

Tales of the Tiger

An Information and Activity Manual for Teachers



A publication supported by Directorate of Project Tiger,
Ministry of Environment and Forests, Government of India

CEE

Centre for Environment Education

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Tales of the Tiger is a component of the educational package developed to mark the completion of 30 years of Project Tiger. This package is supported by the Directorate of Project Tiger, Ministry of Environment and Forests, Government of India.

- Concept and Editing : Mamata Pandya, Meena Raghunathan
Research and Activities : Rasleen Kaur Sahni
Review and Comments : Dr. Rajesh Gopal, Member Secretary, National Tiger Conservation Authority,
Ministry of Environment and Forests, New Delhi
Dr. A.J.T. Johnsingh, Dean, Faculty of Wildlife Studies
Wildlife Institute of India, Dehra Dun
Design : D.M. Thumber
Cover design : Mukesh Panchal
Design assistance : Hardik Raval
Layout : Balamani Menon
Illustrations : Mukesh Acharya, Mukesh Barad, Shailesh Bhalani, Mukesh Panchal, Ravi Panchal,
Vijay Shrimali, Hemal Solanki, Wilson Solanki, Chirag Thumbar, Sandip Thumbar,
D.M. Thumber
Cover photographs : Manoj Dholakia
Production : D.M. Thumber
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Project Tiger is a Centrally Sponsored Scheme of Government of India with the main objective of ensuring a viable population of tigers in India for scientific, economic, aesthetic, cultural and ecological values and to preserve for all time, areas of biological importance as a natural heritage for the benefit, education and enjoyment of the people. It does this through wildlife management, protection measures and site-specific ecodevelopment to reduce the dependency of local communities on tiger reserve resources.

Centre for Environment Education (CEE) is a national institution engaged in developing programmes and material to increase awareness and concern, leading to action, regarding the environment and sustainable development. CEE was established in 1984 as a Centre of Excellence in Environment Education, supported by the Ministry of Environment and Forests, Government of India. CEE's primary objective is to improve public awareness and understanding of the environment with a view to promoting the conservation and sustainable use of nature and natural resources, leading to a better environment and a better quality of life. To achieve this, CEE develops innovative programmes and materials, and field tests them for their validity and effectiveness.

Foreword

Tiger symbolizes the wilderness and the well being of our ecosystem. The combination of grace, strength, agility and enormous power has earned the tiger its pride of place as the national animal of India. The tiger also has scientific, economic, aesthetic, cultural and ecological values. A healthy tiger population signifies a healthy ecosystem, with its diverse flora and fauna.

Tigers were once found all over Asia. However, in the last few centuries, they have been hunted and poached and their habitat destroyed to such an extent that there are only a few thousand tigers surviving in the wild today. India is home to almost 60% of the world's tigers.

For the protection of tigers and their habitats, conservation efforts in India started in 1970 with a complete ban on tiger hunting and export of skins and other derivatives. Under the leadership of the then Prime Minister, late Mrs. Indira Gandhi, the Wildlife (Protection) Act was passed in 1972.

Project Tiger was launched in 1973. This was considered as one of the largest conservation efforts in the world, putting India at the forefront of tiger conservation internationally. The Scheme started with 9 tiger reserves. Today, there are 28 tiger reserves across the country spread over 17 States, representing as many biogeographic zones as possible. This holistic project has undoubtedly put the tiger on an assured course of recovery. It has also been successful in conserving the floral and faunal diversity in the tiger reserves. The density as well as distribution of tigers in States varies as per the forest cover, geographical attributes, natural prey availability, presence of inviolate habitat and protection measures implemented.

Protection, wildlife management, eliciting public support by fostering awareness among all stakeholders, including the people who co-inhabit tiger land and the people who buy tiger body parts and derivatives, are some of the important components of tiger conservation.

This teachers' manual is an attempt to introduce tigers, their life and behaviour, the various values associated with them, the reasons why they are endangered, what agencies across the country and the world are doing to protect them, and what children, our future citizens, themselves can do to make a difference.

Dr. Rajesh Gopal
Member Secretary
National Tiger Conservation Authority

About this Manual

Tales of the Tiger is an information and activity manual for school teachers to help them communicate facts and issues related to tigers in a simple yet effective manner.

The topics in the manual cover a wide range of objectives—starting with creating an awareness of a tiger’s form and features; the adaptations that help it survive and be the top predator in its habitat; developing an appreciation of the important and varied roles played by tigers in the natural environment as well as in culture and traditions; to an understanding of the factors that threaten the existence of wild tigers and the steps being taken to save them.

Tiger Facts: This provides the relevant reference material, which can be useful for introducing the topic or for generating further discussion amongst the students. This includes background information, basic facts and explanations of the topics covered in the accompanying activities.

Tiger Facts are indicated in the Table of Contents with the icon .

Activities: Activities are designed to better demonstrate or explain the concepts and to encourage maximum participation by the students. The activities may be used to introduce or reinforce the concepts. Each activity stands by itself, so you can choose the activities that best suit your requirements.

A step-by-step procedure for conducting the activity is described. Each activity also includes a statement of the instructional objective, the main subject area(s) covered, duration, recommended group size, setting (inside the classroom or outdoors), materials required, as well as a few questions to help you evaluate student learning. The activities also indicate the levels for which they are intended: Elementary (standards 3-5), Intermediate (standards 6-8) and Advanced (standards 9-10). You need not feel bound by the suggested levels. You would be the best judge of what is best suited to your students and the topics you are teaching, or for any other context that you may use it in (a nature camp, eco-club, etc.).

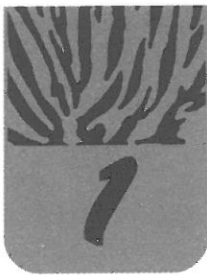
Activities are indicated in the Table of Contents with the icon .

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Tiger Facts

The Magnificent Tiger

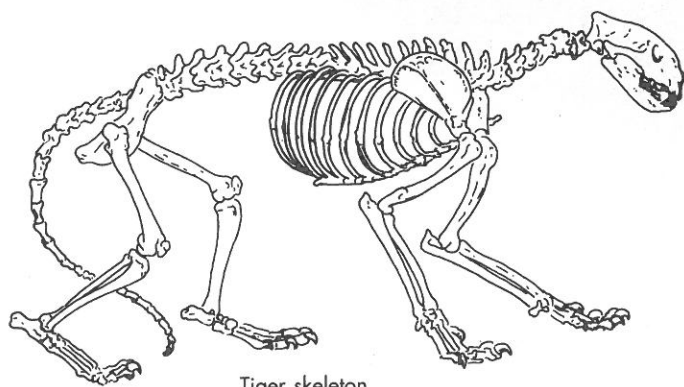
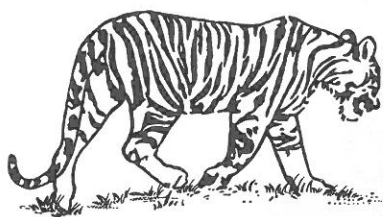
Tigers are the biggest of all the cats. Each aspect of a tiger's structure, body plan and sensory development has a specialized function. The length of a male tiger ranges from 2.2 m to 3.3 m, and that of the female from 2.0 m to 2.75 m. The tigers found in the Sumatran region are the smallest, while those found in Siberia are the largest, with males being nearly 3.3 m in length.

Tails range in length from 0.5 to 1.2 m (about half as long as the body). Tigers use their tails for balance. This function is particularly important when the animal makes high speed turns while running.

The spine is extremely flexible. During a high-speed chase, the belly muscles tighten, making the spine arch like a bow. When the muscles relax, the cat has explosive power for the next step. Tigers are also excellent jumpers, and can leap several times their body length. However, they cannot run long distances at high speeds.

Tigers have relatively long legs, giving them a long *step-length* (the distance covered with each step). Their stance, in which only the toes touch the ground and the rest of the foot remains elevated, gives extra length to each step. Their shoulder blades are located on the sides of the body, rather than on the back (as in humans), so the shoulders "swing" with the legs, further extending the stride.

