



Master Lesson Plan

For

Conservation of Plants and Animals

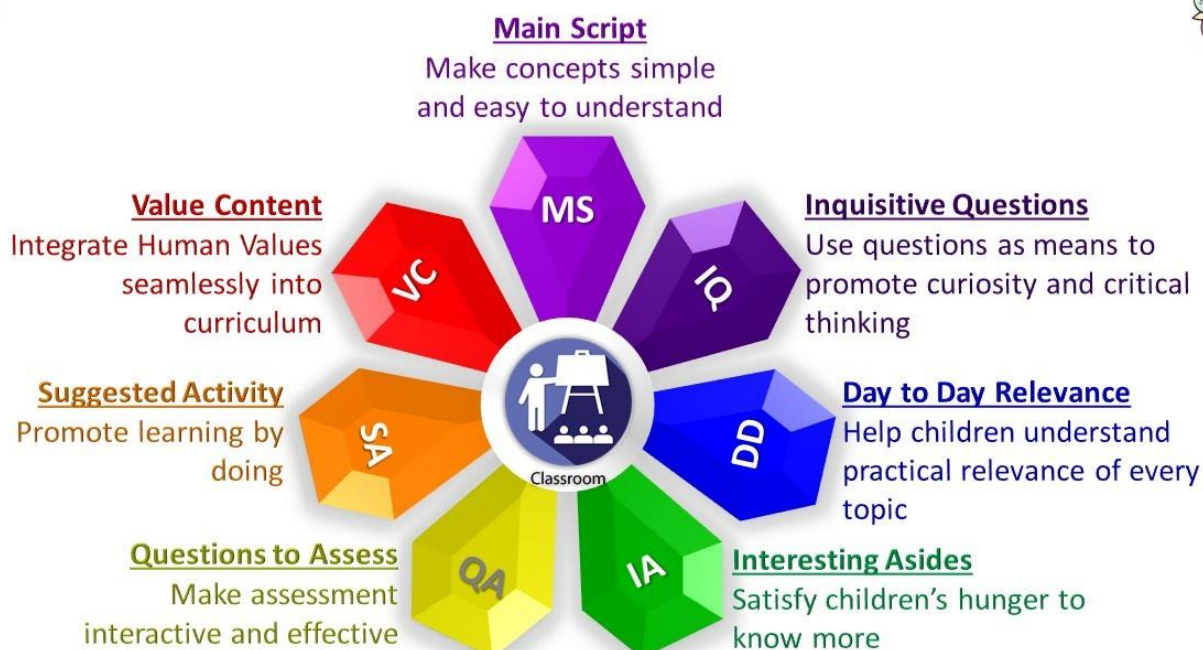
Board	Standard	Subject	Chapter	Language	Reference Link	Creation
CBSE	STD VIII	Science	Conservation of Plants and Animals	English	Conservation of Plants and Animals	2020-12

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Master Lesson Plan (MLP) - Covers the entire chapter with the help of these 7 asset types



For more information on how to use the lesson plan effectively, please scroll to the guidelines at the end of this document.

Conservation of Plants and Animals

1. MS_ Objectives_ Conservation of plants and animals

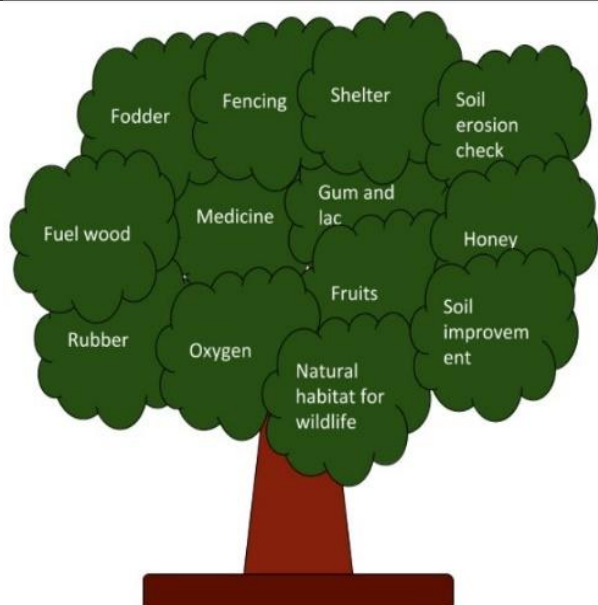
Notes to the teacher: This asset lays down the proposed plan for transacting this chapter. It states the asset objectives of the MLP. This asset is for teacher's reference and need not be taught to the students:

Students will be able to...

- list down the uses of forests
- give reasons about their understanding on flora and fauna in the forests
- analyse the reasons for deforestation
- discuss the measures to conserve forest and wildlife
- recognise the importance of plants and animals in our lives
- define endemic species
- report the flora and fauna in and around their location
- outline the features of Red DataBook
- deduce the reasons for migration in birds and animals
- identify the benefits of recycling paper
- take delight in planting plants in their surroundings
- appreciate the usage of drones in conservation of biodiversity
- associate the important days related to conservation of the environment
- appreciate the achievements of Thimmakka
- create awareness about conservation of plants and animals
- relate to the concept of preservation of nature
- enjoy the flora and fauna of India
- adapt the number of ways to protect biodiversity
- have the advantage of knowing about project tiger and project elephant
- relish the extra information on extinction of dinosaurs
- assess themselves on their knowledge on conservation
- revise the various concepts of the chapter 'Conservation of plants and animals'

Time to teach	Asset Type	Theme	Sub Theme
3 Minutes	Main Script	Conservation of Flora & Fauna	Wild life sanctuaries, National parks, Migration, forests, Endemic species (meaning, examples), Endangered animals(meaning, examples of forest and wild life) Red data book, Flora and fauna in forests

2. DD_ Uses of Forests



Fuel Wood -



For the rural population, dried wood is an important source of energy for cooking and heating.



Fodder from the forest forms an important source of food for cattle and other grazing animals in the hilly and arid regions.

` Fencing-



Fences created with trees and shrubs are used in many parts of the world.

Shelter



The dense bushes, shrubs, tall grasses and thick trees are shelter for various animals and birds.

Soil Erosion Check



The roots bind the soil and prevent erosion caused by wind or water.

Soil Improvement



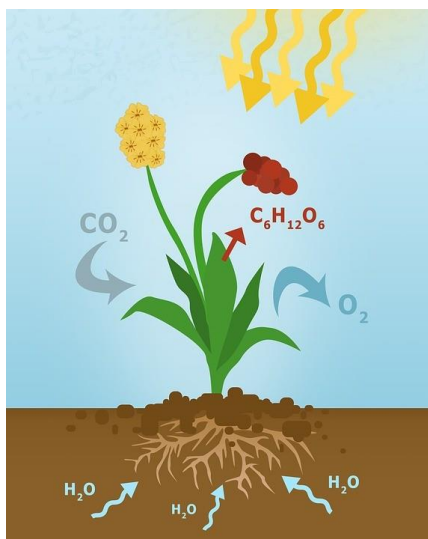
Some trees have the ability to return nitrogen to the soil through root decomposition or fallen leaves.

Honey



For animals and humans

Oxygen



Necessary for every living being

Fruits



To eat

Gum and Lac

Insects that feed on certain host trees, produce a secretion called lac. Gum is collected from incisions on the barks of certain trees



For many objects

Rubber



To make tyres etc.

Medicinal plants



To cure various diseases

Natural Habitat for Wildlife-



A natural home for animals to live.

Forests serve a number of ecological purposes which include important role in the water cycle, providing habitat for plants and animals adapted for life in forests, etc.

Image Source:

Image: OC: puttyrevankar@gmail.com

<https://pixabay.com/photos/forest-wood-tree-trunks-fog-1768922/>

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Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Day-to-day Relevance	Conservation of Flora & Fauna	Flora and fauna in forests

3. IQ_ Flora and Fauna in forests

[Notes to the teacher – Teacher may enable the students to think and come out with as many answers as possible before giving out the right answer/ answers]

1. Do you know a few plants grown in the coastal region prevent floods? Which are they ?

Suggested Answer: The mangroves grown in the coastal regions prevent floods.

2. How do they prevent?

Suggested Answer : They hold the soil tightly and prevent the erosion of the soil. This prevents water from entering beyond the coast.



3. Among all the animals , which one is the main support to forest life?

Suggested Answer: Tiger is considered as the main animal of the forest.



4. Why is the tiger so important ,and needs to be saved?

Suggested Answer: Tiger is at the top of the ecosystem. It maintains a balance between the herbivores whom it preys upon and subsequently the vegetation, the food of the herbivores.

Image source:

<https://pxhere.com/en/photo/720567>

<https://pixahive.com/photo/the-royal-bengal-tiger-kolkata-wb/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Inquisitive Questions	Conservation of Flora & Fauna	Flora and fauna in forests

4. MS_ Deforestation

The forest ecosystem plays an essential role in supporting life on earth. But deforestation is clearing earth's forests on a massive scale. With the current rate of destruction, the world's rain forests will completely disappear within a hundred years.

WHY SHOULD WE CARE ABOUT DEFORESTATION.?

Deforestation increases the greenhouse gases in the atmosphere in two ways.

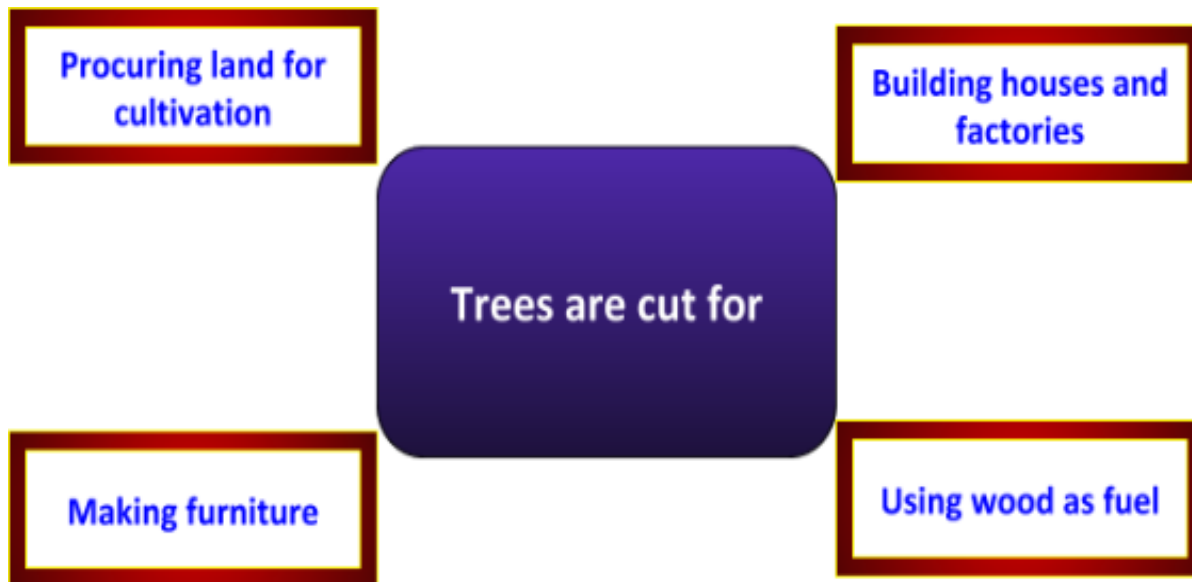
1. When trees are felled, they release stored carbon dioxide into the atmosphere.
2. Trees play a critical role in absorbing the greenhouse gases that contribute to global warming. Fewer forests means larger amounts of greenhouse gases entering the atmosphere.

