

Class:8	Subject: SST -Geography	Topic: Agriculture
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SUMMARY SHEET		
Pedagogical Approach: Student – led		
Learner Previous Knowledge	N.A.	
Target Knowledge for this Topic	Importance of agriculture; different types of agriculture; methods	
Learning Goals		
More Complex Learning Goal- Students will be able to understand the transformation of a plant to a finished product.		
Target Learning Goal- Students will be able to explain the types of farming.		
Simpler Learning Goal- Students will be able to describe the importance of agriculture.		
Period No.	Lesson Objectives	Teaching Learning Materials Required
1	Students will understand the importance of agriculture.	Handout (Reference: Annexure 1A)
2	- Students will be able to describe different types of agriculture - Students will be able to describe the factors affecting agriculture.	Handout (Reference: Annexure 2A)
3	- Students will be able to understand the different implements used in agriculture. - Describe methods used for irrigation. - Draw a contrast between manure and fertilizers.	- Worksheet (Reference: Annexure 3A) - Handout (Reference: Annexure 3B) - Worksheet (Reference: Annexure 3C)

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4	Identify major crops and their distribution in the world.	- Handout (Reference: Annexure 4A) - Worksheet (Reference: Annexure 4B)
5	Students will be able to describe the agricultural development and its economic significance.	- Handout (Reference: Annexure 5A) - Worksheet (Reference: Annexure 5B) - Differentiate Chart (Reference: Annexure 5C)
6	Students will be able to draw a contrast between farms in India and U.S.A.	- Worksheet (Reference: Annexure 6A) - Map of world - Worksheet (Reference: Annexure 6B)
7	- Students will be able to describe different types of farming practices. - Subsistence farming and commercial farming.	- Worksheet (Reference: Annexure 7A) - Handout (Reference: Annexure 7B) - Worksheet (Reference: Annexure 7C)

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Lesson Plan 1

Lesson Objectives

At the end of this lesson students will be able to:

- Students will understand the importance of agriculture.

Teaching Learning Materials required

- Handout (Reference: Annexure 1A)

Details of Teaching Learning Experience

Seating Arrangement: Normal

Lesson Beginning <u>Time:</u> 10 minutes <u>Purpose:</u> Introduce topic	Introduction • Discuss with students about the basic needs of human beings. • Let them come up answering as air, water and food. • Let the students answer from where does their basic need of food comes from? • Let the students understand that agriculture is the source of food products which we daily consume.
Lesson Middle <u>Time:</u> 20 minutes <u>Purpose:</u> Develop conceptual understanding	Handout • Distribute handouts to all the students. • Ask them to read it thoroughly. • Let them discuss with their peer mates. • Have an open discussion about the three types of activities ➤ Primary ➤ Secondary ➤ Tertiary • Explain them the meaning of all three types with examples. • Let the students also think of some examples and share with the class.
Lesson End <u>Time:</u> 10 minutes <u>Purpose:</u> Finish up	<u>Home Assignment</u> • Write about the importance of agriculture in our day to day life. (in the note book).

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Lesson Plan 2

Lesson Objectives

At the end of this lesson students will be able to:

- Students will be able to describe the factors affecting agriculture.
- Students will be able to describe different types of cultivation.

Teaching Learning Materials required

- Handout (Reference: Annexure 2A)

Details of Teaching Learning Experience

Seating Arrangement: Normal

Lesson Beginning <u>Time:</u> 15 minutes <u>Purpose:</u> Activate prior knowledge	<u>Handout</u> • Distribute handouts (Reference: Annexure 2A) to students. • Let them read and understand. • Ask them to write the definitions in their notebooks.
Lesson Middle <u>Time:</u> 15 minutes <u>Purpose:</u> Develop conceptual understanding	Discussion. • Let them understand the factors which affect the agricultural activities. • Ask students what is needed to grow crops? • Explain them the availability of all things help in plant growth, these are called factors. Class Discussion • Let all the students recall the factors • Let the students voluntarily speak out factors one by one. • Ask them few questions ➤ Why temperature affects agriculture growth? ➤ What makes precipitation an important factor in plant growth?
Lesson End <u>Time:</u> 10 minutes <u>Purpose:</u> Finish up	<u>Finish Up</u> • Let the students write all the factors in their note books and also write why they are important.

