



## Master Lesson Plan

For

### India Climate Vegetation and Wildlife

| Board | Standard | Subject        | Chapter                               | Language | Reference Link                                           | Creation Date |
|-------|----------|----------------|---------------------------------------|----------|----------------------------------------------------------|---------------|
| CBSE  | STD VI   | Social Science | India Climate Vegetation and Wildlife | English  | <a href="#">India : Climate, Vegetation and Wildlife</a> | 2020-08       |

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## India Climate Vegetation and Wildlife

### 1. MS\_Objectives\_India:Climate, Vegetation and Wildlife

## Objectives of the lesson India: Climate, Vegetation and Wildlife

To enable the students to:

1. explain the concepts: weather and climate,
2. compare different seasons in India,
3. interpret the natural vegetation and the factors influencing the same,
4. illustrate the wildlife of India and
5. justify the need to conserve our flora and fauna.

| Time to teach | Asset Type  | Theme                  | SubTheme                                                                                                                                                                                                                                                           |
|---------------|-------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 Minutes     | Main Script | Climate and vegetation | South West Monsoon Season, Season Of Retreat, Autumn, Natural Vegetation Season or Summer, Factors Climate , Cold Weather Season, South West Monsoon Season, Season Of Retreat, Autumn, Natural Vegetation Season or Summer, Factors Climate , Cold Weather Season |

### 2. IQ\_Weather

## Weather

Notes to teacher:

The teacher may

1. give a few minutes time to the students to think and come out with as many answers as possible before giving out the right answer,
2. conduct this session orally and discuss the answers.

#### 1. How is the weather today?

Ans. *Hot/ cold/ rain. Answer may depend on the place and time.*



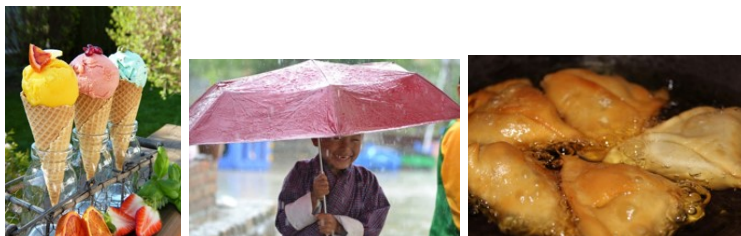
**2. When do you feel like wearing warm clothes?**

Ans. *When we feel cold or temperature is cold outside.*



**3. Do you like temperature to remain the same or keep changing? If it should keep changing, then which season do you like the most and why?**

Ans. *Yes I would like it to keep changing. Hot/ cold/ rainy. It's fun during hot season we get to eat ice creams and drink cold juice. In cold season we like to eat tasty hot and spicy snacks. In rainy season we like to play in the rains and wear raincoat and walk in rain with umbrella.*



**4. What do you think is affecting the changes in the weather?**

Ans. *The atmosphere is affecting the change, the location of the place and the revolution of the earth around the sun is the cause for the changes in weather.*

**URLs**

Sun: <https://pixabay.com/vectors/sun-sunny-weather-sunshine-yellow-159392/>

Rainy: <https://pixabay.com/vectors/cloud-rain-rainy-sun-weather-159394/>

Cold: <https://pixabay.com/vectors/snow-winter-christmas-cold-season-4329741/>

Sweaters: <https://pixabay.com/photos/sweaters-culture-clothes-clothing-279563/>

Ice cream: <https://pixabay.com/photos/ice-cream-waffles-food-2202561/>

Rains: <https://pixabay.com/photos/cute-boy-child-kid-childhood-5147373/>

Samosa : <https://pixabay.com/photos/samosa-fry-oil-cooking-cuisine-3446944/>

| Time to teach | Asset Type            | Theme                  | SubTheme                                                       |
|---------------|-----------------------|------------------------|----------------------------------------------------------------|
| 5 Minutes     | Inquisitive Questions | Climate and vegetation | Factors Affecting India's Climate<br>Affecting India's Climate |

### 3. MS\_Four Seasons in India

## Four Seasons in India

Notes to teacher:

Teacher may

1. start by discussing about weather and climatic changes and conclude that the weather changes due to the change in the temperature and atmosphere. The cause of change in the temperature is earth's revolution,
2. show the diagram of earth's revolution and explain how revolution brings differences in the temperature in different parts of the earth,
3. bring in a lot of inferences from the students.

**Weather :** It is the day to day variations in the atmosphere and temperature.

This brings extreme or moderate heat, coolness or rain for certain period of the year in different parts of India. Traditionally, India has six seasons called *Ritu*, they are:

Spring (*Vasant Ritu*)

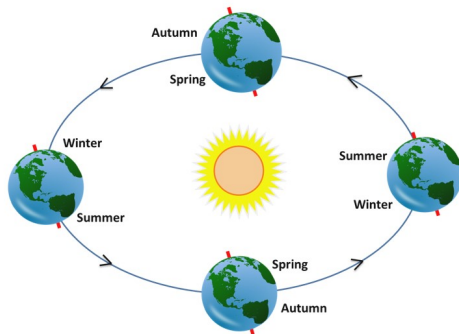
Summer (*Grishma Ritu*)

Monsoon (*Varsha Ritu*)

Autumn (*Sharad Ritu*)

Pre-winter (*Hemant Ritu*)

Winter (*Shishir Ritu*)



Basing on these broadly, major seasons recognized in India are four:

1. **Cold Weather Season or Winter:-** It occurs from December to February. During winter season cool and dry winds blow from North to South. The temperature becomes extremely cold in some places.
2. **Hot Weather Season or Summer:-** It occurs from March to May. During this season hot and dry winds called *loo* blow in some places. The temperature rises very high in summer season.
3. **South West Monsoon or Rainy Season:-** It occurs from June to September. The season is marked by the onset of Monsoon. The winds blow from Arabian Sea and Bay of Bengal towards the land bringing in rains.
4. **Season of Retreating Monsoon:-** This season is called the season of retreating monsoon or North-East monsoon because during October and November the winds move back from mainland to the Bay of Bengal.

**Climate:** 'Climate' is the average weather condition in a particular place measured and recorded over the years.

- Climate of a particular place depends on the location, altitude and distance from the sea level and the various reliefs like high mountains ranges, ghats and hills that act as barriers in cold and moist winds.
- India is located in the Tropical Zone, hence it experiences regional differences in climate.
- India's climate is broadly described as Monsoon type and the name Monsoon is taken from the Arabic word *Mausim* which means season.