In addition to helping regulate the earth's climate, forests provide habitat for over 80% of the plants and animals that live on land. But deforestation destroys these habitats, diminishing biodiversity.

Some estimate that 4 to 6 thousand rainforest species go extinct each year. This also affects more than 2 billion people who rely on forests for food and shelter.

Deforestation and its causes:

Deforestation means clearing of forests and using the land for other purposes. Trees in the forest are cut for:

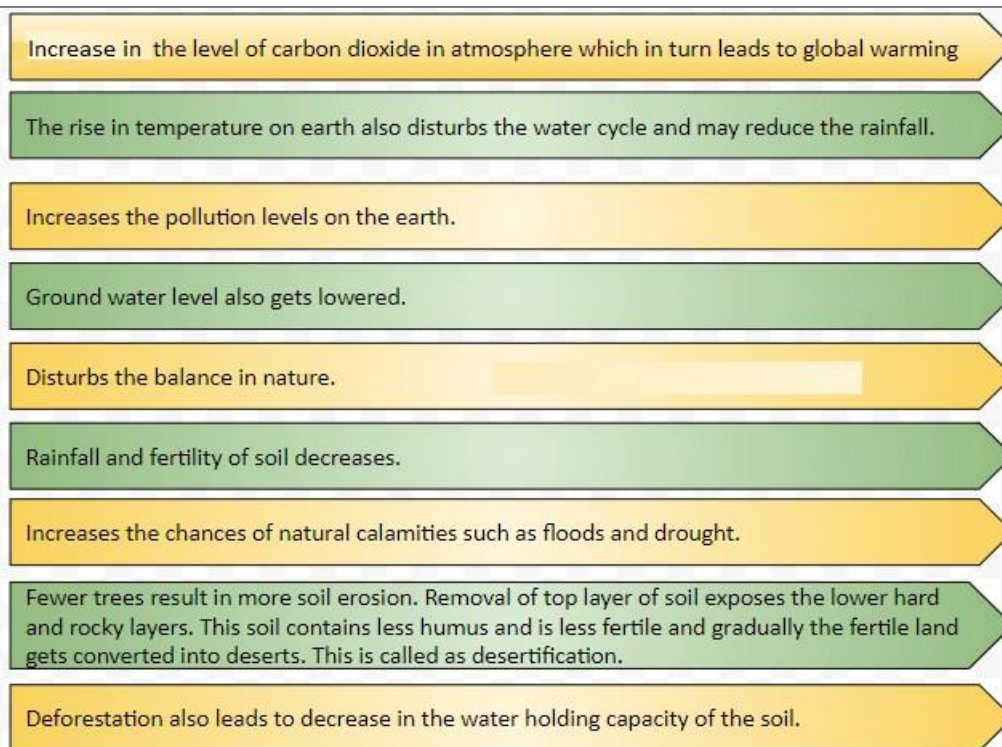
**Natural causes of deforestation:**

Some natural causes of deforestation are:

***forest fires**



severe drought****Consequences of deforestation :*GLOBAL WARMING****AIR POLLUTION****RAINFALL AND FERTILITY DECREASE LEAD TO SOIL EROSION**

**Image source:**

Deforestation : <https://pixabay.com/photos/deforestation-machine-truck-2833687/>

Forest fire: <https://pixabay.com/photos/forest-fire-fire-smoke-conservation-432870/>

Drought: SSSVV Gallery

Global warming: <https://pixabay.com/illustrations/climate-change-global-warming-2063240/>

Air pollution: <https://pixabay.com/photos/warming-global-environment-nature-2370285/>

Soil erosion 1: <https://pxhere.com/en/photo/1138480>

Soil erosion 2: <https://www.pexels.com/photo/landscape-mountain-dry-tree-sky-sunlight-1882124/>

Time to teach	Asset Type	Theme	Sub Theme
8 Minutes	Main Script	The Plant Kingdom	Deforestation - Consequence

5. SA_ Importance of plants and animals in our lives

Aim -To make the students aware of the importance of plants and animals in our lives.

Materials required: pens, pencils

Setting for activity: Indoor/ Individual activity

Procedure-

- The children are asked to make a list of plant and animal products that they use in their home and school, on the observation sheet as follows.
- The student that brings out the maximum uses within the stipulated time is the winner.

Observation:

Plant product	Uses
•	
•	
•	
•	
•	
•	
•	
•	
•	
•	
•	

Animal product	Uses
•	
•	
•	
•	
•	
•	
•	
•	
•	
•	
•	

Conclusion: This activity will help the students to list the plant and animal products they use in their daily lives. The students learn about the source, product they get from them and the category.

Question to ponder

How many items from the list of forest products made , do each one us use everyday?

1.Paper 2.Rubber 3.Pencil 4.Firewood in villages 5.Honey 6.Fruits 7.Flowers 8.Perfumes etc.

Note to the teacher:

Sample:

Clue:

- Plants - Vegetable - Food
- Silk worm - Silk- textile
- Honey bee - Honey - food/medicine
- Aloe vera - gel -medicine

Time to teach	Asset Type	Theme	Sub Theme
10 Minutes	Suggested Activity	Conservation of Flora & Fauna	Flora and fauna in forests

6. MS_ Conservation of forest and wildlife

Biosphere

Biosphere is that part of the earth where living organisms exist or which supports life.



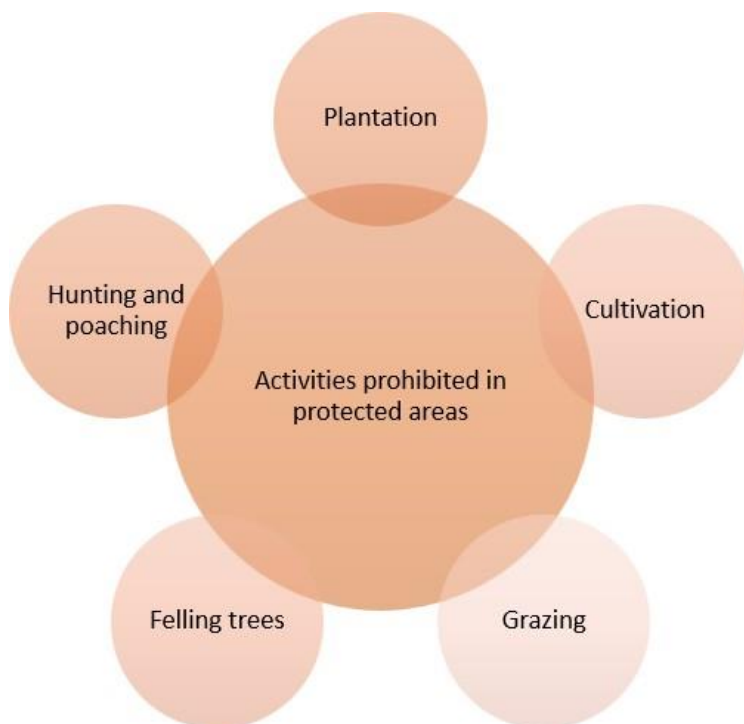
Biological diversity or biodiversity means the variety of organisms that are present on the earth, the inter- relationships and their relationship with the environment.



Protected areas



In order to protect the flora and fauna, many protected areas called sanctuaries, national parks and biosphere reserves have been set up. These protected areas protect the plant and animal species in their natural habitats.



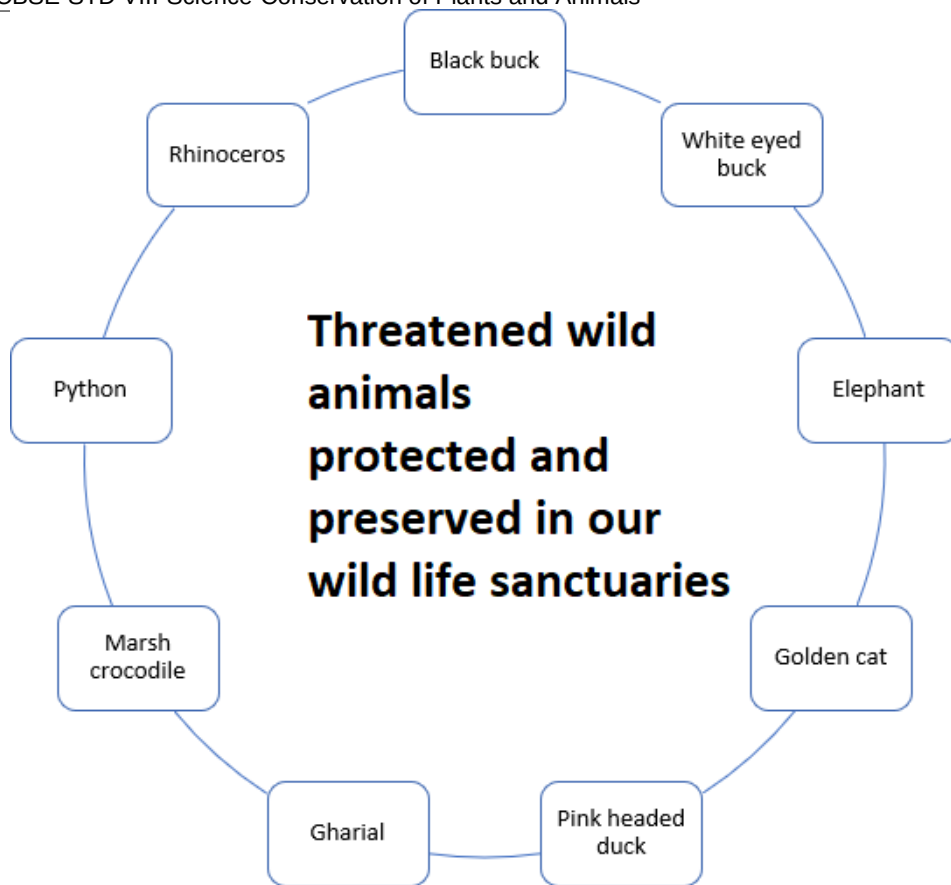


Sanctuary



Sanctuaries are those areas in which the animals are protected. There is no disturbance, danger to the animals and the habitat in a sanctuary. No one is allowed to hunt or capture in a sanctuary. In India there are about 500 sanctuaries. Other than caring for the animals, sanctuaries also educate the people. The individuals should be educated about the importance of animals so that the animals can be protected, and a good ecological balance can be maintained.

The most important function of a wildlife sanctuary is to provide protection and suitable living conditions for the animals living in the sanctuary.



Indian sanctuaries have very nice landscapes, broad forests, mountain forests and bush lands in deltas of big rivers.