Annexure 2A

What is Agriculture, Sericulture, Pisciculture, Viticulture, Horticulture ?



Differences among Agriculture, Sericulture, Pisciculture, Viticulture, Horticulture are

Agriculture/Farming: The science and art of cultivation on the soil, raising crops and rearing livestock (domesticated animal).

Sericulture: The commercial rearing of silk worms.

Pisciculture: Breeding of fish in specially constructed tanks and ponds.

Viticulture: Cultivation of Grapes.

Horticulture: Growing vegetables, flowers and fruits for commercial use

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Lesson Plan 3

Lesson Objectives

At the end of this lesson students will be able to:

- Students will be able to understand the different implements used in agriculture.
- Describe methods used for irrigation.

Teaching Learning Materials required

- Worksheet (Reference: Annexure 3A)
- Handout (Reference: Annexure 3B)
- Worksheet (Reference: Annexure 3C)

Details of Teaching Learning Experience

Seating Arrangement: Normal

Lesson Beginning <u>Time:</u> 15 minutes <u>Purpose:</u> Activate prior knowledge	Activity • Ask students to draw few tools which they have seen on agricultural grounds. • Let them discuss about different tools used for agricultural activities. • Distribute worksheet (Reference: Annexure 3A) to each student. • Ask students to complete the worksheets. Ask them to recall what they have seen in the agricultural farms.
Lesson Middle <u>Time:</u> 15 minutes <u>Purpose:</u> Develop conceptual understanding	Image Study • Distribute Handout (Reference: Annexure 3B) to all the students. • Ask them why do they think irrigation plays a vital role in farming? • Let them discuss about different methods of irrigation used for agricultural activity. • Distribute worksheet (Reference: Annexure 3C) to each student. • Ask students to complete the worksheets.
Lesson End <u>Time:</u> 10 minutes <u>Purpose:</u> Recap student learning	Finish Up • Collect worksheets for review.

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Annexure 3 A

List down the different implements used for agriculture.

Old Implements	Modern Implements

1. According to you which implements are most outstanding for higher agricultural growth? Give reason to support your answer.

Annexure 3B

What do you see in the Pictures given below? What do you understand from these?

Picture 1



Picture 2



Picture 3



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Annexure 3 C

1. Differentiate between traditional and modern methods of irrigation used for agriculture.

Old Methods	Modern Methods

2. According to you which method is more advantageous for higher yields? Give reason to support your answer.

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Lesson Plan 4

Lesson Objectives

At the end of this lesson students will be able to:

- Students will be able to describe different types of farming practices.
- Subsistence farming and commercial farming.

Teaching Learning Materials required

- Handout (Reference: Annexure 4A)
- Worksheet (Reference: Annexure 4B)

Details of Teaching Learning Experience

Seating Arrangement: Normal

Lesson Beginning <u>Time:</u> 10 minutes <u>Purpose:</u> Activate prior knowledge	Handout • Distribute Handout 4A to all students. • Ask them to read it carefully. • Discuss with them about the different ways of farming for different crops. • Ask them if they have seen any of these types of farming • Let them share their experience.
Lesson Middle <u>Time:</u> 15 minutes <u>Purpose:</u> Develop conceptual understanding	Discussion • Let the students understand that farming is done in various ways. • Ask students to brainstorm and give reason as to why we do different farming practices in different areas? • Let them discuss with other students and come up with their points. • Discuss with them and correct them if required. • Let them know that farming is done in various ways due to: ○ geographical conditions ○ demand of produce ○ labour and level of technology ○ capital investment • Distribute the worksheet 4B to each student.
Lesson End <u>Time:</u> 15 minutes <u>Purpose:</u> Finish up	<u>Finish up</u> • Collect the worksheets for review.

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Annexure 4A

There are two main types of farming, viz. subsistence farming and commercial farming.