<https://www.yourarticlelibrary.com/essay/seasons-the-cycle-of-seasons-in-india-with-map-and-diagrams/32104>

### Inferences:

- In hot climate we feel like drinking and eating something cold.
- The dress code varies in different seasons.
- In cold season we usually like to be inside our house.
- Rainy weather brings relief from the hot summer days.

| Time to teach | Asset Type  | Theme                  | SubTheme                 |
|---------------|-------------|------------------------|--------------------------|
| 7 Minutes     | Main Script | Climate and vegetation | The Seasons, The Seasons |

#### 4. IA\_More about places and climate

## More About Places and Climate

### Notes to teacher:

Teacher may highlight the places that experience the extreme summer, winter and heaviest rainfall

### Let's know more about the climate in some places:

- Northern states of India like Punjab, Haryana, Uttar Pradesh, Gujarat and Rajasthan experience too.
- Apart from deserts like Jaisalmer and Bikaner which are very hot, Phalodi in Rajasthan is considered the hottest in the country with temperature going up to 51 degree Celsius.



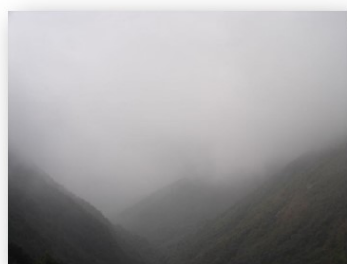
### *Phalodi desert*

- Cold weather prevails in India due to the southward movement of the sun.
- The temperature in places like Drass and Ladakh in Jammu and Kashmir goes below freezing point up to -40 degree Celsius.
- Drass which is known as 'The gateway to Ladakh' is the coldest place in India.



### **Drass- 'Gateway to Ladakh'**

- Places like Assam, Cherrapunji in Meghalaya in the North East also receive very heavy rainfall during monsoon.



### Cherrapunji

- The monsoon winds that approaches the land from the Bay of Bengal goes towards the North East.
- These winds go back to the sea from North East bringing rains in some places hence it is called retreating monsoon.

### URLs

Phalodi Desert <https://www.flickr.com/photos/chrischoenbohm/4814898870> (By Chris Ford)

Drass - <https://www.flickr.com/photos/39790692@N05/3668372829> (By Kiran SRK)

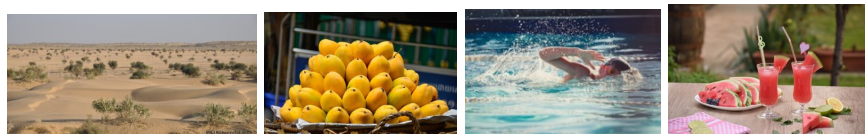
Cherrapunji - <https://www.flickr.com/photos/21007708@N00/2241660094> (By anuradhac)

| Time to teach | Asset Type         | Theme                  | SubTheme                                                       |
|---------------|--------------------|------------------------|----------------------------------------------------------------|
| 3 Minutes     | Interesting Asides | Climate and vegetation | Factors Affecting India's Climate<br>Affecting India's Climate |

## 5. MS\_Seasons in India: Summer, Winter and Rainy

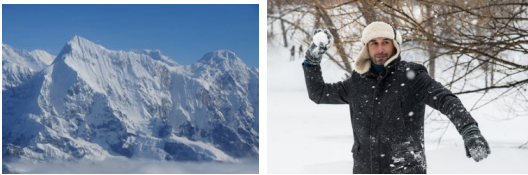
# Seasons in India: Summer, Winter and Rainy

### Summer Season :



- I. Hot summer season occurs from March to May in most of the regions in India.
- II. The sun rays fall directly on different parts of the country which result in rise in temperature.
- III. Hot and dry, dusty winds called **loo**, blow during the day in some of the Northern plains.
- IV. Some places experience extreme heat which results in heatstroke, whereas, in some places the weather remains moderate depending on its location.

### Winter Season :



1. Cold and dry winds blow from North to South. Most of the places in Northern plains become extremely cold and dry during this season.
2. The sun rays do not fall directly in the region resulting in fall in the temperature.
3. Places like Drass and Kargil in Jammu and Kashmir experience extreme cold.
4. Due to snowfall in Himalayas many states in Northern parts have extreme cold weather.

### South West Monsoon Season:



- This season marks the onset or advancement of monsoon in most of the parts in India.
- South West Monsoon is the rain bearing seasonal winds that blow towards the land from Arabian Sea.
- The moist winds blowing from the sea strike the mountain barriers in the Western Ghats and bring heavy rains in coastal regions of Kerala and Mumbai.
- Mawsynram in Meghalaya receives the world's heaviest rainfall.

### Season of Retreating Monsoon :

- During the months of October and November the South West monsoon winds weaken and start withdrawing gradually.
- Winds from North East direction start gaining strength and blow towards the South.
- This brings rains in Tamil Nadu, Andhra Pradesh and Karnataka.
- The climate of India is broadly described as Monsoon type. And most of the vegetation in India depends on the rains.

## URLs

1. Desert - <https://www.flickr.com/photos/26745817@N00/5528923072> (By John and Melanie (Illingworth) Kotsopoulos )
2. Mangoes - <https://pixabay.com/photos/yellow-fruit-healthy-fresh-4992183/>
3. Juices - <https://pixabay.com/photos/table-refreshment-glass-food-drink-3220967/>
4. Swimming- <https://pixabay.com/photos/swimming-child-kid-water-summer-821622/>
5. <Himalaya> - <https://www.flickr.com/photos/24759409@N03/6219541622> (By orangems)
6. Warm clothes- <https://pixabay.com/photos/winter-hat-girl-snow-season-1209119/>
7. Rain- <https://www.flickr.com/photos/marvelouskerala/8925352279/in/photostream/> (By Marvelous Kerala)
8. Water logged roads- <https://www.flickr.com/photos/asharism/30478352> (By inexplicable)
9. Meghalaya- <https://commons.wikimedia.org/w/index.php?curid=68305423> (Sharada Prasad CS from Berkeley, India)

| Time to teach | Asset Type  | Theme                  | SubTheme                                                                                                                                                                    |
|---------------|-------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7 Minutes     | Main Script | Climate and vegetation | The Seasons, South West Monsoons Or Rainy Season, Season C Or Summer, Cold Weather S<br>The Seasons, South West Monsoons Or Autumn, Hot Weather S Or Summer, Cold Weather S |

## 6. IQ\_What would happen if...?

## What would happen if...?

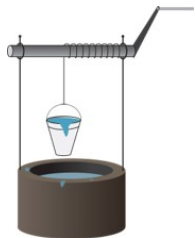
Notes to the teacher:

1] Teacher may enable the students to think and come out with as many answers as possible orally before giving out the right answer.