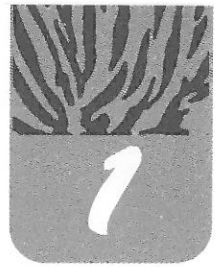
The hind limbs are longer than the forelimbs, as an adaptation for jumping long distances. The forelimbs are tightly packed with muscle to attack and bring down large prey. Tigers are known to bring down animals weighing almost five times their own weight and then dragging them away to a shelter.



Tiger skeleton

A male tiger weighs between 180 and 300 kg. An adult female weighs between 100 and 160 kg. Most of this weight is due to muscle mass, as the skeleton itself is relatively small and fragile. The skeleton and muscles are designed for efficient movement.

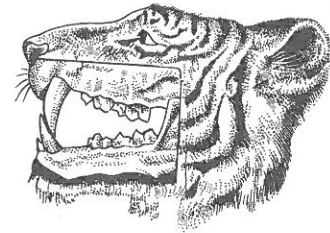
With powerful jaws and long teeth, tigers feed on prey that are as large as, or larger than, themselves. Tigers have the largest upper canines of all the cats. These are 6 to 8 cm in length. When the jaws close, the canines interlock; when the jaws open, the



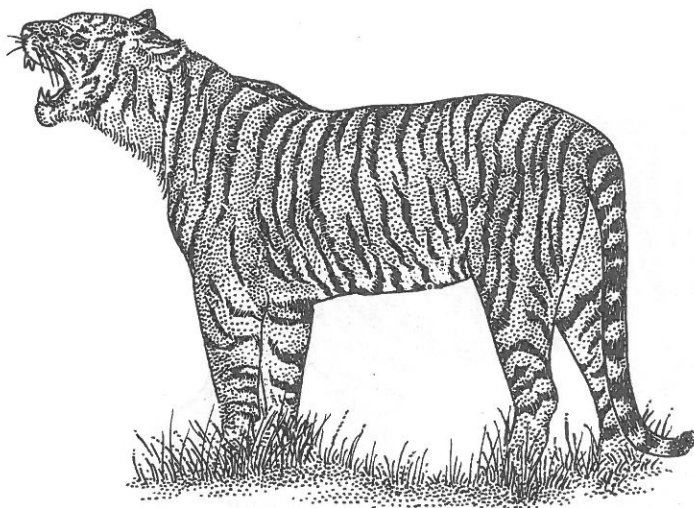
canines can be driven full into the flesh of the victim, piercing even through the muscles. There are gaps in the jaws just behind the canines to allow the teeth to sink fully into the body of the prey.

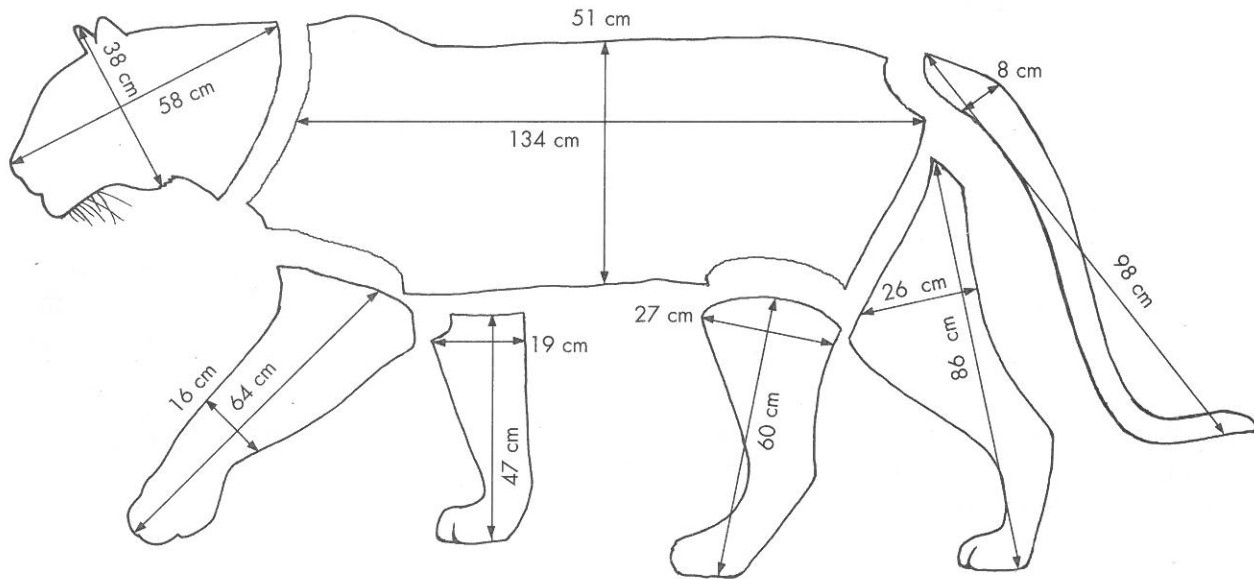
The night vision of tigers is six times better than that of humans. The sense of hearing is so acute that they can distinguish the rustle of leaves in the breeze from the sound of an animal brushing through the undergrowth. Their whiskers are extremely sensitive to touch and the slightest change in air pressure.

Most tigers have an orange coat with grey, brown or black stripes highlighted with white. The stripes help to camouflage and hide the tiger from its prey. No two tigers have identical striping patterns. Tigers that live in cold climates have thicker fur than those that live in warm climates.

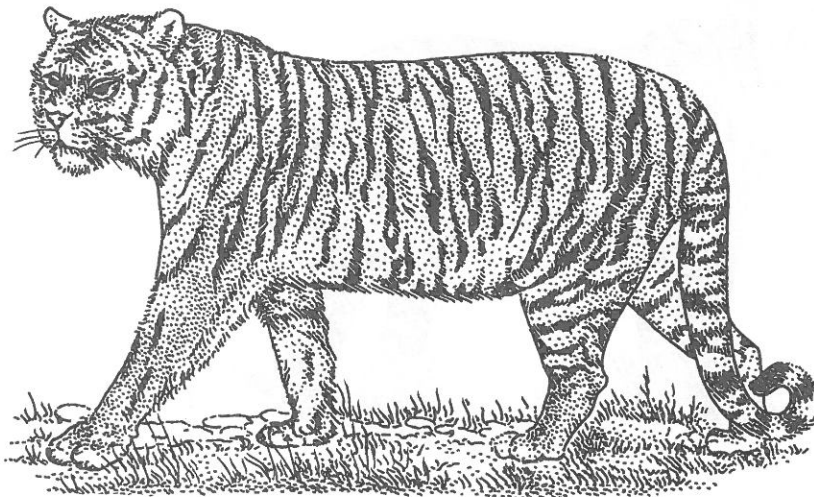


Tiger teeth





Given here are the patterns, in scale, of external parts of an adult male tiger, with their respective dimensions.



Paper Tiger

Objective

To help students learn about the different parts of the tiger's body, and understand the functions of each part.

Before You Begin

Before you begin the activity, collect about 10 to 15 old newspapers, scissors and glue. All these will be needed for preparing the Paper Tiger. A day before the activity, draw the pattern pieces on separate chart papers, and specify the dimensions on each part.

The Activity

Ask the students to close their eyes and visualize a tiger. Have they ever wondered why the tiger has a large size, a striped coat, sharp eyes and long teeth? Discuss the different parts of the body of a tiger, and the form and function of each of these.

Divide the class into 7 groups. Distribute to each group one chart paper with the pattern pieces you had drawn earlier. Explain to the students that each group will be responsible for drawing, cutting and colouring the tiger parts using the pattern pieces.

Tell them to scale up and make cutouts of the different parts according to the sizes specified on the pattern pieces.

As the dimensions of the tiger are large, students may have to join two or more newspapers to prepare a cut-out of a particular part. Once they have finished cutting and pasting the papers to form cut-outs of the specified size, they can colour them.