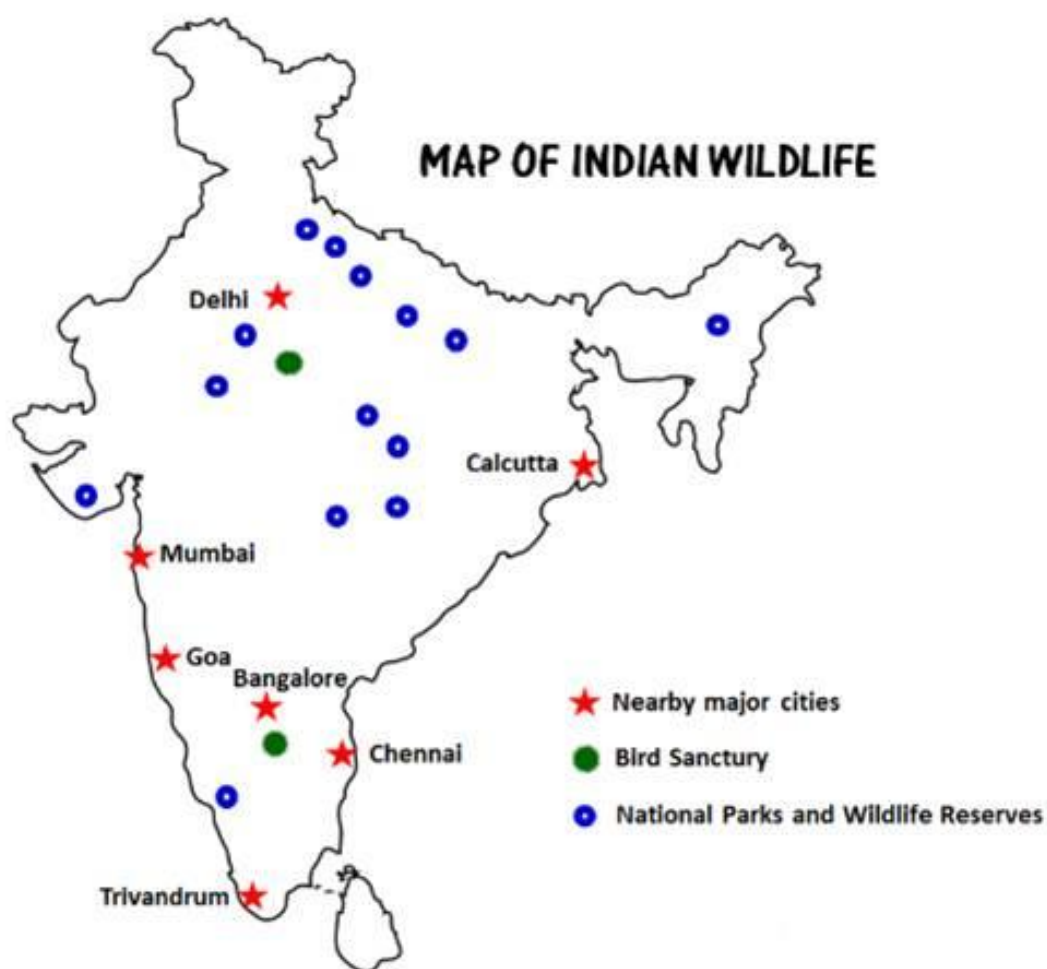
Name and Location	Animal species found here
Bandipur National park, Mysore - Karnataka	Elephant , panther, barking deer, tiger, sambar
Jim Corbett National Park, Pauri Garhwal – Uttar Pradesh	Four horned antelope, elephant, chital, tiger, nilgai
Gir National Park, Talala Gir - Gujarat	Asiatic lion, panther, nilgai, wild boar, chinkara
Kaziranga National park, Golaghat - Assam	Elephant, one horned rhinoceros, wild buffalo, tiger, leopard
Periyar National park, Idukki – Kerala	Elephant, chital, nilgai, sambar, tiger, barking deer

National park



National parks are those areas in which the wild animals are free to use all the natural resources present in their habitat.

National parks protect the environment, the natural resources and the wild animals present there. At first many national parks in India were wildlife sanctuaries. There are about 89 national parks in India.



Biosphere Reserve

Biosphere reserves are the areas which are specially involved in conservation of biodiversity. Biodiversity is the variety of plants, animals and micro-organisms generally found in an area. A biosphere reserve is a place reserved for all life forms found in a particular area.



- A biosphere reserve comprises an area which is divided into many zones, and each zone is involved in a particular activity.
- Biosphere reserves help in protecting wild animals, traditional lifestyle of regional people and also domestication of plant and animal life.
- Pachmarhi biosphere reserve and Nilgiri biosphere reserve are the important biosphere reserves of India.



- A biosphere reserve comprises a number of national parks and wild life sanctuaries.
- Rajiv Gandhi National Park, Silent Valley National Park, Mukurthi Wildlife Sanctuary and Mudumalai Tiger Reserve are few biosphere reserves.
- The Mudumalai National Park has many varieties of plants such as the Begonia malabarica, rosewood, coral trees, etc.



Rosewood



**Begonia
malabarica**



Coral trees

- The Nilgiris Biosphere Reserve is the first Indian biosphere reserve. Plants and animals confined to a particular area are referred to as the flora and fauna.



The biospheric reserve helps to maintain the biodiversity and culture of that area. A biosphere reserve may also contain other protected areas in it. The Pachmarhi biosphere reserve has one national park named Satpura and two wildlife sanctuaries named Bori and Pachmarhi.

The Indian government has established 18 biosphere reserves in India, which protect larger areas of natural habitat, and often include one or more national parks. They not only protect the animals but also the human communities who live in these regions, and their ways of life. Animals are protected and saved here.

Image source:

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<https://pixnio.com/nature-landscapes/national-parks-reserves/the-guatemalan-government-established-the-maya-biosphere-reserve-in-1990-and-divided-into-three-zones>

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Map outline – mudambisowmya@gmail.com

Sanctuary – Elephant: SSSVV Gallery

River Bird: SSSVV Gallery

Time to teach	Asset Type	Theme	Sub Theme
10 Minutes	Main Script	Conservation of Flora & Fauna	Conservation of forest and wildlife

7. SA_ Flora and fauna around us

Aim: To recognise the flora and fauna around the city.

Materials required: Pens, pencils, notebooks

Setting for activity: Individual/outdoor, Whole class on a field trip.

Procedure:

- The teacher may organise a field trip to a local zoo, a national park or a botanical garden.
- Students have to see both the plant and animal species.
- She may tell the students to note down the names of the plants and animals that they saw in the place, in the observation chart.
- They may be told to bring information on the habits and habitats of these animals and plants.
- She may discuss the need to preserve the plants and animals to have a healthy and bountiful environment.



Observation:

Flora around us	
Plants	

Fauna around us						
Worms	Amphibians	Arthropods	Reptiles	Fishes	Birds	Mammals

Conclusion: This activity will help the students to recognise the flora and fauna around their city.

Image Source:

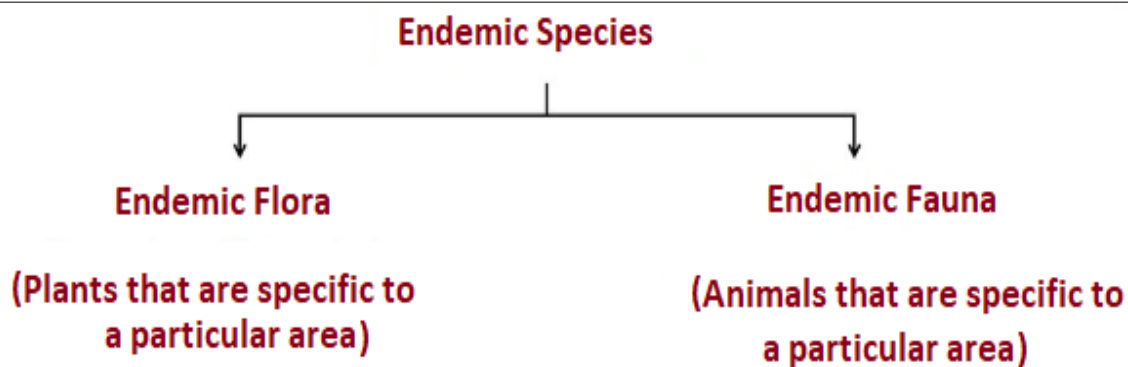
<https://pixabay.com/photos/gede-pangrango-national-park-java-4625862/>

<https://pixabay.com/photos/garden-botanical-spring-park-3689432/>

Time to teach	Asset Type	Theme	Sub Theme
20 Minutes	Suggested Activity	Conservation of Flora & Fauna	Flora and fauna in forests

8. MS_ Endemic Species

Endemic species



Endemic species are those species of plants and animals which are found exclusively in a particular area.

One cannot find those animals and plants anywhere else. A particular type of animal or plant may be specific to a zone, a state or a country.

Endemic Flora

In India, the Pachmarhi biosphere reserve in Madhya Pradesh also has endemic species. Sal and wild mango are one among the endemic plant species.



Endemic Fauna

Bison, Indian giant squirrel and flying squirrel are endemic fauna of this area.



It should be noted that the region to which the species is endemic is called the “endemic site”. Endemic sites can be “national endemic”, a “geographical range endemic”, or a “political region endemic” depending on the location. Since endemic species are unique to a specific geographic region, they have more risk of extinction. They require special conservation efforts. They need to be protected from predators, human activities, and climate changes.

Examples of Endemic Species:

Some examples of endemic species are lemurs of Madagascar and the tortoises of the Galapagos which can be found only in those locations. Kangaroos were originally endemic to Australia and were found nowhere else in the world. In the case of endemic plants, sometimes species become endemic due to habitat destruction.



Image Source:

<https://pixnio.com/fauna-animals/squirrel/virginia-northern-flying-squirrel-on-a-tree-glaucmys-sabrinus-fuscus>

<https://pixabay.com/photos/bison-buffalo-flock-animal-beef-4194794/>

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<https://www.maxpixel.net/Slow-Galapagos-Tortoise-Giant-Tortoise-2962121>

<https://pixabay.com/photos/kangaroo-animal-australian-hop-197717/>

<https://pxhere.com/en/photo/1419093>

Sal tree: <https://www.youtube.com/watch?v=XtHnO6ZnwnC> (Attribution: Under the Sal Tree - Theatre of nature)

<https://pixabay.com/photos/wild-mango-tree-jungle-3808186/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Main Script	Conservation of Flora & Fauna	Endemic species meaning

9. IQ_ Migration

[Notes to the teacher - Teacher may enable the students to think and come out with as many answers as possible before giving out the right answer/ answers]

1. What is meant by the term migration?

Suggested Answer: Moving from one place to another.



2. Can you give examples of migration?

Suggested Answer:

- People migrate from one place to another
- Fishes migrate from one place to another
- Birds migrate from one place to another



People migration



Fish migration



Bird migration

3. Have you seen birds migrating? How do they move?

Suggested Answer: Yes, they move in groups.

4. Why do birds move in groups?

Suggested Answer:

- To conserve energy, since each bird flies slightly ahead of the other, there is less wind resistance.
- To be safe, since each individual is less likely to be attacked by a predator if they are in a group.

5. What is the main purpose behind migration?

Suggested Answer:

1. In search of food
2. Safe place to breed and to protect their babies
3. Warmer/colder climate
4. To avoid diseases
5. To get away from predators.