2] Teacher can conclude the session by telling that suitable climatic condition is very important for agriculture and vegetation. Extension of a particular climate may result in destruction of natural vegetation.

**A. What do you think is the source of water for farms, forests and even our homes?**

*Suggested Answer: The source of water for farm, forests and our homes are rains, rivers, lakes, streams and wells.*

**B. How do wells and rivers fill up?**

*Suggested Answer: Wells and rivers fill up due to rain.*

**C. What would happen to the wells and rivers if there was no rain in a particular year?**

*Suggested Answer: If there was no rain in a particular year, then wells and rivers would dry up or water level would go down.*

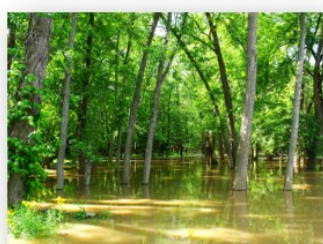
**D. Will it affect agriculture? How?**

*Suggested Answer: Yes, there would be no agriculture; farms and fields would dry up and we would not get any food grains.*



### E. What would happen if there was excess rain in a particular region?

*Suggested Answer: The rivers and lakes in that region would fill up and over flow, there would be floods, this will destroy all the crops, the village or towns and forests if any nearby would be affected badly.*



### URLs

River : <https://pixabay.com/photos/kerala-india-backwater-river-boats-354317/>

Well : <https://pixabay.com/illustrations/well-water-water-well-4755913/>

Rain : <https://pixabay.com/photos/rain-weather-raindrop-heavy-rain-3954273/>

Dried river : <https://pixabay.com/photos/drought-barren-irrigation-dry-4133538/>

Farm : <https://pixabay.com/photos/dry-bush-agriculture-farm-fence-1283919/>

Grains : <https://pixabay.com/photos/rice-hand-harvest-grain-thailand-1549130/>

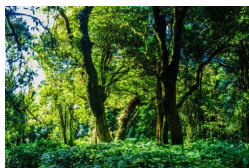
Rice field : <https://pixabay.com/photos/rice-field-work-asia-harvest-3962383/>

| Time to teach | Asset Type            | Theme                  | SubTheme                    |
|---------------|-----------------------|------------------------|-----------------------------|
| 5 Minutes     | Inquisitive Questions | Climate and vegetation | Natural Vegetation, Natural |

## 7. MS\_Natural Vegetation

# Natural Vegetation

- **Natural vegetation** means the grasses, shrubs, short and tall trees grown on their own in the surrounding without any human assistance or interference.

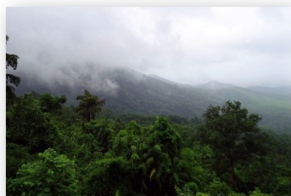


- In India the natural vegetation are dependent mostly on rainfall though different climatic conditions also affect them.
- India has a wide range of vegetation which can be divided into five types:

1. tropical evergreen,
2. tropical deciduous,
3. thorny bushes,
4. mountain vegetation and
5. mangrove forests

### 1) **Tropical Evergreen**

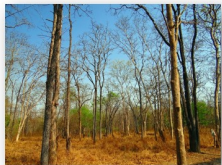
- These are dense forests found in areas having heavy rainfall.



- They are called as Evergreen forests as all the trees do not shed leaves at the same time. Most of them are more than 60 metre tall trees.
- Trees like rosewood, mahogany, ebony and even bamboos and reeds are common in tropical rainforests.
- The woods are used in making furniture.
- Found in Andaman and Nicobar islands, Western slopes of Western Ghats such as Kerala, greater part of Assam and small parts of Odisha.

### 2) **Tropical Deciduous**

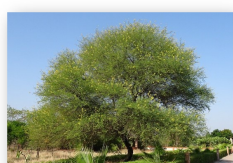
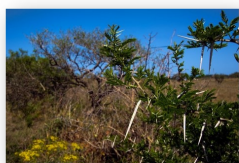
- These are less dense, most widespread forests in the country.
- Also called as Monsoon forests, they shed leaves in a particular season.
- Trees like sal, teak, peepul, neem, sandalwood, shisham, mango, jack fruit are found here.



- The wood is used for commercial purposes like building houses and furniture.
- Mostly found in the Northern parts of the country like Chhattisgarh, Odisha, Madhya Pradesh, Uttar Pradesh, Bihar and some parts in Maharashtra.

### 3) Thorny Bushes

- These forests have thorny bushes and plants with spiny leaves and roots penetrating deep into the soil to retain moisture.
- cactus, acacia, wild date palms, khair, babool, keekar are some important thorny plants and trees.
- Khair and babool have good medicinal value, khair is used to treat painful throat and dry cough and babool treats dental problems.



- Mostly found in the Eastern slopes of Northern Western part of India including semi-arid or dry regions such as Gujarat, Rajasthan, Madhya Pradesh, Haryana and Punjab.

### 4) Mountain Vegetation

- The trees are conical in shape as they are found in the mountains at the altitude of 1500 to 2500 metres from the sea-level.
- These trees are called coniferous trees because of their shapes.
- Trees like oak, chestnut are found in the North-Eastern India such as West Bengal and Uttaranchal.
- Some trees like silver firs, pine, chir, deodar are found in the Himalayan ranges and Western Ghats.
- There are Southern mountain vegetations in the hills of Annamalai, Nilgiris and Palani locally known as 'Sholas'.
- Soft wood obtained from these trees are used to make decorative items whereas some have medicinal value.



## 5) Mangrove forests

- These forest types are found near sea coasts, thus we understand that they can survive in saline water.
- Sunderbans in West Bengal got its name from the 'Sundari trees' found there in abundance.