Subsistence Farming: When farming is done to meet the needs of the farmer's family, it is called subsistence farming. In subsistence farming, low levels of technology and household labour are generally utilised. Farming is done on smaller plots and output is also small. Subsistence farming can be further categorized as intensive subsistence and primitive subsistence farming.

- a. **Intensive Subsistence Farming:** In this type of farming, the farmer cultivates on a small plot of land. He uses simple tools and more labour. Places which have fertile soils and where the climate allows a large number of days with sunshine are suitable for this type of farming. In favourable climates, farmers are able to grow more than one crop in a year. Rice is the main crop in this type of farming. However, wheat, maize, pulses and oilseeds are also grown. This type of farming is prevalent in densely populated areas of the monsoon regions of south, southeast and east Asia.
- b. **Primitive Subsistence Farming:** Shifting cultivation and nomadic herding come under this type of farming.
 - **Shifting Cultivation:** In shifting cultivation, a small patch of land is cleared by felling the trees and burning them. Then the ashes are mixed with the soil and seeds are broadcast. After a couple of years, the patch of the land is left fallow and the farmer moves on in search of a new patch of land. Shifting cultivation is practiced in thickly forested areas of Amazon basin, tropical Africa, parts of southeast Asia and Northeast India.
 - **Nomadic Herding:** In this type of farming, cattle, sheep, goat and camel are reared. The herdsmen move from place to place with their animals in search of new pastures. Nomadic herding is practiced in the semi-arid and arid regions of Sahara, Central Asia and some parts of India (like Rajasthan and Jammu & Kashmir).

Commercial Farming: This type of farming is done with sale as the main purpose. In this case, a very large area is cultivated and large amount of capital is utilised. Heavy machineries are used with less emphasis on manual labour. Commercial farming includes commercial grain farming, mixed farming and plantation.

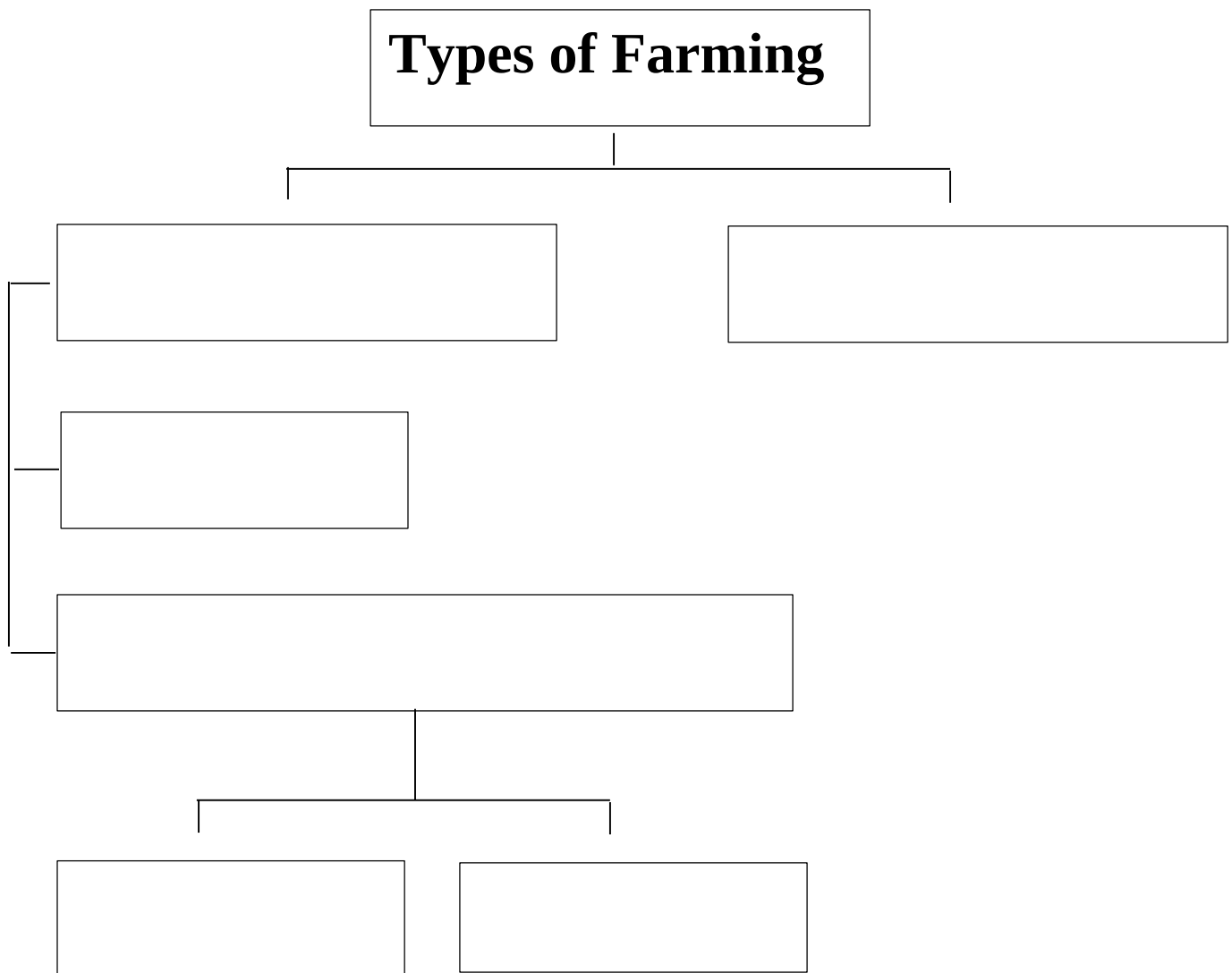
The temperate grasslands of North America, Europe and Asia are the major areas where commercial grain farming is done. Severe winters in these areas restrict the growing season and only a single crop can be grown in a year. Tea, coffee, sugarcane, cashew, rubber, banana and cotton are grown in plantations. The produce of plantation may be processed on the farm itself or in nearby factories. A good transport network is essential for commercial plantation. Rubber is mainly grown in Malaysia, coffee in Brazil and tea is grown in India and Sri Lanka.