Now, hold up each one of the tiger's parts, e.g., the legs or the tail, to the wall. Then, ask each student to compare his/her height against each part. Similarly, they can compare their weight with that of a tiger (Adult male – 180-300 kg; Adult female – 100-160 kg).

Next, ask each group to lay the tiger pattern on the floor in the correct shape. The students should then tape or stick together the pieces of the tiger carefully.

The tiger is ready!

They can lift the paper tiger and tape it to the wall.



Level

Elementary

Subjects

Science, Art and Craft

Group Size

7 groups of students

Place

Inside the classroom

Duration

45 minutes

Materials

Newspaper, chart paper, cellotape, scissors, paint brushes, marker pens, tiger picture, glue



Tiger Facts

Camouflage

Scientists have classified cats into 37 species—the domestic cat and 36 wild cats. Each of these cat species, from the lion and leopard, to the caracal and fishing cat, has a different colour and pattern of coat.

Many cats spend a lot of time in the shadows. When sunlight hits the leaves of trees, bushes and grasses, it creates different patterns of light and dark patches everywhere. The spots or stripes on a cat's coat often match those patterns. Thus, the cat blends with its background—making it easier for it to remain unnoticed from enemies or to sneak up on prey.

The colouring and patterns of the coats of cats vary depending on the environment in which they live.

Tiger: It has vertical stripes over its yellow-orange body. Its stripes blend with the shades of the grass. The marking helps the tiger to stalk prey unnoticed. The tigers of the Sumatran region have the most stripes, and the tigers of the Siberian region have the fewest stripes. Tiger stripes are like human fingerprints; no two tigers have the same pattern of stripes.

Leopard: Its coat is marked with small close-set black rosettes. Some leopards seem to have no spots—they are the so-called black panthers. But these cats are really just regular leopards with dark fur. The normal pattern of spots can be seen if they are observed minutely.

Lion: It lives in patches of thorn forests with interspersed grasslands. Its coat is brown with no spots or patterns on it. This uniform colouration helps the lion to blend with the background in the open grasslands.

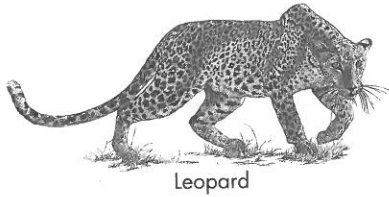
Snow Leopard: The colour of its coat ranges from soft grey to pure white on the underside, with large rosettes.

Clouded Leopard: Colour of the body varies from grey to earthy brown, with dark blotches lined with black. It inhabits dense evergreen forests where it hunts by night.

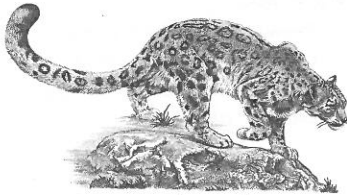
Fishing Cat: The body markings consist of a series of elongated spots arranged in more or less longitudinal rows from head to tail.

Caracal: The colouring is a uniform reddish brown.

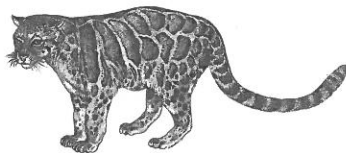
Cheetah: It has solid close-set black spots. It is now extinct in India. The last record of the cheetah in the wild in India is of three males shot in Madhya Pradesh in 1948.



Leopard



Snow leopard



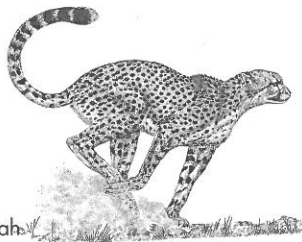
Clouded leopard



Fishing cat



Caracal



Cheetah

Patterns on Cats

Objective

To draw students' attention to the fact that different members of the cat family have different kinds of coats, and to understand how this helps the cats in camouflage.

Before the Activity

Talk to the students about different cats and their body markings. Tell them why each cat is differently coloured and patterned, and how these designs help them in blending well with the background.

Show them a picture of a tiger and talk to them about the stripes, why they are black and vertical, rather than horizontal. Show them pictures of some other types of cats and explain to them that cats are coloured according to their habitats. Ask them to observe the cats' coats very carefully. As you show them each picture, let the students write down the colour and pattern of each cat. For example:

Tiger—orange background, black vertical stripes

Lion—sandy brown with no patterns

Cheetah—yellowish-brown with close-set black spots

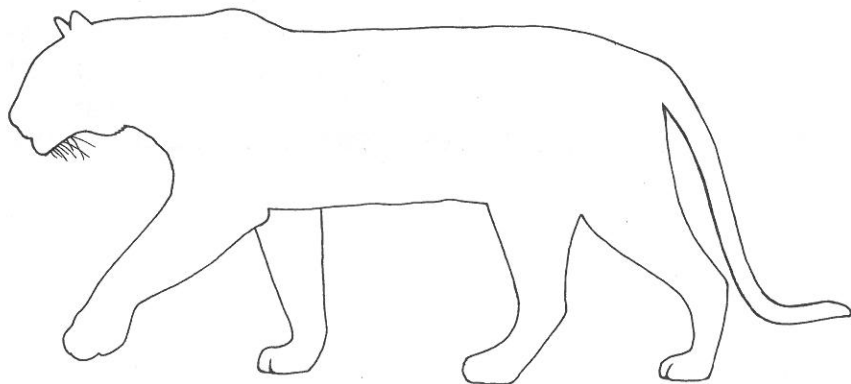
Leopard—black rosettes (rose-shaped markings)

The Activity

Copy the outline given below onto the blackboard. Ask students to copy it onto their drawing sheets.

Tell them that this outline is a general one. As seen in the pictures, different cats have characteristic features (ears, tail, etc.).

Now, let the students recollect the colours and patterns of the cats in the picture you had shown earlier. The students must select their cat, and accordingly draw the patterns and add colours to the outline drawings.



Level

Elementary

Subjects

Science, Arts

Group Size

Individual

Place

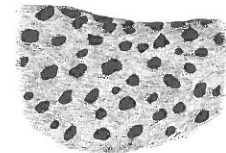
Inside the classroom, or outside on a zoo visit

Duration

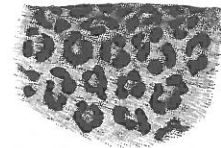
30 minutes

Materials

Crayons, pencils, drawing sheets, pictures of different species of cats, blackboard



Cheetah spots



Leopard spots



Tiger Facts

Where Can We Find Tigers?

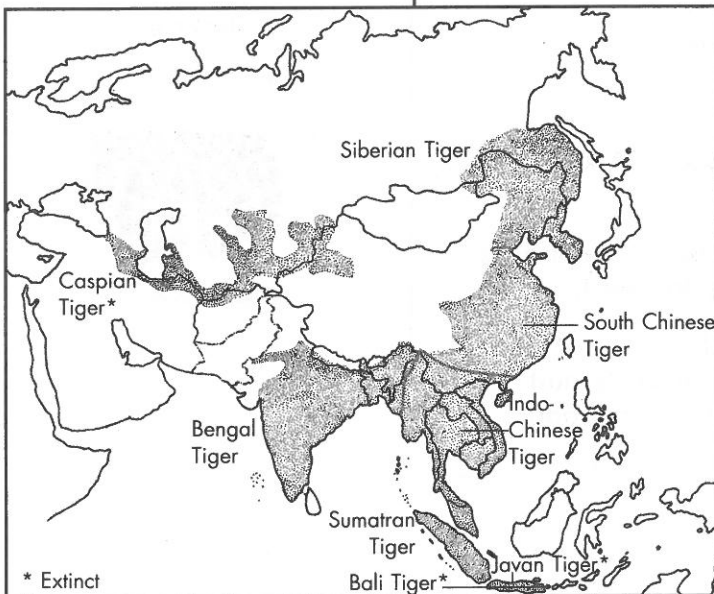
Wild tigers are found only in Asia. About 100 years ago, they were spread throughout Asia, from Armenia and Azerbaijan to Korea and Indonesia. Today, their geographic range has been greatly reduced because of a number of factors, and tigers now occupy less than 5 per cent of their former vast domain. Only about 4,500–7,000 tigers are left in the wild.