- Wood used in boat making, news print and perfumes. Mangroves help in land building, prevents erosion, maintains water quality and clarity.
- Mangrove forests are largely found in Andaman and Nicobar Islands and Sunderbans of West Bengal.



### URLs

Forest: <https://pxhere.com/en/photo/1514177>

Rainforests : <https://pixabay.com/photos/rainforest-mollem-national-park-384940/>

Deciduous forest: <https://pixabay.com/photos/forest-deciduous-mixed-forest-322597/>

Babool tree : <https://pixabay.com/photos/babul-tree-acacia-nilotica-2872022/>

Acacia Bush : <https://www.flickr.com/photos/86604360@N06/8023901144> (By **Steve Slater**)

Pine trees : [https://commons.wikimedia.org/wiki/File:Pine\\_Forest\\_Ooty.jpg](https://commons.wikimedia.org/wiki/File:Pine_Forest_Ooty.jpg) (By **Vinodkumar Kotabagi**)

Mangroves: <https://pixabay.com/photos/mangroves-sundarbans-forest-1225627/>

Cone roots: <https://pixabay.com/photos/cone-roots-mangroves-flora-species-1226567/>

### References

<https://www.toppr.com/content/concept/the-thorn-forests-and-shrubs-210986/>

[https://www.indianetzone.com/40/mountain\\_forests\\_india.htm](https://www.indianetzone.com/40/mountain_forests_india.htm)

[https://www.tutorialspoint.com/geography/geography\\_india\\_natural\\_vegetation.htm#:~:text=Mountain%20forests%20in%20India%20are,of%201%2C000%20and%202%2C000%20m.](https://www.tutorialspoint.com/geography/geography_india_natural_vegetation.htm#:~:text=Mountain%20forests%20in%20India%20are,of%201%2C000%20and%202%2C000%20m.)

[https://www.tutorialspoint.com/geography/geography\\_india\\_natural\\_vegetation.htm](https://www.tutorialspoint.com/geography/geography_india_natural_vegetation.htm)

| Time to teach | Asset Type  | Theme                  | SubTheme                    |
|---------------|-------------|------------------------|-----------------------------|
| 10 Minutes    | Main Script | Climate and vegetation | Natural Vegetation, Natural |

## 8. QA\_Recap of Climate and Vegetation

# Recap of Climate and Vegetation

Notes to teacher:

Teacher may

1. do the assessment by giving the worksheet,
2. discuss the answers by displaying the questions on the ppt after the students complete the worksheet,
3. give the map separately for the students to mark the places.
4. allow the students to name the places on the map displayed in the ppt after the worksheet completion.

Q1. Locate the following places on the outline map of India:

- A place with freezing point in Jammu and Kashmir-- Drass**
- Capital city of India -- Delhi**
- Hottest desert in Rajasthan -- Phalodi**
- Place in Meghalaya receiving highest rainfall -- Mawsynram**
- Coastal region in the West receiving heavy rainfall – Mumbai or Kerala**
- One Northern State where wheat is grown – Punjab**

Q2. India has how many seasons? -- 4

- 3
- 5
- 4
- 2

Q3. Name the winds that bring rainfall in India. – South Westerly

- a. North Westerly      b. South Westerly      c. Loo      d. Eastern winds

**Q4. What forest types are found in Sunderbans? -- *Mangrove***

- a. Coniferous      b. Pine      c. Thorny shrubs      d. *Mangrove*

**Q5. Retreating Monsoon brings rain in which southern state? -- *Tamil Nadu***

- a. Kerala      b. Assam      c. *Tamil Nadu*      d. Maharashtra

**Q6. Where do we find Tropical evergreen forests in India? -- *Kerala***

- a. South Eastern states      b. *North Eastern states*      c. Bihar      d. *Kerala*

**Q7. Weather is the day to day changes in the atmosphere.**

- a. Climate      b. *Weather*      c. Temperature      d. Loo

**Q8. Hot and dry wind that blows in the Northern plains is called loo.**

- a. monsoon winds      b. *loo*      c. desert winds      d. retreating winds

**Q9. Pine and Deodar trees are found in mountain forest.**

- a. tropical rainforest      b. *mountain forest*      c. deciduous forest

**Q10. What type of vegetation do we find in Rajasthan and Haryana? Why?**

- a. Evergreen forest      b. *thorny bushes*      c. mangrove      d. deodar trees

*Suggested Answer: As the regions of Rajasthan and Haryana are arid and hot, the vegetations grown are thorny bushes. Thorny bushes have modified leaves to retain water for a long period.*

### Q11. Why do you think some places in the Western Ghats get heavy rainfall?

*Suggested Answer: The SouthWest monsoon winds hit the Western Ghats and brings heavy rains in some places. The Western Ghats form the barrier to the moist winds thus bringing heavy rains.*

| Time to teach | Asset Type  | Theme                  | SubTheme                        |
|---------------|-------------|------------------------|---------------------------------|
| 10 Minutes    | Assessments | Climate and vegetation | The Seasons, Natural Vegetation |

## 9. IA\_ Uniqueness of fruits

# Uniqueness of Fruits

Notes to the teacher:

- Teacher begins the class by asking the students to name some fruits that we get in different seasons and in different regions.
- From the variety of fruits available, teacher points out that some fruits grow in summer whereas some grow only in winter with the help of a mind map.
- The teacher then asks the students to tell any fruit that is not grown in their region.
- The teacher continues the class by telling about various fruits depending on the location, altitude and climate of a particular region.
- Teacher tells about some unique features of a few selected fruits.

List of fruits found in India: jack fruit, sapota, mango, black grapes, green grapes, apple, watermelon, muskmelon, papaya



## Unique Features of fruits:

### Jackfruit:

- Jackfruit is the largest tree fruit in the world.

- b. It can weigh up to 45 kg.
- c. The fruit gets its name from the Portuguese name '*jaca*' as they called it and which is probably a version of name in southern India, 'chakka'.
- d. It is the national fruit of Bangladesh and Sri Lanka and state fruit of Indian states of Kerala and Tamil Nadu.