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Annexure 4B

Complete the flow chart



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Lesson Plan 5

Lesson Objectives

At the end of this lesson students will be able to:

- Students will be able to draw a contrast between farms in India and U.S.A.
- Draw a contrast between manure and fertilizers.

Teaching Learning Materials required

- Handout (Reference: Annexure 5A)
- Worksheet (Reference: Annexure 5B)
- Differentiate Chart (Reference: Annexure 5C)

Details of Teaching Learning Experience

Seating Arrangement: normal

Lesson Beginning <u>Time:</u> 15 minutes <u>Purpose:</u> Introduce the topic	<u>Handout</u> • Distribute the handouts 5A to the students. • Let them read the handout carefully. • Ask students to understand the topic • Discuss with their peer mates the similarities and differences between the farms of two places. <u>Class Discussion</u> • Give them some hints • Ask them to one by one stand up and share the points on farms of India and USA. • Add few points from your side if something is missed. • Distribute the worksheets 5B to the students. • Ask them to write down the points discussed in the class.
Lesson Middle <u>Time:</u> 15 minutes <u>Purpose:</u> Develop conceptual understanding	Chart study • Draw a differentiate table or chart (Reference: Annexure 5C) on the black board by discussing all points. • Make students understand the importance of fertilizer and manure for crops. • How it helps in increasing the quality of production. • Ask students to draw it in their notebooks.
Lesson End <u>Time:</u> 10 minutes <u>Purpose:</u> Finish up	<u>Finish up</u> • Collect the worksheets for review.

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Annexure 5A

Difference between Indian Farmer and U.S. Farmer



Numbers

India is basically an agricultural country with almost 80% of its population living in rural areas. The total number of Indian farmers is around 120 million. In the U.S., on the other hand, only a small number of people are involved in farming. The total number of U.S. farmers is only around 2.3 million.

Sizes

Indian farms are inherited by family members from generation to generation. In each generation, the original plot of land gets subdivided among family members. Consequently, the size of an average farm is small in size, around 2.3 hectares. In contrast, U.S. farm holdings are large, around 250 hectares.