Within the range that they occupy, there is a wide variation in habitat and climate—from the hot tropical evergreen and monsoon forests of Indo-Malaysia to the cold mixed coniferous-deciduous woodlands of the Russian Far East, to the humid mangrove swamps of the Sundarbans. Tigers are even found in mountain forests at elevations up to 3,000 metres in Bhutan. During the course of their evolution, tigers have had to adapt to these variations.

Until recently, scientists divided tigers into eight sub-species: Bengal, Indochinese, South China, Siberian, Sumatran, Javan, Bali, and Caspian. Of these, the Javan, Bali and Caspian have become extinct.

Classifying the Tiger

Kingdom	: Animalia
Phylum	: Chordata
Subphylum	: Vertebrata
Class	: Mammalia
Order	: Carnivora
Family	: Felidae
Genus	: Panthera
Species	: Tigris



The differences between the sub-species are essentially based on the region where they are found, and not scientifically-defined genetic differences. There is considerable debate on whether there are subspecies at all. Some scientists have tried to distinguish among them by several physical characteristics that include weight, colour and stripe pattern. However, these differences are merely the result of the tigers' local adaptations, and even within the same region, individual tigers can vary greatly.

The activity Map the Tiger is meant to highlight the spatial distribution of wild tigers, and not the differences between the sub-species.

Map the Tiger



Objective

To help students become aware of the geographical distribution of tigers.

The Activity

Divide the class into eight groups. Give each group one outline political map of Asia. Ask them to select one of the sub-species. Each group will work on the distribution of the eight subspecies of tigers.

Provide each group with necessary information regarding the sub-species from the Table 'Distribution of Wild Tigers' below. The third column gives the estimated number of individuals left in the wild. Each group has to show the distribution of their sub-species on the outline map. They must refer to an atlas to locate the names of the countries and places on their list. Once every group has marked the locations and indicated the number of tigers left in that region, a composite map showing the distribution of all the sub-species can be made on a large map of Asia. Different colours can be used to identify different sub-species. This larger map can be put on the display board for the benefit of other students of the school.

Level

Intermediate and Advanced

Subjects

Geography, Science

Group Size

8 groups of about 5 students each

Place

Inside the classroom

Duration

45 minutes

Materials

Outline maps of Asia, wall map of Asia, atlas, drawing material

Distribution of Wild Tigers

Sub-species	Distribution	Number(s) in the Wild
Siberian Tiger	Siberia in Russia, north east China and may be in North Korea.	430 – 500
South Chinese Tiger	Central and East China	20 – 30 (maybe fewer)
Indochinese or Corbett's Tiger	South China, Laos, Vietnam, Cambodia, Thailand, Myanmar, peninsular Malaysia	1100 – 1400
Sumatran Tiger	Sumatra in Indonesia	400 – 500
Indian or Bengal Tiger	India, Bangladesh, Nepal, Bhutan, NW Myanmar	3600 – 4700
Bali Tiger	Bali in Indonesia	Extinct, last one shot in 1937
Javan Tiger	Java in Indonesia	Extinct, last seen in 1983
Caspian Tiger	N Afghanistan, N Iran, Russia (Central Asiatic area) E Turkey, W Mongolia,	Declared extinct in 1970s

Source: IUCN/SSC Cat Specialist Group, 1997



Tiger Facts

Mothers and Cubs

A mature tigress usually has three to four cubs every two to two-and-a-half years. After a gestation period of 93–110 days, the cubs are born (usually at night) in a secluded, thickly forested area. The cubs are blind, weigh up to 1.5 kgs and are about 30 cm long at birth. Immediately upon delivery, the mother licks them clean, and eats the placenta and embryonic sac. Within minutes of being born, the cubs cry and search for the mother's teats and begin suckling. It is not unusual for at least one cub to die at birth. This is usually the weakest cub in the litter.



At birth, cubs are entirely dependent on the mother. The eyes open after 10–12 days, but their vision clears only after about two months. They live on their mother's milk for 6 to 8 weeks, and are then introduced to meat. The mother stays close to them for the first few months, never straying further than one or two km from the den. She is fiercely protective. If disturbed, she carries them in her mouth to another safe spot.

This is a time of great risk for tiger cubs. While their mother is away hunting, her cubs may be found and killed by other predators. They may succumb to forest fires or sudden floods. If found by people, they are usually killed. Only one or two of a litter generally survive the first two years of life.

After two months or so, the cubs make their first limited explorations around the den, closely supervised by the mother. From three months onwards, they start accompanying their mother to her kills, to feed directly. On these expeditions, the mother is also teaching them the ways of the forest. She instills a sense of order and discipline by the occasional snarl, growl or cough.



Playing and cuddling are important activities for the cubs between three to six months. They are an assertion of close physical bonds between the tigress and the cubs. Playing also assists in building skills of stalking and hunting, as well as survival.

At about six months, the cubs start to roam around more freely. Within any litter, one cub always emerges as the most dominant. This cub will eat first at a kill and be more outgoing than its siblings.

Male cubs grow faster than their female siblings and by one year of age are noticeably larger and more independent. By 18 months, both sexes start making their own kills. The mother frequently absents herself, returning to check on her cubs every few days. Between 18 and 24 months, the association of the cubs with their mother's range gradually decreases.

Cub Announcement Card



Objective

To help students to learn about the birth, and characteristics of tiger cubs.

The Activity

Start this activity by putting a copy of the Tiger Cub Announcement Card on the board. You may also put up on the board some information related to tiger cubs, like their birth, early days and growing up.

Divide the class into groups of two or three students each, and tell each group that they have to prepare a Tiger Cub Announcement Card. Emphasize that while all the facts should be correct, students must use their imagination to present the information in an interesting manner.

To help students understand the procedure of filling a Cub Announcement Card, you can carry out the exercise on the blackboard, of filling a Card for another animal baby or a human baby.

Now ask the students to imagine that they are in the place of the mother tiger. In the first blank (where the name of the person announcing the birth has to be put), they could write "Ms. Tigris", as only the mother is involved in raising the cub.

In the second blank space (where the announcement regarding the child's birth has to be made), tell the students to keep in mind the average number of young that a tigress has at a time (about 3 to 4, but can go up to 7). Under the heading 'Time of Birth', students can give a particular time or season when that cub was born. In tigers living in temperate regions (such as Siberia), this is usually winter. Tigers living in tropical regions can have cubs any time of the year.

For the blank 'Place of Birth', students should name the place where for cub was born, for example, a cave, rocky crevice, a bamboo grove, etc. In the blank spaces for pictures, the students can stick a photograph or draw a tiger cub. Students can also draw a picture of the tigress.

Tell the students to give interesting facts about the cub, such as, when a cub is born, it is blind and helpless and requires its mother's help. It remains in the den till it is two to three months old, after which it, along with its siblings, accompanies its mother on hunts. The cards may be put up in the class or on the notice board for display.

Level

Elementary

Subjects

Science, Language and Craft

Group Size

Group of two to three students each

Place

Inside the classroom

Duration

30 minutes

Materials

Writing material

CUB ANNOUNCEMENT CARD	
_____ announces	
the birth of _____	
First Photo	
Time of birth _____	
Place of birth _____	
Special Baby Facts	_____ _____ _____
Proud Mother	



Tiger Facts

Language of the Tiger

Tigers communicate with each other using a variety of means—vocal, visual, as well as scent and touch.

Tigers use scent communication by spraying urine to mark their territory, which can be many square kilometres in size. They also leave claw marks on trees.

The scent serves a number of purposes: It enables tigers to follow one another in the forest; It indicates that the area is occupied, and so the other tigers, depending upon the circumstances, would either be attracted or repelled by it; It also communicates specific information such as the identity of the individual tiger, and the time elapsed since it passed by that spot. In case of a tigress, it indicates whether or not she is in heat (ready for mating).

Tigers are also quite articulate and have a wide variety of vocalizations, such as chuffing, growling, hissing, grunting, mewling and roaring.