### Apples:

- a. Apples are largely grown in Himachal Pradesh and Jammu and Kashmir.
- b. The best of the apples are grown in extreme cold weather and crisp chilly air in the surrounding.
- c. Some varieties of apples grown in India are Red Delicious, Golden Delicious and Lal Ambari.
- d. To select the best fruit in the market keep this in mind, 'Flick an apple gently and listen, it should sound hollow'.



### Jungli Jalebi or Kodukkapuli:

- a. Jungli jalebi is locally known in Tamil Nadu as Kodukkapuli means Manila Tamarind, Madras Thorn, Monkey Pod and so on.
- b. The fruit has mild sweet and tart flavour with essential nutrient benefits such as strengthening of teeth, managing blood sugar, enhancing digestion, etc.
- c. It is due to the fruit's resemblance to the Indian sweet jalebi that the name is been given.
- d. It is mostly found in Tamil Nadu, Kerala, Karnataka and Maharashtra.



Sapota : <https://pixabay.com/photos/tropical-apple-sapote-fruit-968569/>

Black Grapes : <https://pixabay.com/photos/black-grapes-power-fruit-eat-2205732/>

Green Grapes : <https://pixabay.com/photos/grapes-frozen-fruit-summer-organic-1476089/>

Apples : <https://pixabay.com/photos/apple-red-fruit-fruits-decoration-1506119/>

Watermelon : <https://pixabay.com/photos/watermelon-melon-juicy-fruit-food-815072/>

Papaya : <https://pixabay.com/photos/fruit-papaya-2123166/>

Mango : <https://pixabay.com/photos/exotic-food-fresh-fruit-healthy-21549/>

Musk Melon : <https://pixabay.com/photos/muskmelons-cantaloupes-fruit-melon-387466/>

Jackfruit : <https://pixabay.com/photos/jack-jackfrucht-green-large-52055/>

Apple Orchard : <https://pixabay.com/photos/apple-orchard-apple-trees-red-1873078/>

Fruit : <https://www.flickr.com/photos/guam-flora-fauna/30690806842/by> **Lauren Gutierrez**

| Time to teach | Asset Type         | Theme                  | SubTheme                    |
|---------------|--------------------|------------------------|-----------------------------|
| 5 Minutes     | Interesting Asides | Climate and vegetation | Natural Vegetation, Natural |

## 10. SA\_Major crops in India

# Major Crops in India

Notes to the teacher:

The teacher may

1. tell the students to read out the list in the class before beginning the activity,
2. allot the presentation work to one student in each group,
3. guide the students allotted to present the information after the art work,
4. conclude the session by adding on to the points given, after the presentation.

**Material:**

1. Cardboard sheet
2. Glue or fevicol
3. Grains, lentils and millets varieties
4. Pencil

**Instructions:**

1. Teacher announces to bring a list of any five grains or pulses or lentils or millets that students know grown in different regions.
2. Teacher divides the class in six groups.
3. Teacher asks the students to get information on the specific grain or millet allotted to each group.
4. Teacher announces a day for the activity and asks each group to bring specific type of grains or millets and pulses each around 10 gm. and 5 gm. to the class.
  - each student in first group brings wheat - 10 gms.
  - each student in second group brings rice -10 gms.
  - each student in third group brings green moong - 10 gms.
  - each student in fourth group brings maize or corn - 10 gms.
  - each student in fifth group brings ragi - 10 gms.
  - each student in sixth group brings bajra - 10 gms.
  - any one student from every group also brings one specific pulse - 5gms.
5. Teacher draws a beautiful flower design with six petals on the cardboard and asks each group to come forward in turns and paste the grains brought uniformly on the design.
6. Students make a beautiful wall hanging for the class with grains, millets and pulses.



7. Teacher concludes the activity by making one child from each group present information about one grain or millet in the class.

**List:** wheat, rice, corn, chickpea, green moong, red lentils, dal varieties, green peas, finger millet(ragi), jowar, foxtail millet(Thinai), pearl millet(bajra)

### **Presentation:**

1. Wheat is grown in abundance in Uttar Pradesh, Haryana, Punjab and Madhya Pradesh which experience extreme hot weather. Wheat Bread is staple food for most of the regions in North and North West parts of India. It is rich in protein, carbohydrates and vitamin.
2. Rice is grown in abundance in West Bengal as it receives heavy rain. The East Godavari district in Andhra Pradesh is called the 'rice bowl of India' as water is available in plenty there. Rice production needs good irrigation.
3. Green moong is a pulse variety. Can be used in salads when soaked and sprouted. It contains fibre, high-quality protein, vitamin and keeps skin healthy.
4. Ragi (Finger millet) is a small sized cereal variety. It is grown in almost all parts of the country as it does not need any specific weather condition. It is also high in fibre content, carbohydrates and protein. It is good for brain development in children.
5. Maize or corn is the third most important field crop after wheat and rice grown in India. This crop is grown in different climatic conditions in different regions in India. Karnataka being the highest producers of maize followed by Rajasthan and Madhya Pradesh.
6. Bajra (pearl millet) is also known as a poor man's staple food. It is mostly grown in dry lands. Major production states in India are Rajasthan, Maharashtra, Haryana, Uttar Pradesh and Gujarat. It controls blood sugar levels, helps in digestion disorders and is a rich source of energy.

### **Conclusion:**

- § Students get information on different crops grown in different regions.
- § They understand that the regional difference in crops production is due to the location and climate.
- § They work in unison to make a beautiful wall hanging for the class.

### **Trouble Shoot:**

1. Teacher should be ready with the required materials including the grains if the children miss them.
2. Teacher should be ready with the points for presentation if the students don't bring.

## URLs

1. Cardboard - <https://pxhere.com/en/photo/1014004>
2. Glue: <https://freessvg.org/glue-1574682408>
3. Pencil: <https://pixabay.com/vectors/pencil-green-writing-tools-37254/>
4. Cereals: <https://pixabay.com/photos/grains-corn-millet-oats-nature-3601581/>  
<https://pixabay.com/photos/food-cereals-wheat-grains-plant-4509/>  
<https://pixabay.com/photos/chana-pulses-daal-food-lentils-390529/>  
<https://pixabay.com/photos/mung-beans-moong-beans-green-gram-390724/>
5. Butterfly – Self clicked
6. Heart Shape - <https://pixabay.com/photos/cereals-harvest-agriculture-nature-1694247/>

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<https://www.agrifarming.in/bajra-cultivation>

| Time to teach | Asset Type         | Theme                  | SubTheme                    |
|---------------|--------------------|------------------------|-----------------------------|
| 30 Minutes    | Suggested Activity | Climate and vegetation | Natural Vegetation, Natural |

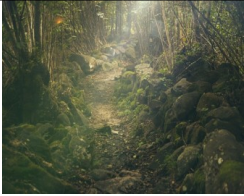
## 11. IQ\_ Why are Forests necessary?