Qualifications

Most Indian farmers have simply continued their father's professions. In their schooling years, they may have spent a considerable amount of time assisting their parents on the fields. They may have received basic education at the village school before dropping out. Hence, the average Indian farmer does not have any basic education and is probably a dropout. This is not the case in the U.S. American farmers are mostly well educated and will probably have specialized in some area

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of agriculture in college. Being educated, they keep themselves up to date on the latest developments in agriculture and incorporate these in their farmlands.

Farming Methods

Indian farming is very much labor intensive, and most farmers use traditional methods of farming like plowing with bullocks. U.S. farming is mostly capital intensive with large-scale use of heavy and advanced machinery. The number of farm laborers is very small. Indian farming is still very much dependent on the weather and, consequently, is able to grow only two to three crops in a year, which is restricted to either rice or potatoes. On the other hand, U.S. farms are able to grow multiple crops in one year such as soybeans, beet root, in addition to wheat, etc. U.S. farmers take advantage of scientific and technological innovations and facilities to enhance their production levels. For example, they may do soil testing in laboratories to know the fertility level of the farmland and the type of crop best suited to grow profitably. Such testing done periodically enables them to take steps to restore the soil fertility. Indian farmers on the whole do not have access to such facilities and do not know about such possibilities. Indian farming is heavily dependent on the vagaries of the monsoon rainfall. Despite massive investment, including the building of huge dams, irrigated lands are still very few in number. Thus, a change in the amount of rainfall has disastrous consequences for Indian farming. In contrast, U.S. farming uses advanced systems of irrigation methods, which allow all-year-round production. Indian farmers are mostly owned by poor families and managed by family members themselves. In contrast, U.S. farms are owned by rich business corporations and managed by specialized manpower.

Output

Though small in size, farmlands in the U.S. are more productive and bring back greater returns to the farmer. A rough comparison between the two farmlands will show that U.S. farms have a higher yield per hectare than Indian farms. For example, in rice, it is 7.8 tones to Indian's 3 tones; in corn, it is 8.6 tones to Indian's 1.8 tones; in sorghum, it is 2.8 tones to Indian's 0.8 tones; in peanuts, it is 2.6 tones to Indian's 1 ton; in soybeans, it is 2.8 tones to Indian's 1.1 tons; and in cotton lint, it is 647 Kg to Indian's 220 Kg. Similarly, in the U.S., the cow milk yield is three times that of the Indian yield.

Conclusion

Indian farms have a long way to go before they can catch up with the current level of U.S. farms. Though the Indian government is making efforts, the future is not bright

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Annexure 5B

Differentiate between Indian Farms and U.S.A. Farms

Indian Farms	U.S.A. Farms

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Annexure 5C

Draw this on the black board while discussing points with students.

Table 1.1 : Differences between Fertiliser and Manure

S. No.	Fertiliser	Manure
1.	A fertiliser is an inorganic salt.	Manure is a natural substance obtained by the decomposition of cattle dung, human waste and plant residues.
2.	A fertiliser is prepared in factories.	Manure can be prepared in the fields.
3.	A fertiliser does not provide any humus to the soil.	Manure provides a lot of humus to the soil.
4.	Fertilisers are very rich in plant nutrients like nitrogen, phosphorus and potassium.	Manure is relatively less rich in plant nutrients.

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Lesson Plan 6

Lesson Objectives

At the end of this lesson students will be able to:

- Identify major crops and their distribution in the world.

Teaching Learning Materials required

- Worksheet (Reference: Annexure 6A)
- Map of world
- Worksheet (Reference: Annexure 6B)