6. Do all birds migrate?

Suggested Answer: Not all birds migrate. The more severe the climate of an area, a greater percentage of nesting birds migrate.

Image source:

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<https://pixabay.com/photos/salmon-fish-salmon-migration-valdez-435574/>

<https://pixabay.com/photos/geese-flying-birds-sky-1883526/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Inquisitive Questions	Conservation of Flora & Fauna	Migration

10. MS_ Red data book

Red data book is a catalogue of threatened plant and animal species facing risk of extinction.



This concept of Red Data Book was introduced in the year 1963 by IUCN International Union for Conservation of Nature and Natural resources.

The Red Data Book contains colour-coded information sheets, which are arranged according to the extinction risk of many species and subspecies.

- Black represents species which are confirmed to be extinct.
- Red represents species that are endangered
- Amber for those species whose status is considered to be vulnerable
- White is assigned for species that are rare
- Green for species that were formerly endangered, but their numbers have started to recover
- Grey coloured for the species that are classified as vulnerable, endangered, or rare but sufficient information is not available to be properly classified.

Categories of Species

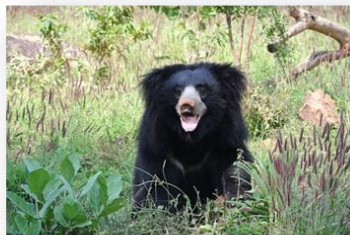
● Threatened species (T)

1. These are the species that can become extinct if not provided with proper food, habitat and protection.
2. Threatened species are recorded in pink pages of Red DataBook

Following categories fall under threatened species

Endangered (E): Species experiencing high risk of extinction in the wild.

Examples (Sloth bear, Rhinoceros, Snow leopard, Great Indian bustard, Blue whale, Indian aconite.



Sloth bear



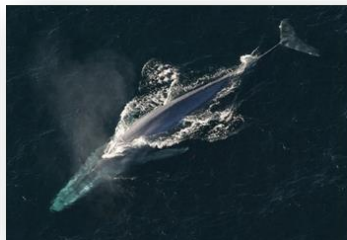
Rhinoceros



Snow leopard



Great Indian bustard



Blue whale



Indian aconite

Vulnerable (V)

Examples- Mountain Zebra, Gaur, Black crowned crane



Mountain Zebra



Gaur



Black crowned crane

Critically Endangered (CE): Species experiencing very high risk of extinction and can become extinct anytime in immediate future.

Examples- Tiger, Sea turtle, Gorilla

**Gorilla****Sea turtle****Tiger****Lower Risk(LR)****Rare (R)****Immediate (I)****Out of danger (O)**

- **Extinct (EX)**

Extinct in wild(EW) Data deficient(DD) Not evaluated(NE)

Advantages of the Red Data Book

- It helps in identifying all animals, birds and other species and gives us information about their conservation status.
- It is used to get an idea about the population of a particular species.
- The data available in this book can be used to evaluate the taxonomy (family, species or group) at the global level.
- With the help of this book, we can estimate the risk of any species becoming globally extinct.
- Provides a framework or guidelines for implementing protective measures for endangered species.

Image Source:

<https://pixabay.com/photos/tiger-feline-cat-wild-animal-3135616/>

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Time to teach	Asset Type	Theme	Sub Theme
10 Minutes	Main Script	Conservation of Flora & Fauna	Red data book

11. IA_ Plant a sapling



The answer to deforestation is reforestation or afforestation. Reforestation is restoration of the destroyed forests by planting new trees. The planted trees generally should be of the same species which were found in that forest. Reforestation can take place naturally also, if the deforested area is left undisturbed. It re-establishes itself. Afforestation is aimed at two kinds of forestry programmes such as social forestry and agro forestry. In a locality, 'Tree lovers Club' can be started, and more people can be invited to join these clubs.



Tree saplings can be planted on the road side. Saplings can be gifted to friends on special occasions and celebrations.



Social Forestry

- In India, the Social Forestry Project was started in 1976.
- Its aim is to encourage natural forests and grow forests on unused lands.
- Social forestry also aims at raising plantations by the common man so as to meet the growing demand for timber, fuel wood, fodder etc. thereby reducing the pressure on the traditional forest area.



Agro Forestry

- Planting of trees in and around agricultural boundaries and on marginal, private lands, in combination with agricultural crops is known as agro-forestry.



- The land can be used to grow agricultural crops and trees, and to rear animals.



Image source:

<https://pixabay.com/photos/tree-sapling-cultivating-soil-2139015/>

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<https://pixabay.com/photos/almk%C3%BCh-cows-cow-alm-alpine-meadow-402204/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Interesting Asides	Conservation of Flora & Fauna	Tree planting

12. MS_ Benefits of recycling paper

Saves energy

Recycling lowers the amount of energy it would take to make new paper. It takes less energy to recycle paper than it does to cut down a tree and make new paper.

Reduces pollution caused by waste

The more we reuse paper, less paper will go to the landfills. Less trash in the landfills means less waste, less pollution.

Saves forest

Paper is made out of trees. Recycling paper means fewer trees being cut down, saves forests, thereby reduces global warming.

Saves resources

When we recycle paper, fewer trees are cut down. It also takes other resources such as energy and water to make paper. The less paper we make, the less energy, trees and water we use.

Decreases the size of landfills

Landfills require land space. If there is too much trash, then there will be no space to put all of the trash. Recycling will decrease the size of landfills.

Environmental protection

Conserves the equivalent of 17 trees worth of lumber. Saves lots of oil and cuts pollution, thereby protecting the environment.

1 ton of recycled paper saves



13 trees



4,100 kw/h electricity



32,000 litres of water



4 cubic metres landfill



2.5 barrels oil

Image source:

http://www.publicdomainfiles.com/show_file.php?id=14023159212540

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<https://pixabay.com/vectors/light-light-bulb-on-bulb-148483/>

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<https://pixabay.com/vectors/oil-droplet-liquid-fluid-graphics-2838626/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Main Script	Conservation of Flora & Fauna	Recycling paper

13. IA_ Drones to grow trees



Forests are the lungs of our planet. But today, we are losing many acres of forests every minute, which means that we are losing millions of trees. The only solution to deforestation is “reforestation”. It is the need of the hour to speed up reforestation to save our planet from further damage.

Scientists are trying to use the latest technology to accomplish massive reforestation. Bio-Carbon Engineering, a U.K based company, has developed a tree planting drone to combat deforestation. Their aim is to plant one billion trees in a year. Following them, many such drones have been created in different parts of the world.

Initially, the drone surveys the area to find out the best zone for tree plantation. The seeds that are best suited for the area are chosen. Seed pods are created with adequate nutrients and appropriate seeds. The drone carrying the seed pod flies about 6 feet above the ground and fires the seed pod onto the ground at the exact position. These drones are highly beneficial since they can plant huge number of trees in a short time. They are capable of planting 100,000 trees in a day.

It is also easier to plant trees in forest areas, where manual plantation is quite difficult.

On June 5th, the World Environment Day, scientists from Indian Institute of Science, Bangalore, made their first drone seeding trial in Gauribidanur area in Karnataka. They aim to make a 10,000 acre area green and convert the inaccessible areas into a forest.



Let us look forward to have a greener future with the efficient usage of this drone technology.

Image Source:

<https://pixabay.com/photos/dji-uav-plant-protection-drone-4204799/>

<https://www.pexels.com/photo/man-planting-plant-169523/>

<https://pixabay.com/da/photos/plantning-plante-femte-fr%C3%B8-5327155/>

Time to teach	Asset Type	Theme	Sub Theme
4 Minutes	Interesting Asides	Conservation of Flora & Fauna	Conservation of forest and wildlife

14. DD_ Days to remember

WORLD WILDLIFE DAY

WHEN	MARCH 3rd
WHY	- To raise awareness about the various benefits that conservation of wildlife provides to people. - The day reminds us of the urgent need to step up the fight against wildlife crime and human-induced reduction of species, which have a large ecological impact.
THEME	2018- “Big cats: Predators under threat” 2019 - “ Life below water: for people and planet”.



**WORLD
WILDLIFE DAY**
3 MARCH

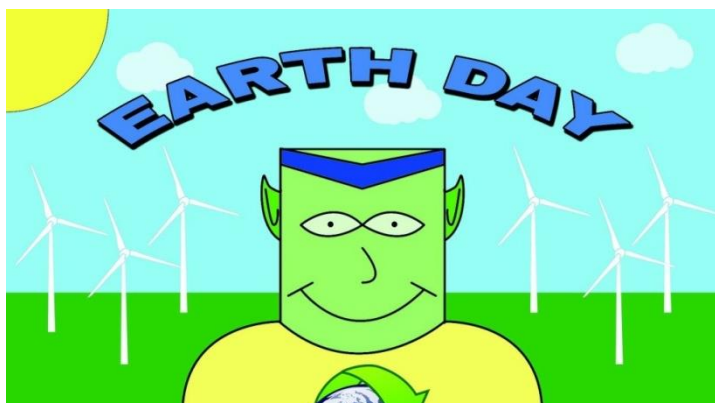
INTERNATIONAL DAY OF FORESTS

WHEN	MARCH 21st
WHY	- To create awareness about the importance of trees in our lives and to appreciate the way in which they protect us. - The day reminds us that forests are an indispensable part of earth as they act as the lungs that provide oxygen for animal respiration and also absorb carbon dioxide.
THEME	2018- “Forests and sustainable cities” 2019 - “ Forests and Education”.



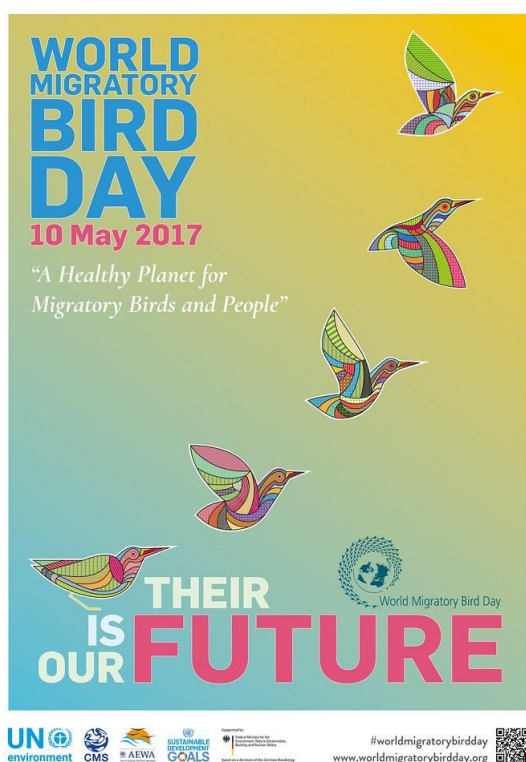
INTERNATIONAL MOTHER EARTH DAY

WHEN	APRIL 22nd
WHY	- To motivate everyone to establish an earth friendly and sustainable development. - The day reminds us that Earth is not just the place we live in but she is considered to be our mother as our entire existence depends on the earth and no other planet exists like her.
THEME	2018- “End plastic pollution” 2019 - “ Protect our species”.