Growls and snarls are the most common form of communication. Annoyance or anger at being disturbed or prevented from retreating in a desired direction evokes snarls and deep-throated rumbling growls of varying intensity, often ending with a harsh bark-like snarl.

The roar is a loud, long-drawn, moan-like resonant sound that reverberates through the forest. It can be heard over 3 km. A roar advertises location and warns away other tigers, or attracts them when the search for a mate is on.

Roars may be preceded with long, low moans. A tigress also uses moans to communicate with her cubs, especially when she does not want to attract the attention of potential enemies. Frequently, cubs are heard to purr while rubbing heads with each other or with the mother.

A 'chuff' or 'prusten' is a friendly and non-threatening sound made when two tigers meet (captive tigers sometimes use it with their keepers).

The 'pook' is a sound similar to the alarm call of the sambar, a favourite prey animal of the tiger. It has been variously interpreted as a means of locating sambar, as a mating call, as a way of evoking a response from an object the tiger cannot fully identify, or to announce its presence to other tigers.

At close quarters, tigers use body (especially tail) language to show aggression, affection, curiosity, etc.



Speechless!

Objective

To help students learn about the ways of communication used by tigers, and to encourage creative expression.

The Activity

Divide the class into groups of 5–6 students each. Explain to students that, just as humans communicate with each other to share information, experiences and knowledge, animals too communicate with other animals of the same species or of different species. Tell them that, through this activity, students will be able to appreciate the different ways used by tigers to communicate with each other.

Using the Tiger Facts, tell them about the range of sounds that tigers make. Encourage the students to think of situations when tigers communicate—using any of these ways. Write the suggestions on the board. There need to be as many situations as there are groups. Some examples of situations are:

- A tiger warning other tigers to stay away from its territory
- A female in oestrus trying to attract a mate
- More than one male responding to a female's mating call
- A mother teaching her cubs to hunt
- Cubs mock-fighting with each other
- A male tiger encountering a sub-adult male in his territory
- Tigers in a zoo enclosure annoyed with visitors

Next, give each team 10 minutes to improvise a short (5 minute) performance based on the simple situations discussed earlier. They can use facial and body movements, markings (using chalks or other objects) and sound (but NO WORDS). They cannot lip-synch either!

You must ensure that all the students of the group are part of the performance. Encourage the students to be creative with their scripts and actions, and, if needed, reassure them that they should not feel any hesitation or embarrassment.



Level

Elementary and Intermediate

Subject

Dramatics

Group Size

Groups of 5–6 students each

Place

Inside the classroom

Duration

45 minutes

Materials

Blackboard, writing material

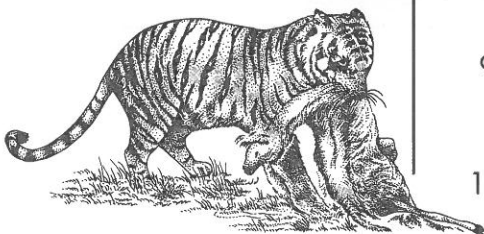
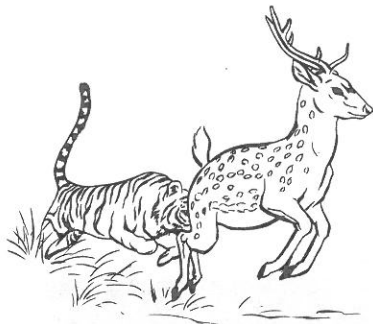


Pankaj Gorana

Tiger Facts

Facts and Fallacies

1. The tiger has a wide geographical distribution. It is found in all types of climates and habitats ranging from extreme cold, and pine and fir trees, to sweltering heat and thick forests with heavy undergrowth. In India, tigers are found in dry forests of Central India, in grasslands of Assam as well as in the swamps of Sunderbans.
2. The tiger is shy, solitary and reclusive. Unlike some big cats like lions, in general, adult tigers do not live and move around in groups. Adult tigers in the wild live alone (except for mother tigers with cubs). This is partly because in the forest a single tiger can sneak up and surprise its prey better than a group of tigers can. The word for a group of tigers is a streak.
3. The tiger is predominantly a night-time hunter. Highly developed nocturnal vision enhances its hunting ability at night.
4. The tiger's preferred prey is ungulates (hoofed animals) like wild deer or wild pigs. They have also been known to eat fish, birds and even other predators like leopards and bear.
5. The tiger is successful in hunting down its prey in only 10 to 20 per cent of the attempts. Unlike a cheetah, the tiger cannot run down its prey by chasing it over a long distance. It kills by stalking its prey from the rear, creeping up on it, and then springing upon it. A tiger usually makes 2-3 springs and gives up if it does not succeed in bringing down the prey.
6. The tiger relies on strength and surprise, rather than speed, to kill its prey. It stalks to a point within striking distance (25 m), then charges in a sudden burst of speed, and brings its prey down.
7. The tiger eats about 25-30 kg of meat at a time. If undisturbed, it returns to its kill for 3-6 days to feed on it.
8. The tiger usually takes the prey's body to a secluded spot. After the first helping, it goes for a drink, then rests in the vicinity of the prey. It feeds on it again later, sometimes for 2-3 days if it is a large prey.
9. An adult tiger must make a medium-sized (average weight of 60 kg) kill about once every seven days, while a female with cubs needs to kill about once every five days.
10. Human beings are not regarded as normal prey and tigers usually avoid humans.



Junior Editor

Objective

To help students identify correct and incorrect information related to tigers, and understand why accuracy in journalism is important.

The Activity

Discuss various facts about tigers by referring to the Tiger Facts given in the earlier pages. Tell the students that this activity will help them test their level of understanding about tigers by identifying incorrect information about them.

Explain to the students that they have to pretend to be editors of a popular science and nature magazine. Editors receive many articles and stories each week from writers. As editors, they have to decide which of the articles and stories can be printed in their magazine. Magazines have to print information that is well-written, yet fair and accurate.

Dictate to the students the passage "*Panthera tigris*". Tell them that they have received this from an author. They have to go through the piece to decide whether or not it can be printed in their magazine.

Tell the students to read the passage carefully and underline any words, phrases or sentences that they feel are inaccurate. Ask them to number each word or phrase they underline and then write why they think it is wrong. This can be based on class discussions and, wherever possible, research by the students.

When all the students have finished the corrections, go back to the passage and discuss with them the inaccurate information it contains. The piece is given below with the inaccuracies italicized. Each of the italicized sections is numbered and, corresponding to each number, an explanation of the factual inaccuracy is given in the Tiger Facts on page 14.

Panthera tigris

Mighty and majestic, the tiger is one of the most feared predators of the world. Even though it is the national animal of India, in the wild, it is found *only in the deciduous forests of Kanha*¹. Here, it has abundant water, prey, vegetative cover, and slight or no disturbance by humans—the essential attributes of a tiger habitat.

The tiger is a *highly social*² animal that prefers to *hunt in the day*³. Its favourite food includes *baby elephants, rhinos and domestic cattle*⁴.

A *highly successful predator*⁵, it is known for its *speed and outruns the prey*⁶ to catch it. The tiger eats about *80-90 kgs of meat in a day*⁷, and will *never return to a kill*⁸ if it has not finished eating in the first sitting.

The tiger is a voracious eater, and needs to make at least *one medium sized prey a day*⁹ to stay alive. It poses a *serious danger to humans, and attacks them whenever it can*¹⁰.



Level

Elementary and Intermediate

Subjects

Science, Language

Group Size

Individual

Place

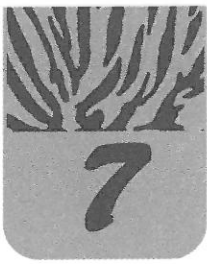
Inside the classroom

Duration

30 minutes

Material

Copy of "*Panthera tigris*",
writing material



Tiger Facts

Chains and Webs

Organisms interact with their surroundings, including other organisms, in a variety of ways. These organisms may have some activities or requirements in common, such as food, shelter, habitat, etc. These interactions may occur between individuals of the same species or between individuals of different species. One such relationship is that of the predator and prey. Predators kill and eat prey. In an ecosystem, this sequential chain of eating and being eaten is called *food chain*. These food chains are not isolated. Rather, a number of food chains are interconnected, thus forming a *food web*.