Details of Teaching Learning Experience

Seating Arrangement: Normal

Lesson Beginning <u>Time:</u> 10 minutes <u>Purpose:</u> Introduce the topic	Discussion • Let them discuss about crops grown in India with their peer group. • Ask them to recall all the crops and the conditions in which they grow. • Distribute the worksheet (Reference: Annexure 6A) and ask students to write the areas of the world where these crops are found. • Let the students find out the areas in India through internet.
Lesson Middle <u>Time:</u> 15 minutes <u>Purpose:</u> Develop conceptual understanding	Map Study • Ask students to take out world map. • Also let them take out their atlas for help. • Ask them to mark two places of each crop in the world map. • Give them the name of the crop and also the name of the country to be marked in the map. • When they finish marking let them paste the map in their notebooks. • Distribute the worksheet (Reference: Annexure 6B) and ask students to write about the weather requirement and soil suitable for these crops.
Lesson End <u>Time:</u> 15 minutes <u>Purpose:</u> Finish up	Finish Up • Let the students take worksheet 6A at home to complete. • Collect the worksheet 6B for review. • Let them take the help from text book to fill the worksheet.

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Annexure 6A

Name: _____

Skill – Research and evidence

Complete the following table:

Crops	Areas (World)	Areas (India)
Rice		
Wheat		
Millets		
Maize		
Cotton		
Jute		
Coffee		
Tea		

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Annexure 6C

Name _____

Complete the following table:

Crops	Temperature & Rainfall	Type Of Soil
Rice		
Wheat		
Millets		
Maize		
Cotton		
Jute		
Coffee		
Tea		

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Lesson Plan 7

Lesson Objectives

At the end of this lesson students will be able to:

- Students will be able to describe the agricultural development and its economic significance.

Teaching Learning Materials required

- Worksheet (Reference: Annexure 7A)
- Handout (Reference: Annexure 7B)
- Worksheet (Reference: Annexure 7C)

Details of Teaching Learning Experience

Seating Arrangement: Normal

Lesson Beginning <u>Time:</u> 10 minutes <u>Purpose:</u> Introduce the topic	Class discussion • To conclude let them understand the importance of agricultural development. • Ask them if they now know why agriculture is the primary activity. • Distribute the Worksheet (Reference: Annexure 7A) to each student. • Ask them to complete the worksheets.
Lesson Middle <u>Time:</u> 15 minutes <u>Purpose:</u> Develop conceptual understanding	Handout • Distribute handouts (Reference: Annexure 7B) to each student. • Let the students study it nicely and understand the importance of agricultural development. • Distribute worksheet (Reference: Annexure 7C) to each student. • Ask students to complete the worksheet in class. • Take rounds in the class • Observe the class activity. • Help the students in answering the worksheet.
Lesson End <u>Time:</u> 15 minutes <u>Purpose:</u> Finish up	<u>Finish up</u> • Finish up. • Collect the worksheet to review.

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Annexure 7A

Name_____

Answer the following questions:

1. What changes does agriculture face today?

2. How is climate change threatening agriculture?

3. How can agriculture make better use of natural resources?

4. How has Green Revolution changed agriculture in India?

5. What is Agricultural Development?

Annexure 7B

Read the passage given below:



Taking root around 12,000 years ago, agriculture triggered such a change in society and the way in which people lived that its development has been dubbed the “Neolithic Revolution.” Traditional hunter-gatherer lifestyles, followed by humans since their evolution, were swept aside in favor of permanent settlements and a reliable food supply. Out of agriculture, cities and civilizations grew, and because crops and animals could now be farmed to meet demand, the global population rocketed—from some five million people 10,000 years ago, to more than seven billion today.

There was no single factor, or combination of factors, that led people to take up farming in different parts of the world. In the Near East, for example, it's thought that climatic changes at the end of the last ice age brought seasonal conditions that favored annual plants like wild cereals. Elsewhere, such as in East Asia, increased pressure on natural food resources may have forced people to find homegrown solutions. But whatever the reasons for its independent origins, farming sowed the seeds for the modern age.

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Annexure 7C

Name _____



1. Name the implement used in the picture:

2. What type of farming is it?

3. Do you think the farmer in this picture needs some awareness on agriculture? What suggestion you will provide to increase his production.



1. What is the farmer doing in this picture?

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2. What do you think will happen if this activity is not carried on?



1. Name the implement in the picture.
2. Do you suggest to use this implement on the farms? Why?



1. In the given picture the farm land is burnt up. What type of farming is this?

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2. What are the disadvantages of this type of farming?