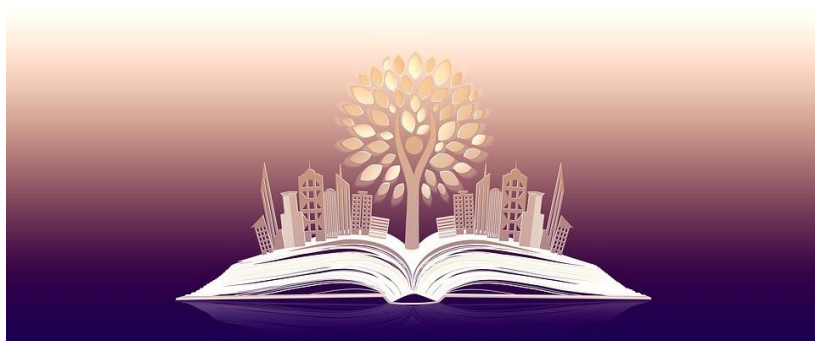


WORLD MIGRATORY BIRD DAY

WHEN	SECOND SATURDAY OF MAY
WHY	- To create awareness on the threats faced by the migratory birds due to various human activities and the need to conserve them. - The day reminds us that migratory species are declining and many of them are becoming threatened species. We need to think about how to create a conducive atmosphere for them.
THEME	2018- “Unifying our voices for bird conservation” 2019 - “Protect Birds. Be the solution to plastic pollution”.

**WORLD ENVIRONMENT DAY**

WHEN	JUNE 5th
WHY	- To create awareness on the protection and improvement of the environment, which affects the well-being of all the people. - This day calls for an enlightened opinion and responsible conduct by individuals, enterprises and communities in preserving the environment.
THEME	2018- “Connecting People to Nature- in the city and on the land, from the poles to the equator” 2019 - “Beat Plastic Pollution”



What environmentalists do on these days?

- They create environmental awareness among the public by organising campaigns, marathons, nature walks, competitions, street plays, rallies, talk shows, exhibitions etc...
- They organise cleanups of beaches, lakes, gardens etc...
- They organise massive tree plantation programmes
- They create stop over sites for migratory birds and conduct bird counting tours.

Image source:

<https://www.flickr.com/photos/worldwildlifeday/12304964963> (Attribution - "[WWD-logo-large](#)" by [WorldWildlifeDay](#))

<https://pixabay.com/photos/green-park-season-nature-outdoor-1072828/>

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<https://www.flickr.com/photos/worldmigratorybirdday/32808045870> (Attribution - [World Migratory Bird Day](#), 2017 POSTER - World Migratory Bird Day)

<https://pixabay.com/illustrations/world-environment-day-environment-3448160/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Day-to-day Relevance	Conservation of Flora & Fauna	Conservation of forest and wildlife

15. IA_ Saalumarada Thimmakka

Thimmakka also known as “Saalumarada” which means rows of trees in Kannada, has planted plenty of trees near her village. She is fondly called the “Tree Woman”.

HER STORY

- She has grown around 400 banyan trees on a 4km stretch between Hulikal and Kudur.
- She and her husband remained childless for many years and they chose to plant trees and tend to them as their own children.
- They started by planting 10 trees in the first year and then the number grew little by little.
- They used the little resources that were available to them to grow these saplings. They even carried water for 4 kms to water the saplings. They made the fences with the thorny shrubs to protect the trees from the cattle.
- They usually planted saplings during monsoon so that enough water would be available for the saplings

to grow and by the next monsoon, the saplings would have grown well with sufficient roots.

Thimmakka has further been involved in several environment protection campaigns. She is frequently invited for various afforestation programmes.

AWARDS

She has received around 50 awards for her contributions towards the environment, like the National Citizens award (1996), Godfrey Phillips award and several state awards.

She received the Padma Shri Award - The fourth highest civilian award for the year 2019.



The 108 year old environmentalist stands as a great role model to everyone, in planting trees and protecting the environment. Her story has even been quoted as an example in the textbooks of school children.

Image Source : <https://commons.wikimedia.org/w/index.php?curid=20050157> - Public domain

Time to teach	Asset Type	Theme	Sub Theme
3 Minutes	Interesting Asides	Conservation of Flora & Fauna	Conservation of forest and wildlife

16. SA_ The Eco warriors

Aim: To enable students to

- Create awareness about conservation of plants and animals.
- Recognise the efforts of individuals towards protection of the environment.
- Develop a determination to protect the plants and animals.

Resources required [with quantities]

1. Newspaper articles
2. Chart papers - 4
3. Sketch pens

Setting of the Activity [Indoor/ Outdoor] - Indoor

This is a team based activity involving all the students in the class.

(Instructions prior to the activity)

- One week before the activity, the teacher divides the class into 4 groups.
- Two groups are allotted the topic “ Conservation of plants” and the remaining two groups are allotted the topic “ Conservation of animals” .
- Students are requested to collect newspaper/ magazine articles about people who have received awards and recognitions for their remarkable contributions towards conservation of plants and animals. They can also collect relevant pictures and slogans related to the topic for making a bulletin board.
- Students from each group are requested to bring one chart paper and sketch pens, on the day of the activity to make the bulletin board.
- The teacher can show or read out a sample article in order to give them a better idea and help them in searching for similar articles.

(Instructions for the activity)

- The students from each group can sit together and gather the articles, pictures and slogans that each one has collected.
- They can make a bulletin board in a creative manner with the articles and information they have collected.
- The bulletin board could be displayed outside their classroom or in an appropriate place to create awareness among all the children.
- If time permits, each group can make a short presentation in the classroom or in the assembly.

Instructions for the Teacher

- Check if all the children have collected articles for their respective groups.
- Check if the articles collected by the children are relevant to the topic given to them.
- Make sure that the students make the bulletin board in a creative and attractive manner.

Precautions to be taken: [if any]

- Students may jot down points relevant to the activity from the internet and maximum resources from newspapers or magazines. This will encourage the children to read newspapers or magazines.
- The teacher can also collect few related articles to help the groups that don't have sufficient articles for the bulletin board.

SAMPLE ARTICLE**WOMAN WHO TOOK ON MAFIA TO PROTECT FORESTS GETS PADMA SHRI**

The Central and Jharkhand Government have done a lot to protect forests, but ‘Lady Tarzan’ Jamuna Tudu’s efforts for environment protection is exceptional. Her life was in danger many times when she took on the Mafia head-on to preserve the forests in Chakulia, Jamshedpur, but she did not give up. Her parents were her motivation. Her father would plant saplings on his land in Rairangpur, Odisha to combat the dearth of natural vegetation in the region. In 1998, she moved to the Matrukham village in Chakulia, after getting married to Mansingh who was a contractor. She noticed that the surrounding forests were being cut down in that area. He group would go around protecting the 50-hectare area of the forest using hand-made weapons like sticks, bows and arrows. Slowly when their numbers increased and reached 60, they formed the “Mahila Van Rakshan Samiti”.

Source : The New Sunday Express, Page-7, Sunday: 27.01.2019.

SAMPLE SLOGANS

1. Don't destroy the greenery and spoil the scenery.
2. Each one, plant one.
3. Don't let the wildlife perish, save them to cherish
4. Save Nature, for our Future

Question to Ponder

What is idea of giving the Nature Friendly slogans?

Slogans when displayed at public places are read by visitors . This will create an impact in their hearts and will definitely bring in a positive reaction and a thought to protect the species.

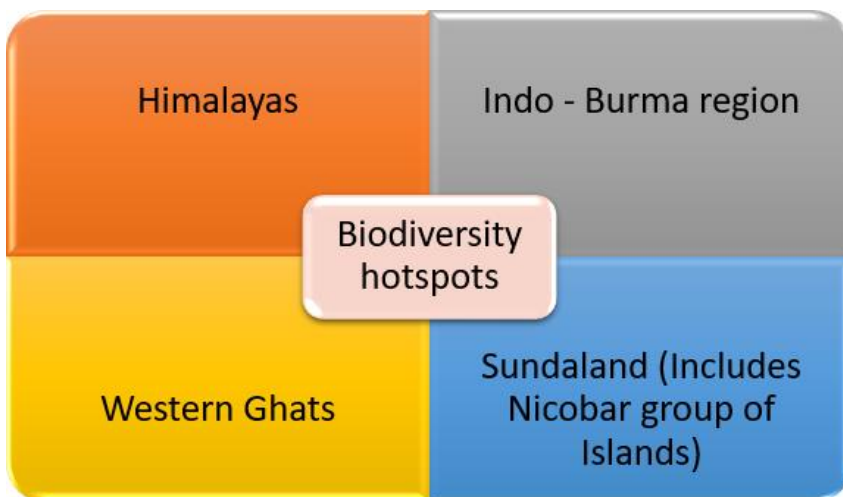
Time to teach	Asset Type	Theme	Sub Theme
20 Minutes	Suggested Activity	Conservation of Flora & Fauna	Ecosystem, Conservation of wildlife

17. IA_ Flora and Fauna of India

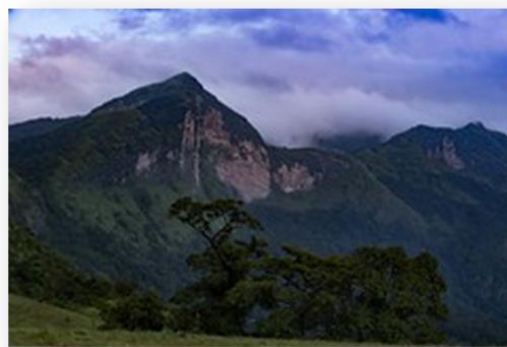
- India has some of the world's most biodiverse regions.



- It hosts 4 biodiversity hotspots



Himalayas



Western Ghats



Indo – Burma region



Sundaland

- These hotspots have many endemic species. One of seventeen megadiverse countries, it is home to many animals.

Mammalian	7.6%
Avian	12.6%
Reptilian	6.2%
Amphibian	4.4%
Fish	11.7%
Flowering plant species	6.0%

- India is home to several mammals, including the Asian elephant, Bengal tiger, Asiatic lion, leopard and Indian rhinoceros.
- These large mammals enhance the beauty of wildlife tourism in India. Many national parks and wildlife sanctuaries meet the requirements to protect and safeguard these animals.
- Project Tiger which started in 1972, is involved in conserving tigers and its habitats. Project Elephant which started in 1992 is involved in protecting elephants. India's rhinos today live in the Kaziranga National Park.



- India also has other mammals such as water buffalo, nilgai, gaur and several species of deer and antelope. Indian wolf, Bengal fox, golden jackal and the dhole or wild dogs belonging to the dog family are also found in India.