Plants form the base of almost every food chain on Earth. Plants use energy from the sun to make their own food through photosynthesis. Plants are called primary producers, because they supply food at the lowest level of a food chain. In turn, some animals eat plants (they are called *primary consumers*), and other animals eat the plant-eating animals (these are called *secondary consumers* or carnivores).

The tiger is at the apex of many of the food chains in a forest. The number of prey animals in a forest is a key factor in determining the number of wild tigers that can live there. An adult tiger must make a medium-sized kill (average weight of 60 kg) about once every seven days, while a female with cubs will need to kill about once every five days. This amounts to about 50 prey animals per year for a single tiger, and 70 prey animals per year for females raising cubs. To support a single tiger, a prey base of about 400 ungulates (hoofed animals) may be needed. These, in turn, require an area with enough vegetation to sustain them.

Tigers work hard for their meals. Although highly skilled hunters, not all their hunting attempts end in success. From studies, it appears that only one stalk in 15 to 20 is successful.

Predators like the tiger help to restrict the number of hoofed animals and prevent their populations growing to the point where vegetation would be over-used. This would lead to a break-down of the web.



Chital stag

Connections

Objective

To help students appreciate the interdependence of organisms in a food web.

The Activity

Before you begin, copy the description clues of each of the animals from the information under "Tiger Food Web" on page 18–19 on separate slips of paper and put the slips in a bag.

Start the activity by discussing the concept of food chain (a food chain shows the transfer of energy, in the form of food, from one organism to another). A simple food chain would be grass → deer → tiger.

A food web is a more realistic way of explaining the transfer of energy between animals and plants than a food chain, because most animals tend to eat more than one kind of food.

Write 'plant' at the bottom of the blackboard, and explain that plants form the base of most food chains on earth. Then, write 'tiger' at the top of the blackboard and explain that the tiger is at the top of many food chains in the forest.

Next, divide the class into groups of three. Ask one of the groups to come up and take out a slip from the bag you have prepared earlier. From the clues given, the group has to guess the name of the animal and decide if it is a primary or a secondary consumer. The group should then write the name of the animal at an appropriate level on the board and draw lines from it to any other organism on the blackboard with which it might be connected in a food chain.

Call the next group now and repeat the activity until all the animal clues have been solved. If you think that students will not easily be able to make the links, you can put up the Tiger Food Web table for reference.

Note: The Food Web thus formed is only representative. Many more webs will exist in a forest involving many of the animals discussed.