# Why Are Forests Necessary?

Notes to teacher:

Teacher may allow the student to come up with as many answers as possible before s/he gives out the suggested answer

**Q1. Enumerate some uses of forests.**



*Suggested Answer – Cleanses the atmosphere by giving oxygen and absorbing carbon dioxide, gives fuel, fodder, medicines, sports items, furniture, timber, rubber, shelter to humans and shelter to wildlife.*

**Q2. Is it possible to take care of the forests? How do we do it?**



*Suggested Answer— Yes it is possible; by planting more trees in the surrounding, allowing small trees to grow well and not cutting down big and strong trees.*

**Q3. Who is benefited by the forests? How?**

*Suggested Answer – Wildlife is benefited. It is their home. They cannot live in the cities and towns with human beings.*

*Human Beings are benefited. We get many things from the forest.*

*Both are benefitted. (Any out of the three or all suggested answers can be accepted)*

**Q4. What will happen if all the forests are destroyed?**



*Suggested Answer – The wildlife will not have place to strive. They will start entering the villages and towns nearby thus disturbing the human life. They will start looking for food in the farms and fields and destroy all the*

*crops. Our lives will be completely disturbed.*

*Also, if the forests are destroyed we will not get all that we want. It will also affect the climate. It will be extremely hot. There will be no rains.*



#### URLs

1. Forest: <https://pixabay.com/photos/forest-path-mystical-rocks-438432>
2. Mangrove Forest: <https://pixabay.com/photos/mangrove-seedlings-plantation-creek-249920/>
3. <https://pixabay.com/photos/forest-fire-fire-b%C3%A5tfors-smoke-432877/>
4. <https://pixabay.com/photos/trees-greenery-forests-parks-paths-271933/>

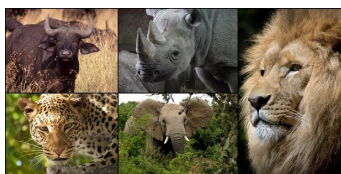
| Time to teach | Asset Type            | Theme                  | SubTheme                    |
|---------------|-----------------------|------------------------|-----------------------------|
| 5 Minutes     | Inquisitive Questions | Climate and vegetation | Natural Vegetation, Natural |

## 12. MS\_Wildlife

# Wildlife

#### Introduction:

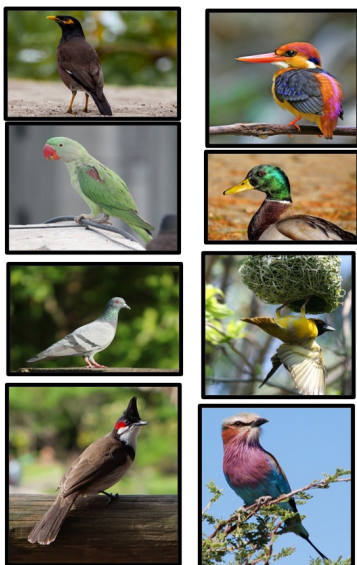
- India is home for a large variety of wildlife animals and birds, amphibians, reptiles, mammals and worms that live in diverse terrain of the country.



- It is host for several large animals including the Indian Elephant, Bengal Tiger, Indian Rhinoceros, Asiatic Lion, Asian antelope nilgai and snow leopard.



- India is known for its largest deer and tiger population.
- One can also find a wide variety of snakes species especially cobras and kraits in Indian water bodies, forests and hilly regions.
- There are many local birds like mynah, parrot, pigeon, sparrow, peacock, duck and bulbul.



- And some rarely found birds like kingfisher, weaver bird, Indian roller, Himalayan quail and great Indian bustard in our country.
- Many bird sanctuaries have been created to protect these birds and give them their natural habitat.
- Other than these are quite a few migratory birds that visit India during winter and go back in summer to Europe and Siberia where they come from.
- Some of them are Siberian Crane, Rosy Pelican, Flamingo, Pintail Duck and Eurasian Curlew.

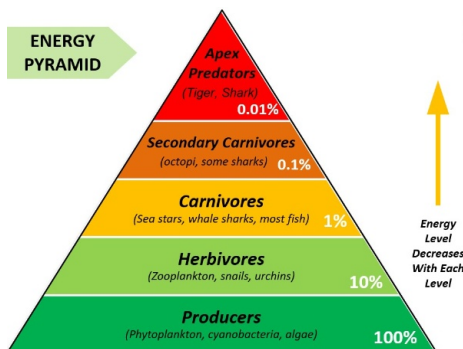
#### Places of existence of some wild animals:

- Gir forest in Gujarat – Asiatic lions
- Forests of Assam, Kerala and Karnataka – elephants
- Rann of Kutch and Thar Desert – camels and wild asses
- Himalayan regions – snow leopard, wild goats, bears
- Assam, Meghalaya and Chhattisgarh – wild water buffalo

- Karnataka, Uttarakand, Madhya Pradesh and Assam – tigers

### Importance of Wildlife:

1. The wildlife is very important in maintaining balance in the ecosystem.
2. Each organism has its own place in food chain of ecology that helps contribute to the nature.
3. The wildlife promotes pollination and continuity of plant species.
4. It helps in regulating various breeds of the animal population and brings stability in different natural processes.