Water buffalo



Nilgai



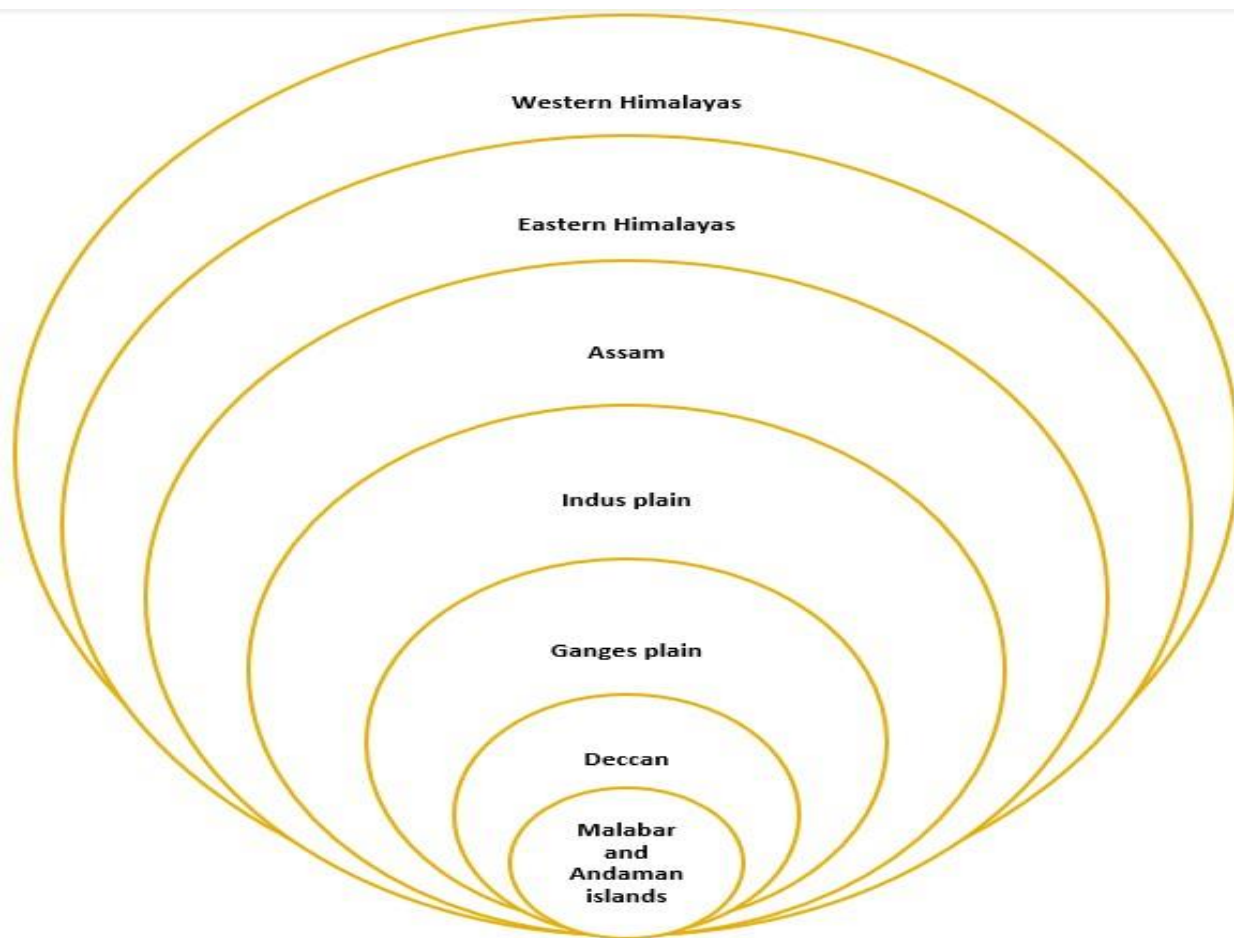
Gaur

**Indian wolf****Bengal fox****Dhole or wild dogs****Golden jackal****Striped
Hyena**

- India also has striped hyenas.
- The flora of India is popular in the world because we have a wide range of climate, topology and habitats.



- The use of plants as a source of medicines has been an integral part of life in India from the earliest times.
- There are more than 3000 Indian plant species officially documented with the regions, possessing these into eight main floristic regions.

**Image Source:**

https://commons.wikimedia.org/wiki/File:Oahu_Landscape.jpg

<https://pixabay.com/photos/himalayas-nepal-mountains-landscape-3989405/>

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<https://pixabay.com/photos/water-buffalo-africa-animal-buffalo-85662/>

<https://pixabay.com/photos/nilgai-antelope-animal-wild-4310418/>

<https://pixabay.com/photos/wild-buffalo-gaur-buffalo-wild-2081931/>

<https://pixabay.com/photos/wolf-wildlife-indian-wolf-3937260/>

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<https://pixabay.com/photos/hyena-walking-savannah-serengeti-591880/>

<https://pixabay.com/photos/sunflower-flower-petals-bloom-3614728/>

<https://pixabay.com/photos/lemon-basil-hairy-natural-spice-906141/>

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Interesting Asides	Conservation of Flora & Fauna	Flora and fauna in forests

18. VC_ Love for Biodiversity

Biodiversity is the variety of all living things; the different plants, animals and micro organisms, the genetic information they contain and the ecosystems they form.

It provides not only practical things like food, energy, medicine and clean air, but also the settings for our lives and how we love them.

To varying degrees, we all have a fascination, a deep connection and awe for nature. Love for biodiversity can lead to care, action and a wish to protect it.

Quote:

Ubuntu –‘I am because we are.’

Story—Love for Biodiversity

Aarav is an amateur wildlife photographer. He was so excited that he got a chance to participate in the ‘International Wildlife Photography Exhibition.’



He was all set to visit different forests and habitats all over the world and click some good photos of a variety of animals there.

Aarav started his exciting journey from Galapagos Islands. He walked silently in the forests. He was awed by the many kinds of rare trees and plants there. He also found evidence of animals living there. Then he went to the beach. He clicked many photographs of a variety of animals and birds in both places. He felt a connection with Nature. He realised why we have to look after the planet, so that beautiful creatures like these don't die out.



Now Aarav went on his journey to the great Amazonia in Africa! Amazonia is believed to be the most beautiful centre of biological diversity in the world. There he saw everything from huge elephants to a tiny arthropod hardly bigger than a tiny dot, flying creatures like birds, butterflies and moths.



Seeing the variety of flora and fauna living in harmony, he understood that even tiny creatures like bees and bugs are so important to our lives. They are fascinating, beautiful, and they provide service, such as pollination that we simply cannot do without.



Finally, Aarav was fortunate to witness and photograph those species of plants and animals which are found exclusively in these places. He was on his way back home. His mind was very calm and balanced for he realised that nature is so beautiful, so bountiful yet so quiet while serving humanity.



Children, do you know that research has found out that we humans use a minimum of 40,000 types of plants and animals every day?

These species contribute to the delicately-running natural cycles that make our life comfortable and contribute to our way of life in many ways.

He reminisced the famous African saying, “Ubuntu – I am because, We are.” Here ‘We’ refers to plants and animals.

Dear children, know that, this is a green world, with animals and humans who are all dependent on the plants and leaves. Some people feel money is important to live. Let us realise we live not by the rattling of our coins, but by the fullness of our harvests.



Image Source:

<https://pixabay.com/photos/gallery-table-museum-decoration-2965961/>

<https://www.flickr.com/photos/31867959@N04/7429202882/sizes/o/> (Attribution - Dallas Krentzel)

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<https://pixabay.com/photos/spring-bird-bird-spring-blue-2295431/>

<https://pixabay.com/photos/bee-insect-purple-flower-wasp-173322/>

<https://pixabay.com/photos/green-grass-outdoor-nature-trees-2561026/>

<https://pixabay.com/photos/nature-earth-sustainability-leaf-3289812/>

<https://pixabay.com/photos/summer-field-nature-cereals-2404769/>

Time to teach	Value Type	Value Sub Type	Value Attribute
10 Minutes	Non-Violence	Love life Around	Stories

19. DD_ Ways to help protect biodiversity

We can help protect biodiversity in the following ways:

- Learn about diversity - Learning about biodiversity is important to understand how humans should live while respecting the earth's limited resources. We can do this by asking our parents, teachers and other elders about biodiversity.
- Be aware when shopping.....

Buy things that help to protect biodiversity. For example,

1. Choose only healthy, local and organic foods as far as possible.
2. Buy foods that have little packaging ie. Fresh foods,
3. Buy environment friendly products, especially for cleaning.
4. Buy products from companies that value the environment and people.



We can make a direct difference as individuals in the following ways:

1. Plant trees in the backyards of houses, school premises, streets and vacant places, making sure we look after the trees we have planted.



2. Keep your environment clean

3. Recycle, reuse and conserve things as much as possible. Reduce wastage.



4. Do not use, eat or buy endangered species or any product made from endangered species.

5. Avoid using pesticides in family and community gardens.



We can volunteer for any of the following organisations that help protect biodiversity:

International Union for Conservation of Nature(IUCN), Green peace, World Wildlife Fund (WWF),etc.



Image Source:

<https://pixabay.com/photos/supermarket-fridge-produce-food-949912/>

<https://pixabay.com/illustrations/coffee---drink-template-packaging-2433133/>

<https://pixabay.com/illustrations/wiper-bucket-water-clean-2055246/>

<https://pixabay.com/photos/tree-watering-child-planting-3335400/>

[https://commons.wikimedia.org/wiki/File:India_-_Kids_-_Planting_trees_for_her_future_\(4040009491\).jpg](https://commons.wikimedia.org/wiki/File:India_-_Kids_-_Planting_trees_for_her_future_(4040009491).jpg) – CC BY 2.0 - [India - Kids - Planting trees for her future](#)

<https://pixabay.com/vectors/trash-environment-garbage-rubbish-310219/>

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<https://pixabay.com/photos/herbicide-avignon-in-rice-field-587589/>

https://commons.wikimedia.org/wiki/File:IUCN_logo.svg – Public domain

<https://www.flickr.com/photos/nonprofitorgs/6904527267/> - CC BY 2.0 - Nonprofit Organizations

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Day-to-day Relevance	Conservation of Flora & Fauna	Conservation of forest and wildlife

20. IA_ Extinction of dinosaurs



- Dinosaurs were the most dominant terrestrial animals with a backbone, that were present for over 160 million years.
- They were of different varieties.
- They existed from the late Triassic period until the end of the Cretaceous period.
- They went extinct at the end of the Cretaceous period.

- All the birds that are present now have evolved during the Jurassic period. As per the fossil record, the dinosaurs who did not go extinct evolved and have become the modern day birds.

Image Source:

<https://pixabay.com/en/pterdactyl-dinosaur-ancient-bird-46279/> - CC0

<https://pixabay.com/en/dinosaur-brontosaurus-sauropods-242679/> - CC0

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<https://www.publicdomainpictures.net/en/view-image.php?image=186141&picture=silhouette-of-an-animal&jazyk=CN> – CC0

<https://pixabay.com/en/woolly-mammoth-animal-prehistoric-2722882/> - CC0

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Interesting Asides	Conservation of Flora & Fauna	Terrestrial animals

21. QA_ Conservation Score



Instructions

1. What is your conservation score?
 2. Discover the impact you are having on the planet.
 3. Be honest in answering to be aware of, how much you are contributing towards conservation of plants and animals.
1. Do you know which plants are specifically found only in your region?
 - a. Yes, I know
 - b. I don't know.
 - c. I know, but not sure about it.