Level

Intermediate and Advanced

Subject

Science

Group Size

Groups of three students each

Place

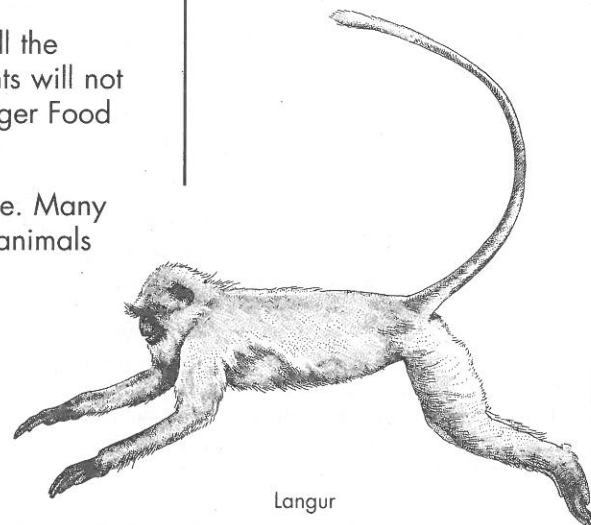
Inside the classroom

Duration

40 minutes

Material

Blackboard, small bag, small strips of paper



Langur

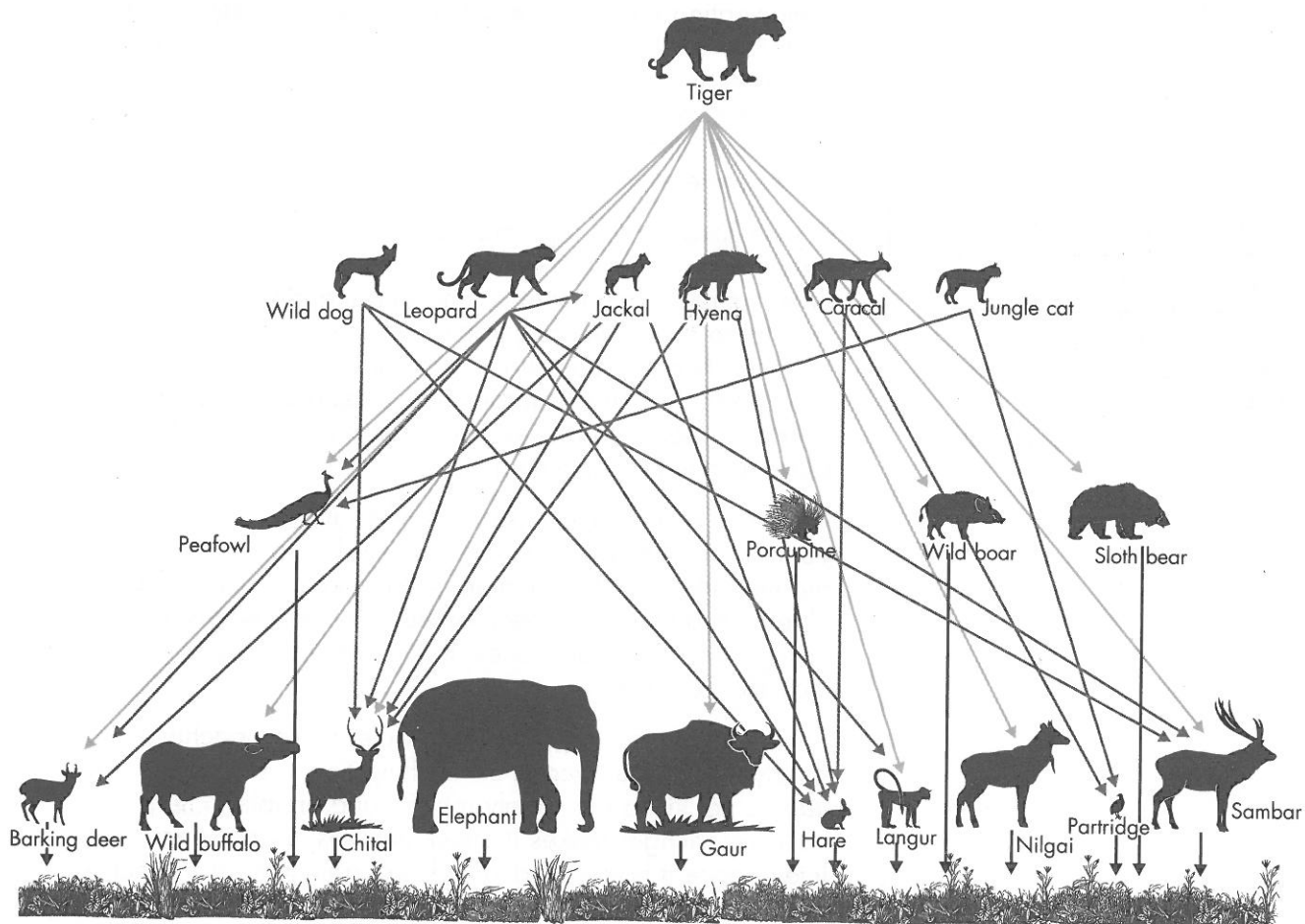


Tiger Food Web

Animal	Description Clues	Eats	Is eaten by
Barking Deer	Small deer with small antlers and a bark like a dog's	Plants	Leopard, Jackal, Tiger
Wild Buffalo	Massive, slaty-black coloured bovid (a member of the family "Bovidae", which includes cows, buffalo, sheep, goats, etc.) with large horns	Plants	Tiger
Caracal	Cat with long pointed ears and tuft of black hair at the ear tips	Hare, partridge	
Chital	Large deer, having a reddish fawn coat with white spots and white underparts	Plants	Tiger, Leopard, Jackal, Wild dog
Gaur	Large wild ox with broad forehead and short thick curved horns	Plants	Tiger
Hare	Swift, long-eared, rabbit-like but larger, having a divided upper lip and long hind legs	Plants	Leopard, Caracal, Wild Dog, Jackal, Hyena
Hyena	Large scavenger that lives chiefly on carcasses of animals. Does not generally hunt for its food.	Insects, small mammals (like hare and chital), bird's eggs, even fruit and vegetables	
Jackal	Nocturnal hunter, smaller than a wolf, noted for its piercing howling. Member of the dog family (Canidae).	Chital, barking deer, hare	Leopard, Tiger
Jungle Cat	Small wild cat having pointed ears and long legs	Partridge, rodents, peafowl	
Langur	Monkey with long tail	Plants	Leopard, Tiger
Leopard	Largest spotted cat	Langur, barking deer, chital, hare, sambar, jackal, peafowl	
Nilgai	Large Indian antelope; male is blue-grey with white markings	Plants	Tiger
Partridge	Medium-sized bird of the pheasant family. Ground-nesting, seed-eater. All species are hunted for sport and food.	Plants	Caracal, Jungle Cat
Peafowl	Large ornamental bird. Male has strikingly coloured tail feathers to attract female.	Omnivore (eats seeds, roots, worms, etc)	Tiger, Leopard, Jungle Cat
Porcupine	Large rodent covered with over 30,000 quills which are 2.5-6 cm in length	Plants	Tiger

Contd...

Animal	Description Clues	Eats	Is eaten by
Sambar	Large deer, having a uniform reddish-brown coat. Male has 3-pointed antlers	Plants	Tiger, Leopard, Wild Dog
Sloth Bear	Relatively small bear, with shaggy coat. Display a white or cream-colored U shaped patch on their chest.	Omnivore. Food includes honey, termites, ants and fruits	Tiger
Wild Boar	Wild pig with a narrow body. Males have prominent tusks.	Plants	Tiger
Wild Dog	Wild canid, resembles domestic dog	Chital, hare, sambar	





Tiger Facts

Man-eater

One of the few times a tiger hits the headlines is when it turns man-eater, attacks a handler, or mauls the person who had kept it as a pet. Unfortunately, most of the world associates tigers with man-eaters.

Human beings are not regarded as normal prey, and tigers usually avoid humans. However, there have always been cases of individual tigers that attacked human beings. The reasons a tiger kills humans are more likely to do with disease, old age, infirmity, and, in case of tigresses with cubs, the need to protect the young ones. Once it discovers how vulnerable humans really are, there is a strong likelihood that it may turn into a man-eater. Yet, less than 3 per cent of wild tigers are actually man-eaters.

A man-eating tiger can be defined as one that deliberately hunts humans for food. The root cause for a tiger becoming a man-eater is a disturbance or damage to the tiger or its habitat; or if it is crippled, or too old and enfeebled to pursue deer, boars and other wildlife; or if, for some reason, its natural prey has become scarce.

In such situations, a tiger may take to occasional cattle-lifting in areas close to human habitations. This may, at times, lead to direct conflicts with humans, and to get at the livestock, the tiger may try to overcome the people. Diminishing tiger habitat and booming human populations increase the likelihood of these encounters. If such a confrontation takes place a few times, the tiger may feel emboldened enough to take to man-killing and subsequently to man-eating.

In certain circumstances (such as when it is at its kill, eating it or guarding it, when it is nursing a wound, when a tigress is rearing cubs, or when a male is courting a female), a tiger objects to a close approach by humans, and warns the intruder with growls and short rushes. If it continues to feel threatened, it may kill the intruder.

Sometimes it may happen that people, while poaching or simply wishing to avenge cattle-lifting tigers, shoot at it. If the tiger is not killed but merely injured and unable to hunt naturally, hunger makes it attack humans. By accident, or by intent, once it has wounded or killed a human, its instinctive fear vanishes quickly, as it realises how helpless humans really are. And then, it may become a confirmed man-eater.

"A man-eating tiger is a tiger that has been compelled, through stress of circumstances beyond its control, to adopt a diet alien to it. The stress of circumstances is, in nine cases out of ten, wounds, and, in the tenth case, old age."

Jim Corbett

Man-eater of Bhilwani

Objective

To help students increase their ability to understand, remember and interpret information, and understand and appreciate some of the reasons why tigers become man-eaters.

The Activity

Before you begin, copy the passage 'Man-eater of Bhilwani' on pages 22–23 on a large paper and paste it on the class bulletin board, or read it out to the students and ask them to copy it in their notebooks as a dictation.

Then dictate or put up the following questions. Ask students to read the passage carefully and find the answers. Discuss these in class.

Questions

1. Who/what did the tiger kill the first time it attacked Bhilwani?
2. On which day or night did the tiger kill two bullocks? How close did he pass to humans on his way to the cattle shed?
3. When did the tiger have his first taste of human flesh? How long after killing the man did he eat him?
4. Why did the tiger kill the domestic animals?
 - He wanted a change of diet.
 - He liked dogs.
 - He was injured and hungry.
5. For how many months was the tiger active near the village? How many people did he kill?
6. True or False?
 - The second time the tiger attacked, it was to kill the children watching over the cows.
 - The tiger's last kill was on 21st February. He died shortly afterwards.
 - The tiger ate up human beings whenever he killed them.
 - The tiger's injury prevented him from hunting his normal prey.
7. Humans were responsible for the tiger turning into a man-eater. Discuss.
8. Do you think the tiger perceived humans as obstacles to his meal, or as meals themselves? Discuss.



Level

Intermediate and Advanced

Subject

Language

Group Size

Individual

Place

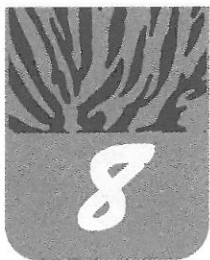
Inside the classroom

Duration

30 minutes

Material

Chart paper, writing material, copies of the passage 'Man-eater of Bhilwani'



Man-eater of Bhilwani

Kanha has rarely witnessed man-eating tigers, but a notable case has been that of the Bhilwani tiger which killed four people between 7 December 1974 and 2 March 1975. Bhilwani, 13 km north of Kanha, is situated on the periphery of the Park.

The first incidence occurred on the night of 7–8 December when the tiger jumped the thatch umbrella under which two boys with their dog were resting, guarding the crop in their field at the edge of the forest in the south of the village. While the boys got trapped under the thatch umbrella, the dog ran out from under it. The dog was picked up by the tiger, and the next day its skull was found about 200 metres away in the forest.

That morning, the tiger, quite certainly in an attempt to lift a cow grazing at the edge of the forest, mauled the boy looking after the herd. In the subsequent commotion, the tiger dashed back into the forest without doing further damage, or even hurting the girl accompanying the boy. The boy succumbed to his injuries the next day.

On 9th night, the tiger forced open a piggery along one of the outlying huts in the village and decamped with two piglets. The next night, he raided another hutment in an adjacent village, about a kilometre from Bhilwani, and killed two bullocks. As was later observed, the tiger, while heading for the cattle shed, had passed within handshaking distance of the owner sleeping in the open verandah of his hut.

On 11 December, the tiger attacked a man walking in front of his child in the forest, killing him instantly. On the boy's raising a shout, the tiger bounded into the forest. The boy then ran to the next village and although it was a good half hour before the villagers arrived on the scene, the tiger had not even returned to feed on the kill. The body was intact except for the broken neck and canine marks on it.