### URLS

<Animals> - <<https://pixabay.com/illustrations/collage-africa-big-5-animals-lion-1803066/>>

1. <Elephant> - <<https://pixabay.com/photos/indian-elephant-elephants-4741619/>>
2. <Tiger> - <<https://www.needpix.com/photo/226404/white-bengal-tiger-tiger-predator-cat-dangerous-wildcat-big-cat-king-tiger-panthera-tigris-tigris>>
3. <Rhino> - <<https://pixabay.com/photos/animals-rhino-indian-rhinoceros-5034798/>>
4. <Lion> - <SSSVV G>
5. <Antelope> - 1. <<https://pixabay.com/photos/safari-antelope-botswana-nature-5013531/>>
6. <Leopard> - <<https://pixabay.com/photos/snow-leopard-predator-big-cat-1972724/>>
7. <Mynah> - <<https://pixabay.com/photos/mauritus-mynah-bird-indian-myna-4520344/>>
8. <Parrot> - <<https://pixabay.com/photos/parakeet-indian-parrot-parrot-bird-2488922/>>
9. <Pigeon> - <<https://pixabay.com/photos/india-kerala-dove-pigeon-rock-dove-4874048/>>
10. <Duck> - <<https://pixabay.com/photos/mallard-anas-platyrynchos-drake-1893080/>>
11. <Bulbul> - <<https://www.pxfuel.com/en/free-photo-xxszu>>
12. <Kingfisher> - <<https://www.pexels.com/photo/birds-birdsofindia-indianbirds-roshankamath-1661149/>>
13. <Weaver bird> - <<https://www.pxfuel.com/en/free-photo-ozndq>>
14. <Indian Roller> - <<https://www.pxfuel.com/en/free-photo-jqibe>>

## References

<https://www.indiastudychannel.com/resources/141853-The-importance-of-wildlife-in-India.aspx>

| Time to teach | Asset Type  | Theme                  | SubTheme             |
|---------------|-------------|------------------------|----------------------|
| 5 Minutes     | Main Script | Climate and vegetation | Wild Life, Wild Life |

### 13. DD\_Conservation of Wildlife

## Conservation of Wildlife

Notes to teacher:

The Teacher may

1. talk about our national animal,
2. display the question to the students along with pictures,
3. encourage the students to answer before giving out the points in the class,
4. make the session interactive.

### Introduction:

- Our National animal Tiger is in the verge of extinction.



- Today it's not only our country but the whole world is looking at ways to conserve tigers.
- It's time we do something to save our National animal.

### Tiger Reserves in our country:

*50 Tiger reserves in our country.*

*Total 2,226 tigers are present in all the Animal parks put together.*

*Corbett Tiger Reserve holds the densest tiger population in our country.*

### **Tigers are the most important maintaining the balance in forest ecosystem**



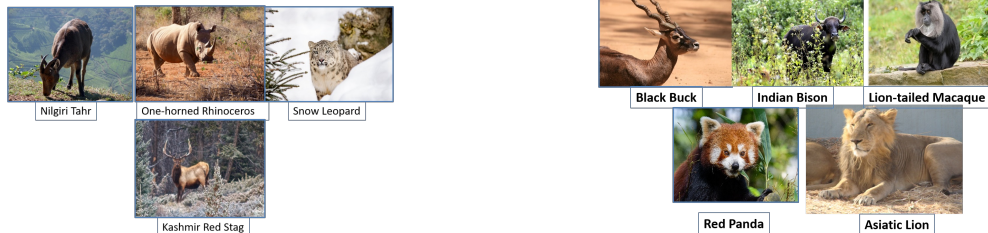
*Yes, they help in balancing the forest ecosystem as they survive by killing other animals. Thus the population of other animals is balanced.*

### **We must do something to conserve tigers:**

*Someone rightly said, 'Don't leave anything behind except your footsteps and don't take anything except memories'*

1. *One should follow the forest guidelines when one visits the wilderness and experience the nature not pollute it.*
2. *By creating awareness about the grave situation of tigers getting extinct by way of movies, documentary, advertisements, school and college projects, etc.*
3. *Also encourage making posters, slogans and observing wildlife days once in a year in the first week of October.*
4. *Many biosphere reserve parks, animal sanctuaries and reserves have been established since years to protect the 'roar of the wild'.*
5. *Project tiger was first launched in 1973 by the Government of India. It was first adopted by Corbett National Park.*
6. *Also the then Prime Minister Indira Gandhi enacted the Wildlife Protection Act of 1973 in Parliament.*
7. *Broadly speaking, the actions of Human population like deforestation leads to the disturbance and imbalance in the flora and fauna which has to be checked.*
8. *Lastly, by refusing to buy or use things made of animal products like fur, bones, skin, horns and feathers, thus, stopping the tiger poaching.*

- **Other animals that are becoming endangered are Nilgiri Tahr, Kashmir red stag, one-horned rhinoceros, snow leopard, red panda, Asiatic lion, black buck, lion-tailed macaque and Indian bison.**



## URLs

Picture of a Bengal Tiger standing> - <<https://pixabay.com/photos/bengal-tiger-tiger-standing-601965/>>

Bengal Tigers: <https://www.peakpx.com/464061/2-bengal-tigers>

Tiger eating other animals: <https://search.creativecommons.org/photos/74df5ab5-aa3c-4471-8f7a-ef0f4e378005>

Nilgiri Tahr: <https://www.flickr.com/photos/10208972@N04/3518341916> by **Sankara Subramanian**

One-horned Rhino: <https://www.flickr.com/photos/146622456@N05/29386634365>

Snow leopard: <https://commons.wikimedia.org/w/index.php?curid=89086236>

Red Stag: <https://www.flickr.com/photos/90949166@N00/4418408815>

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Asiatic Lion: OC @bdarshu@gmail.com

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<http://www.walkthroughindia.com/wildlife/top-10-tiger-reserves-in-india-with-maximum-tiger-population/>

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<https://www.firstpost.com/tech/science/wildlife-week-indias-tiger-numbers-have-increased-by-33-in-5-years-but-thats-not-necessarily-good-news-6492851.html>

[https://www.toftigers.org/park/corbett-tiger-reserve/?gclid=Cj0KCQjww\\_f2BRC-ARIsAP3zarFDTRXEPqrcEqYyFAxrDPTToOecIAOOjtFsWyNeDHJ3KPgV4QFOD6W4aAkF5EALw\\_wcB](https://www.toftigers.org/park/corbett-tiger-reserve/?gclid=Cj0KCQjww_f2BRC-ARIsAP3zarFDTRXEPqrcEqYyFAxrDPTToOecIAOOjtFsWyNeDHJ3KPgV4QFOD6W4aAkF5EALw_wcB)

| Time to teach | Asset Type           | Theme                  | SubTheme             |
|---------------|----------------------|------------------------|----------------------|
| 10 Minutes    | Day-to-day Relevance | Climate and vegetation | Wild Life, Wild Life |

#### 14. VC\_Adopt a positive attitude as a way of life

## Adopt a positive attitude as a way of life

Notes to teacher:

Teacher may talk about weather and its changes and connect it to ones life.