2. Do you know which animals are specifically found only in your region?

- a. Yes, I know
- b. I know, but not sure about it.
- c. I don't know

3. How often do you play and create something out of waste materials?

- a. Once in a year
- b. Not quite often
- c. Very often

4. How many saplings have you planted, watered and taken care of?

- a. One
- b. Few
- c. Many

5. Have you borrowed, shared and/or donated books instead of buying new ones?

- a. I have never done
- b. Yes, I do it often
- c. Have done it sometimes

6. Do you like to spend time in nature spots like forests, beaches, gardens etc..?

- a. I find it boring
- b. I like to spend some time only.
- c. Yes I like it very much

7. How is your plastic usage?

- a. I have sometimes asked my parents not to buy plastic items
- b. I have never thought about avoiding plastic items
- c. I have personally tried to avoid plastic many times.

8. Have you volunteered in any cleaning activities in nature spots in your area?

- a. Yes, I do it often
- b. I have never done
- c. Have done it sometimes.

9. What activity interests you more?

- a. Animal care
- b. Gardening
- c. None of the above.

10. How do you behave when you see an animal or a bird in its natural habitat?

- a. I do not disturb the species in any way.
- b. I try getting close to the species and click a photograph or a selfie.
- c. I try feeding and taming the species.

11. What's your response when you find a rare small flowering plant while on a nature walk?

- a. Try to identify the plant after taking a few photos.
- b. Pluck the flowers to take it home.
- c. Pull off the plant and take it home.

12 . What do you do with the waste generated at home?

- a. I empty the waste in corporation bins.
- b. I don't involve myself with rubbish and waste.
- c. I segregate the waste to find recyclable items before clearance.

13. What does conservation mean to you?

- a. It is an important chapter in the syllabus
- b. It is an interesting topic for school projects.
- c. To take an active part in conserving plants and animals.

14. What do you use for your roughwork?

- a. Use unused papers to make a rough notebook.
- b. Use a new notebook as a rough notebook.
- c. Use a slate/ rewritable boards.

15. Do you know a few animals /birds that are currently classified as endangered species?

- a. Yes, I know few of the species.
- b. I am not interested in knowing them.
- c. I want to know them, but did not try to find out.

ANSWERS : Based on the answers given, marks to be allotted

- 1. a. - 3, b-1, c-2
- 2. a- 3, b- 2, c-1
- 3. a-1, b-2, c-3
- 4. a-1, b-2, c-3
- 5. a-1, b-3, c-2
- 6. a-1, b-2, c-3
- 7. a-2, b-1, c-3
- 8. a. - 3, b-1, c-2
- 9. a-3, b-3, c-1
- 10. a- 3, b- 2, c-1
- 11. a- 3, b- 2, c-1
- 12. a-2, b-1, c-3
- 13. a-1, b-2, c-3
- 14. a-2, b-1, c-3
- 15. a. - 3, b-1, c-2

The teacher can read out the answers once they complete the test and the students can calculate their own score.

1-15 : POOR IN CONSERVATION. You need to start thinking about saving the plants and animals.

15-30 : AVERAGE IN CONSERVATION. You need to look for better alternatives to conserve the plants and animals.

30-45 : SMART CONSERVATIONIST. You are very well conserving the planet and creating a great environment for the next generation. Continue inspiring others to conserve.

Image Source: <https://pixabay.com/sv/illustrations/gr%C3%B6nmilj%C3%B6m%C3%A4ssiga-hus-abstrakt-1357925/>

Time to teach	Asset Type	Theme	Sub Theme
10 Minutes	Assessments	Conservation of Flora & Fauna	Conservation of forest and wildlife

22. IA_ Save the animals

Project Tiger



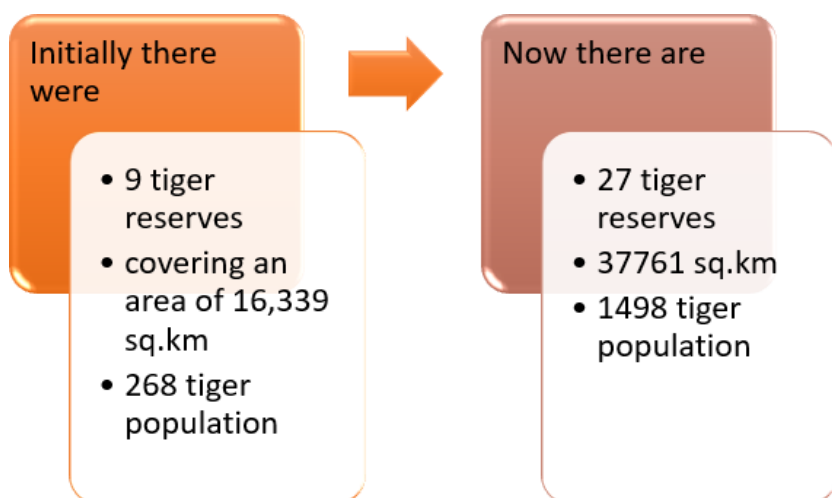
Project Tiger was launched by the Government to protect tigers in the country. The objective of this project was to take care of the survival and the maintenance of the tiger population in the country.





The objectives of the Project Tiger include:

1. Management of wildlife
2. Measures to protect the tigers
3. Development of specific sites so that the local communities are not dependent on tiger reserve resources.



Some of the tiger reserves in India are:

- Ranthambore National Park, Rajasthan
- Kanha Tiger Reserve, Madhya Pradesh
- Corbett National Park, Uttarakhand
- Sundarbans National Park, West Bengal
- Nagarhole National Park and Tiger Reserve, Karnataka
- Bandipur Tiger Reserve, Karnataka
- Sariska Tiger Reserve
- Panna Tiger Reserve
- Manas Tiger Reserve
- Anamalai Tiger Reserve

The Project Elephant

- Project Elephant was launched in 1992 by the Government of India under the Ministry of Environment and Forests.
- This project provides financial and technical support to the wild life management teams of each state who take initiatives in protecting the elephants.
- It makes sure that the elephants live a long life by protecting their natural habitats.

There are around 30 elephant reserves in India. Some of them are:

- Mayurjharna Elephant Reserve, West Bengal
- Singhbhum Elephant Reserve, Jharkhand
- Sambalpur Elephant Reserve, Orissa
- Wayanad, Elephant Reserve, Kerala
- Mayurbhanj, Elephant Reserve, Orissa Nilgiri,
- Elephant Reserve, Tamilnadu Anamalai,
- Elephant Reserve, Tamilnadu Periyar.
- Elephant Reserve, Kerala
- Mysore, Elephant Reserve, Karnataka

Image source:

<https://pixabay.com/photos/tiger-rescue-carolina-tiger-rescue-1809538/>

<https://pixabay.com/photos/tiger-teeth-pause-954440/>

<https://www.maxpixel.net/Thailand-Elephant-Nature-Park-Elephants-2088571>

https://commons.wikimedia.org/wiki/File:National_Tiger_Conservation_Authority_logo.png

Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Interesting Asides	Conservation of Flora & Fauna	National Parks

23. QA_ Conservation of Plants and Animals - A recap

I. Choose the right answer from the following:

1. Conservation means

- a) not using the resources at all
- b) using the resources however we want
- c) both a and b are right
- d) using resources wisely

Suggested Answer: using resources wisely

2.Red Data Book has a record of

- a) Endangered species
- b) Animals
- c) Plants
- d) Insects

Suggested Answer: Endangered species

3.Reforestation means

- a) Planting trees
- b) burning trees
- c) cutting trees
- d) restocking of the destroyed forests by planting new trees

Suggested Answer: restocking of the destroyed forests by planting new trees

**4.III effects of deforestation are, it**

- a) Increases CO₂ level in the atmosphere
- b) Increases pollution level
- c) Increases temperature of earth
- d) All of the above

Suggested Answer: All of the above

**5. Animals whose numbers are reducing to a level that they might face extinction are**

- a) Endangered species
- b) Special species
- c) Dangerous species
- d) Extinction species

Suggested Answer: Endangered species

6. Migratory birds fly to far off places in a particular season of the year because that place becomes

- a) little hot
- b) little warm
- c) very hot
- d) very cold

Suggested Answer: very cold



7. Kaziranga National Park is in

- a) West Bengal
- b) Assam
- c) Rajasthan
- d) Gujarat

Suggested Answer: Assam

8. IUCN stands for

- a) Indian Union for Conservation of Nature and Natural Resources
- b) Indian Union for Conserving Nature
- c) International Union for Conservation of Nature and Natural Resources
- d) International Unity for Conserving Natural Resources

Suggested Answer: International Union for Conservation of Nature and Natural Resources

II. Fill in the blanks

1. _____planted 400 banyan trees. (Salumarada Thimmakka)
2. World Environment day is celebrated on_____. (June 5th)
3. _____species are those species of plants and animals which are found exclusively in a particular area. (Endemic)
4. _____are originally endemic to Australia. (Kangaroos)

III. Word Search**Conservation of plants and animals**

Y	Q	Y	T	I	S	R	E	V	I	D	O	I	B	C	E	V	L	V	O	I	E	N
H	F	J	X	S	I	M	Z	M	P	O	A	C	H	I	N	G	I	U	F	K	W	N
A	G	S	W	B	I	O	S	P	H	E	R	E	B	J	P	I	X	L	U	Z	T	F
B	E	P	X	I	S	A	N	C	T	U	A	R	Y	T	W	X	L	O	K	D	F	I
I	F	E	J	B	I	O	S	P	H	E	R	E	R	E	S	E	R	V	E	G	W	Q
T	L	C	X	D	E	R	E	G	N	A	D	N	E	P	O	I	N	U	E	K	A	D
A	O	I	T	K	O	O	B	A	T	A	D	D	E	R	F	M	N	J	N	F	V	Z
T	R	E	C	G	S	G	W	I	L	D	L	I	F	E	S	Z	V	K	D	A	Z	I
W	A	S	X	B	I	S	O	N	W	X	Q	B	J	C	V	V	F	S	E	U	K	D
G	L	B	P	L	H	N	K	R	A	P	L	A	N	O	I	T	A	N	M	N	D	X
D	E	F	O	R	E	S	T	A	T	I	O	N	P	A	W	C	F	K	I	A	F	G
M	I	G	R	A	T	O	R	Y	A	Y	T	S	K	G	L	R	Z	A	C	W	G	N
O	F	I	N	D	I	A	N	G	I	A	N	T	S	Q	U	I	R	R	E	L	O	C
S	F	T	C	N	I	T	X	E	A	M	C	V	Q	S	I	A	U	P	L	T	G	H
C	I	E	M	C	S	C	O	N	S	E	R	V	A	T	I	O	N	E	G	N	M	I
I	F	O	J	N	A	D	E	S	E	R	T	I	F	I	C	A	T	I	O	N	D	W

Find the following words in the puzzle.

Words are hidden     and .

