavy rainfall and nearness to the sea, this happens. Also, because of high rainfall, rice is the major crop here. Soon, we will reach the sea, Can you name the sea?

All students : (together) the Arabian Sea !

Teacher : Good! After reaching Alibag, before we go to our lodges, we will visit the Talathi office. You can gather information on the basis of the questionnaire you have prepared in the school.

Urmi : We will be asking him questions about the types of crops, soil types, cultivation of fruits and other cash crops. We are asking him how land revenue is collected in his/her office, land under irrigation, watershed programmes and other occupations in the village.



Figure 1.18 : Rajmachi



Figure 1.19 : A waterfall in Sahyadris

- Do you agree that regions and necessities influence the difference in the means of livelihood?
- Guess in which season of the year is the field visit being undertaken?



Figure 1.20 : A 'Devrai'.



Figure 1.21 : A Vanrai

(They reached Alibag in the afternoon and then visited the Talathi office. They collected information based on their questionnaires.)

Teacher : Dear students. After lunch , we will go to the sea coast. How many of you will be seeing the sea for the first time?

(Almost all of them raised their hands)

Abeera : I am just trying to imagine what a breathtaking view it would be to see the sea.! What will it look like? Or will there be just water!

Teacher : True, Abeera, we will visit the beach now. We have already given clear instructions regarding precautions to be taken there. We will also visit a fort called Kolaba or Alibag fort here. We will have to take into account the timings of the high and low tides as this is away from the coast in the sea. We have studied the work of sea waves in Class IX. We will also identify some of the landforms formed by sea waves. Can you name some of them?

All children: (almost together) beach.... sea caves...wave-cut platforms, sand bars.....

Teacher : Good! You remember them well.

(They visited the beach and the fort. Some of them also enjoyed sitting on horse-driven chariots and some of them enjoyed horserides.)

Neha : Madam this fort is different from the first two.

Teacher : Good Neha. Can you tell the difference between them?

Neha : Yes, Madam. This fort was constructed in water while other two were on land.

Teacher : Good, this fort is built on a wave-cut platform. Because it is surrounded by sea water, it is called a sea-fort. Earlier, these forts were built for the security of the seas. There are many such forts on the west coast.

Neha : Yes, I have heard names like Sindhudurg, Janjira earlier.

Teacher : Based on the information you have collected, can you tell what occupations are followed here?

Rahul : Madam, fishing and agriculture, both the occupations are followed here.

Teacher : Correct, Rahul! To which category do these occupations belong ?



Figure 1.22 : Teak Trees

- What is the concept of 'Devrai'.



Figure 1.23 : Kolaba Fort

- What precautions have to be taken while going to the sea coast?
- What is the simplest method of understanding the timings of the tides?

Meena : Madam these are primary occupations.

Teacher : True. Initially fishing was the main occupation. Later on, agriculture was also practiced in this region but away from the shore. Coconut, betelnut, jackfruit, banana and some spices are cultivated in the coastal plains. This is horticultural farming. Today, tourism has become an important occupation here.

(Afterwards, students spent some time playing on the sands of the beach and captured beautiful glimpses of the sunset in their cameras. After sunset, they came to their lodges. They discussed important points to compile their field visit report. After returning to their lodge, they had dinner and rested for the night at Alibag. Next day in the morning, they had their breakfasts and left for their return journey.)



Figure 1.24 : Alibag beach

What type of photographs will you click with respect to the field visit?

- On the basis of which points will you write the tour report?
- During field visit, how will you obtain various types of information?

- Carry out a similar field visit in your region too.

The above text is a sample of a field visit. Do not ask questions based on this very field visit. However, as per given exercises, field visit related questions can be asked in general.



Exercise

Answer in short :

- (1) Make a report on your field visit.
- (2) Prepare a questionnaire for a field visit to a factory.
- (3) How will you manage the litter during the field visit?
- (4) What items will you take with you for the field visit?
- (5) Outline the importance of field-visit.