Teacher may tell the story and conclude the session by highlighting values of Universal Peace and Happiness

*You must know that weather is about day to day changes in the atmosphere. It includes changes in temperature, rainfall and sunshine etc.*

Just as the weather changes every day, our moods also keep changing every day. Many a times, we find that everything goes exactly the way we want and we feel happy. On the contrary, on a few other days, we feel we have woken up from the wrong side of the bed. Whatever we do seem to go wrong.

We need to understand it is all part of life. The fact that there exists 'yin and yang', 'day and night' in life, confirms that everything in this world exists at dualistic level. These dualities exist in ourselves too in the form of joy and sorrow, success and failure, inspiration and depression, likes and dislikes, etc.

Everyone wants to be happy in life always. To lead a happy life, we need to adopt a positive attitude as a way of life. We are in control of our happiness quotient by being so.



A little boy was heard talking to himself as he walked through the playground, carrying his cricket bat and ball:

"I'm the greatest batsman in the world."

Then he tossed the cricket ball in the air, swung at it with the bat and missed.

Undaunted, he picked up the ball, threw it into the air again, swung the bat at it, and missed again for the second time.

He did this four more times and missed all four times.



After missing the ball for the sixth time, he yelled out: "I'm the greatest bowler in the world!"

Life can be tough at times, painful at other times and testing at more times. But turning a situation to your advantage, like the little boy did, is the key. It's certainly a state of mind well worth developing.

Wisdom lies in embracing both positive and negative with open arms.

| Time to teach | Value Type | Value Sub Type | Value Attribute |
|---------------|------------|----------------|-----------------|
| 5 Minutes     | Peace      |                | Stories         |

## 15. QA\_Let's Recall

## Let's Recall

Notes to teacher:

Teacher may

1. do the evaluation by giving the worksheet,
2. discuss the answers after the students complete the worksheet.

1. Climate is the average weather conditions measured over the years.

- a. winds      b. rains      c. monsoon      d. *climate*

2. Mausim is an Arabic name taken for monsoon.

- a. monsoon      b. pous      c. *mausim*      d. varsha

3. Hilly regions experience mild summers and extreme winters.

- a. Coastal regions      b. *Hilly regions*      c. Eastern regions      d. Southern regions

4. The climate of India has broadly been described as Monsoon type.

- a. Snowfall type      b. *Monsoon Type*      c. Hot weather      d. Cyclone type

5. Which place in Meghalaya receives the heaviest rainfall?

**Answer-** *Mawsynram* in Meghalaya receives the heaviest rainfall in India.

6. Locate any two wildlife sanctuaries in India map.

7. What are the types of vegetations found in India?

**Answer-**

- *Tropical Rainforest*
- *Tropical Deciduous forest*
- *Mountain vegetation*
- *Thorny bushes*
- *Mangroves*

8. What are tropical rainforests called? Why?

**Answer --** *Tropical rainforests are called evergreen forests because shedding and flowering take place throughout the year and they are ever green.*

**9. Why are mountain vegetation called coniferous forests?**

**Answer –** *They are called so because the trees have conical shaped leaves and they grow tall and look like cones.*

**10. Name some of the migratory birds in India.**

**Answer –** *pelican, Siberian crane, flamingo, curlew and pintail duck.*

**11. Where are Asiatic lions found in India?**

**Answer –** *Gir forest in Gujarat.*

**12. Which bio diverse sanctuary in India has wild water buffaloes and one-horned rhinoceroses?**

**Answer –** *Assam*

**13. Name some commonly found birds in your area.**

**Answer –** *sparrows, pigeons, crows, mynahs, etc.*

**14. Do you think human beings are responsible towards the wildlife? How?**

**Answer -** Yes, human beings are responsible towards the wildlife. We should protect the animal species by preventing poaching and say no to animal products.

**15. Why do you think deserts have thorny bushes as their natural vegetation?**

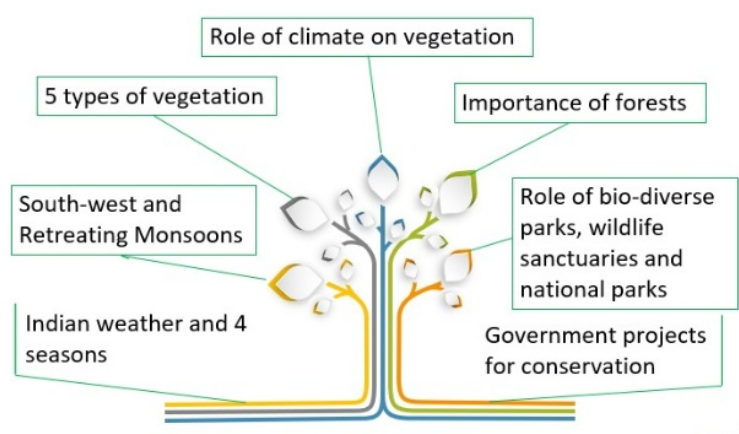
**Answer** - Deserts are arid and extremely hot, due to water scarcity the bushes grow in such a way that they retain water in their thick roots, stems and leaves for a long time. Due to rough weather the leaves grow into spines to avoid water transpiration and hence the vegetation in deserts are thorny bushes.

| Time to teach | Asset Type  | Theme                  | SubTheme                                                                                       |
|---------------|-------------|------------------------|------------------------------------------------------------------------------------------------|
| 10 Minutes    | Assessments | Climate and vegetation | Wild Life, Natural Vegetation<br>Affecting India's Climate , W<br>Vegetation, Factors Affectin |

## 16. MS\_Summary\_India Climate Vegetation and Wildlife

# Summary

In this chapter we learnt the following:



| Time to teach | Asset Type  | Theme                  | SubTheme                                                                                                               |
|---------------|-------------|------------------------|------------------------------------------------------------------------------------------------------------------------|
| 5 Minutes     | Main Script | Climate and vegetation | Wild Life, The Seasons, Nat<br>Factors Affecting India's Cli<br>The Seasons, Natural Vege<br>Affecting India's Climate |