BIODIVERSITY
BIOSPHERE
BIOSPHERERESERVE
BISON
CONSERVATION
DEFORESTATION
DESERTIFICATION
ENDANGERED

ENDEMIC
EXTINCT
FAUNA
FLORA
HABITAT
INDIANGIANTSQUIRREL
MIGRATORY
NATIONALPARK

POACHING
REDDATABOOK
SANCTUARY
SPECIES
WILDLIFE

Suggested Answer:

SOLUTION**SOLUTION**

.	Y	T	I	S	R	E	V	I	D	O	I	B	.	.	.	.	.	.	.	.	.
H	.	.	.	.	.	.	P	O	A	C	H	I	N	G	.	.	.	.	.	.	.
A	S	.	B	I	O	S	P	H	E	R	E	.	.	.	.	.	.	.	.	.	.
B	P	.	S	A	N	C	T	U	A	R	Y	.	.	.	.	.	.	.	.	.	.
I	F	E	B	I	O	S	H	E	R	E	R	E	S	E	R	V	E	.	.	.	.
T	L	C	D	E	R	E	G	N	A	D	N	E	.	.	.	.	E	.	.	.	.
A	O	I	K	O	O	B	A	T	A	D	D	E	R	.	.	.	N	F	.	.	.
T	R	E	.	.	.	W	I	L	D	L	I	F	E	.	.	.	D	A	.	.	.
.	A	S	B	I	S	O	N	.	.	.	.	.	.	.	.	.	E	U	.	.	.
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D	E	F	O	R	E	S	T	A	T	I	O	N	.	.	.	.	I	A	.	.	.
M	I	G	R	A	T	O	R	Y	.	.	.	.	.	.	.	.	C	.	.	.	.
.	.	I	N	D	I	A	N	G	I	A	N	T	S	Q	U	I	R	R	E	L	.
.	.	T	C	N	I	T	X	E	.	.	.	.	.	.	.	.	.	.	.	.	.
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.	.	.	.	.	D	E	S	E	R	T	I	F	I	C	A	T	I	O	N	.	.

IV. Answer the following questions

1. Name the place which has plants and animals similar to those of the upper Himalayan region.

Suggested Answer: Peaks and those belonging to lower Western Ghats, Pachmarhi Biosphere Reserve.



2. Name five National Parks of India.

Suggested Answer:

- (i) Corbett National Park in Uttaranchal.
- (ii) Kanha National Park in Madhya Pradesh.
- (iii) Sanjay National Park in Maharashtra.
- (iv) Periyar National Park in Kerala.
- (v) Bannerghatta National Park in Karnataka

3. Write a short note on migratory birds.

Suggested Answer: Birds who cover a long distance to reach another land are known as migratory birds. The migratory birds are Bar Headed Goose, Great Cormorant. Migratory birds fly to far away specific areas every year during a particular time because of climatic changes. They fly for laying eggs as the weather in their natural habitat becomes very cold and inhospitable.

4. Why should we conserve biodiversity?

Suggested Answer:

- To protect Mother Earth
- To protect our natural resources
- They are beneficial to us in many ways
- To protect them from getting extinct

Image Source:

Puzzle - OC: puttyrevankar@gmail.com

<https://pxhere.com/en/photo/1164291>

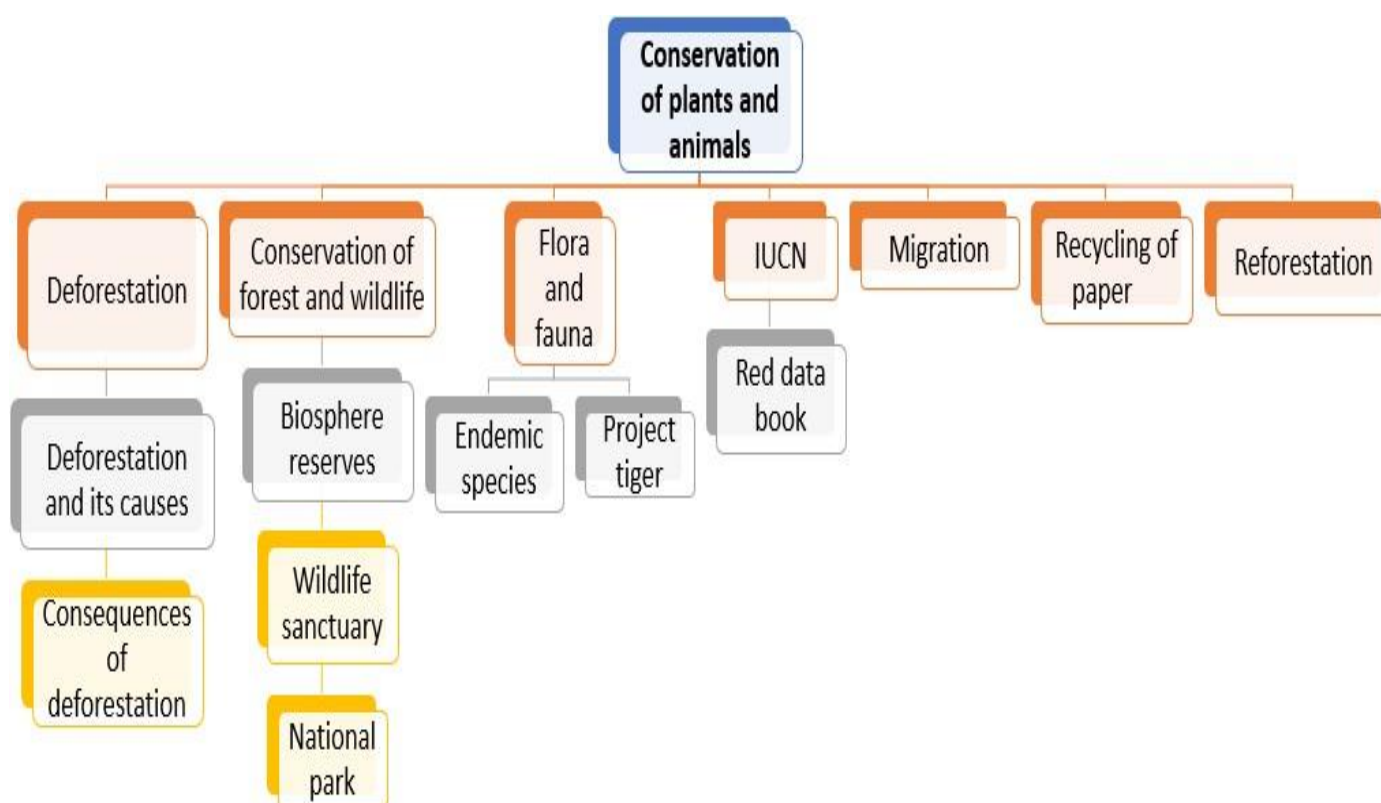
<https://www.publicdomainpictures.net/en/view-image.php?image=296125&picture=deforestation>

<https://pixabay.com/sv/photos/sn%C3%B6-g%C3%A4ss-f%C3%A5glar-djurliv-natur-2645326/>

<https://pixabay.com/photos/western-ghats-sharavati-river-valley-342762/>

Time to teach	Asset Type	Theme	Sub Theme
10 Minutes	Assessments	Conservation of Flora & Fauna	Wild life sanctuaries, Red Data Book National parks, Migration, Flora and Fauna, Forests, Endemic species (meaning, examples), Endangered animals (meaning, examples Conservation of forest

24. MS_ Summary_ Conservation of plants and animals



Time to teach	Asset Type	Theme	Sub Theme
5 Minutes	Main Script	Conservation of Flora & Fauna	Wild life sanctuaries, Red Data Book National parks, Migration, Flora and Fauna, Forests, Endemic species (meaning, examples), Endangered animals (meaning, examples Conservation of forest

Master Lesson Plan

Seven Asset Methodology for MLP	
What is the purpose of this Master lesson Plan?	This Master Lesson Plan (MLP) prepared by Sri Sathya Sai Vidya Vahini, covers the entire chapter for the given board. The chapter given in the textbook is broken down into smaller modules known as assets. One of seven teaching methods is applied to each asset. Several different assets together complete the entire chapter. Each asset is supported by a teaching aid such as animated presentation, audio, video, worksheet; that the teacher can use in the class, while teaching that module. The MLP is for the teacher's preparation and the teaching aids are for use in the classroom.
How to use it?	You can prepare for your class with this MLP by following 3 simple steps: 1. Read your textbook; 2. Go through the information given in the assets (document & multimedia); 3. Prepare your teaching notes. Great! Now you are ready to transact the chapter.
Duration	Kindly note the duration given for each asset. Due care has been taken in planning the assets, to ensure the chapter is completed within the time specified by the Board. Note: Preparation time is not included in the asset duration. The teaching time depends on the duration of the teaching aids and is not impacted by the length of the MLP.
What is a 'Main Script' (MS) Asset?	The Main Script asset is there for explaining the main concepts of the chapter clearly. The information given in the textbook is simplified, organised and structured to give more clarity. Additionally, you may find a video or mnemonics or a graphic organiser to deepen the understanding of the concept.
How to teach using the MS asset?	Please use the blackboard, slides and interaction to develop the concept.
What is an 'Inquisitive Questions' (IQ) asset?	The Inquisitive Questions asset uses questions to promote higher order thinking like the n^{th} why, what-if, new perspectives, cause-effect, and others, creating curiosity.
How to teach using the IQ asset?	You may use the questions to connect with the students, encourage exploration to engage them in the learning process. You may allow multiple responses and instead of rejecting any of the responses, ask why, before revealing the suggested answer or hints.
What is a 'Day to day Relevance' (DD) Asset?	The Day to Day Relevance asset helps students understand the practical relevance of every topic, making them eager participants in the classroom. If students connect the concepts to their environment, they would learn meaningfully without dislike or simply memorizing for exams.

How to teach using the DD asset?	You may use the asset by asking questions about their experience and use it to establish why they are learning the topic. If necessary you may substitute with a recent or local example.
What is an 'Interesting Aside' (IA) asset?	The Interesting Aside asset uses attention grabbing titbits or anecdotes to bring joy and satisfy the child's hunger to know more. This is a quick/short asset intended to bring attention back to the main concept being taught.
How to teach using the IA asset?	You may use this asset to give a piece of interesting information relevant to the topic, without prolonged explanation/discussion. You may suggest appropriate books for further reading.
What is a 'Suggested Activity' (SA) Asset?	The Suggested Activity asset provides a detailed step by step procedure for the teacher to conduct a hands-on activity. This promotes Activity Based Learning.
How to teach using the SA asset?	You may use this asset to energise your students to learn by doing simple, fun-filled activities based on the topic. The asset includes - preparation, activity, and follow-up. You may engage the students in the preparation and follow-up stages to develop collaboration and responsibility. You could try it once, yourself, before the actual delivery to be more comfortable with it. Note: The duration mentioned in the asset is usually for the activity part only.
What is a 'Value Content' (VC) Asset?	The Value Content asset integrates Universal Human Values (such as empathy, inclusivity, respect for nature that translates into responsible behaviour) seamlessly into the curriculum, as the "End of education is character".
How to teach using the VC asset?	You may use this asset to engage with the students to bring out their innate values and connect with the intrinsic values in the topic/concept. The asset includes pointers on the specific pedagogical technique followed.
What is a 'Questions to Assess' (QA) asset?	The Questions to Assess asset uses an interactive approach to check learning of different types of learners, and provides feedback to the teacher for appropriate action. The questions cater to all the levels of Bloom's Taxonomy. Questions from 'Apply' level and above enable students to reflect on their learning.
How to teach using the QA asset?	You may go through the slides to understand its flow and know when to click for the answer (slides include suggested answers). While presenting in the class, you may display the question and encourage multiple responses, before revealing the answer. In some cases, this asset may include extra questions/worksheet that can be given as homework.