The villagers decided to first inform the relatives of the dead man, in another village, before carrying the body. When people returned to the site in the afternoon, the right leg had been eaten away and its bones lay scattered at the spot. But when the police arrived the next evening, and the people reassembled, they found that the body had been dragged some 100 metres along a dry ravine where it had been completely devoured.

Upon detailed enquiries and examination of pugmarks, it became evident that all this was the handiwork of one tiger who came to be designated as the Bhilwani man-eater.



The man-eater continued to be located, on and off, in the vicinity of the village but all initial attempts to kill him failed. He killed some cattle and once a man, when he was persistently deprived of feeding on the three successive bullock kills he had made in a single day.

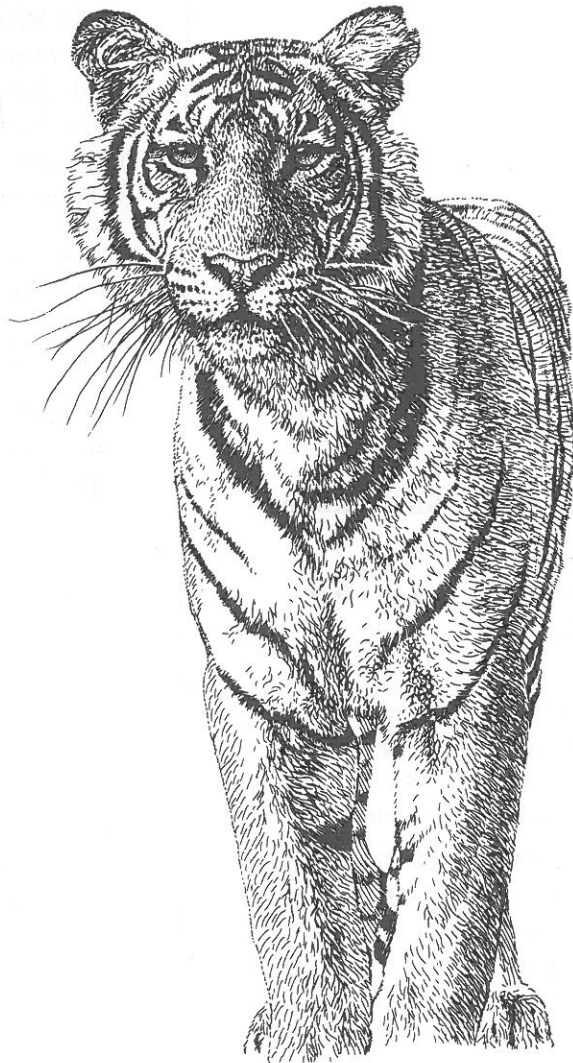
His last kill was made in the early hours of 21 February, when he fatally wounded one of two men walking in a forest, 15 km south-west of Bhilwani. When the other man raised an alarm, the tiger bolted away, and even after two hours when the villagers gathered at the spot, the tiger had not approached the dead body.

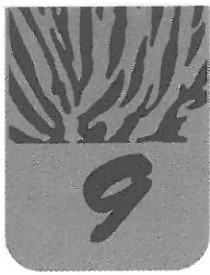
Nothing more was heard of the tiger until 2 March when a boy discovered a dead tiger barely 200 metres away from the last kill site. It was the Bhilwani man-eater. An examination of the carcass showed that he had been dead for at least two days. Four of his ribs were broken and there was a large gaping hole on the right flank.

This wound seemed to be caused by a shot-gun or muzzle loader, and was several months old. It had happened some time before 7 December 1974.

One of the observations made during all this period was that the tiger's pug marks were not seen in the high prey density area of the Park.

Source: Kanha National Park – A Handbook, by H. S. Panwar
Centre for Environment Education, 1991





Tiger Facts

Tiger Lore

Indian literature, folklore and mythology, from the ancient to the modern, abound with references to tigers. According to stories from Indian mythology, the tiger is believed to have powers to do everything from fighting demons to creating rain, keeping children safe from nightmares and healing.

Humans are often attributed as having tiger characteristics. The consecration ceremony of a king in ancient times required the king to tread upon a tiger-skin, signifying the king's strength.

Songs, proverbs and sayings in most Indian languages feature tigers as part of their treasury of folk lore and literature.

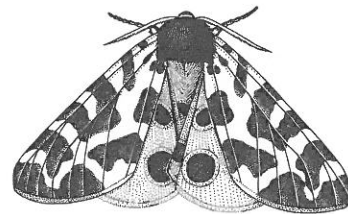
Tigers appear in fiction as well. Who can forget the tigers in *Panchatantra* or Sher Khan, the tiger in Kipling's *The Jungle Book*? Winner of the Man Booker Prize 2002, *Life of Pi*, by Yann Martel, features a tiger at closer range than Pi would have liked. Saki's *Mrs. Packletide's Tiger* is a satire based on the craze for tiger skin trophies among England's populace. Then, there are lovable tiger characters in children's books such as *Winnie the Pooh* and *Calvin and Hobbes*.

The language of modern economics has also been coloured by tiger magic: several fast-growing nations in Southeast Asia are called the 'Tiger Economies'. There is a computer game called 'Tiger Hunt'.

The tiger's colouring has caused its name to be lent to many other species—butterflies, moths, beetles and flowers: Jersey Tiger, Plain Tiger, Wood Tiger, Tiger beetles, Tiger Lily, etc.

Tiger by Many Names

English	Tiger
Hindi	Bagh, Sher
Gujarati	Vagh
Tamil, Telugu	Puli
Malayalam	Kadva
Nepalese	Bagh
Indonesian	Marimau, Macan
Malay	Harimau
Chinese	Wu, Lao Hu
Lao	Seua
Vietnamese	Cop
Burmese	Kyar
Thai	Seua
Korean	Ho Lang-ee



Garden Tiger

Tiger Talk

Objective

To help students understand that tigers have an important place in our culture, traditions, literature, mythology and folklore.

The Activity

Ask each student to collect at least one story (traditional, folk, religious, mythical), a song or poem, and a proverb, saying or idiom related to tigers.

Each student should make a special effort to collect this information in his/her mother tongue. For this, they can take the help of their parents and grandparents. They should write these first in their language, then its transliteration and translation into English or the language understood by all the students.

Once all the students have collected the information, they can prepare a scrapbook of the same. For this, divide the class into three groups and let each group prepare one of the following sections of the scrapbook, namely: Poems, Stories/Movies, Proverbs/Sayings/Riddles/Idioms.

Tell the students that they can supplement the text with colourful pictures and illustrations to make it more attractive. They can also decorate this scrapbook by giving each page a proper outline. Each section can also be given a logo corresponding to the subject.

Discussion

Discuss the following questions with the students:

1. How is the tiger represented in the references they have collected? Some of the adjectives that children can use are: Friendly, Fierce, Scary, Smart, Stupid, Brave, Beautiful, Powerful, Dangerous, Big, Small, Good, Bad, Kind, Mean, Generous.
2. Do they think that the tiger in the references has qualities based on qualities of real tigers, or have human qualities been attributed to the tiger? Which parts of the tiger's personality seem based on real tigers? Which seem human or made up?
3. Do they think the people who wrote the references liked or disliked tigers? Explain why.
4. What common ideas run through the references? How are they different?



Level

Elementary and Intermediate

Subjects

Language, Social Science

Group Size

Individual

Place

Inside the classroom

Duration

30 minutes

Materials

Paper, pencil, drawing material



Sher Khan



Tiger Facts

Tigers in Our Culture

Tigers have always occupied an important place in the traditions, culture, folklore and literature of countries across Asia and Europe. The tiger is variously feared, respected, admired and distrusted, depending on the context.

The oldest known man-made representations of the tiger have been found in engravings on rocks by the River Amur in Siberia, dating back to 3500-4000 B.C. The people of that area revered the tiger and never hunted it. The tribe expelled anyone found killing a tiger, for violating the traditions handed down by their forefathers.

In India, the earliest visual representations of the tiger are found on seals and terracotta figurines of the Indus Valley Civilisation. A seal found at Mohenjodaro, dating back about 5000 years according to Schaller, shows a man sitting in a tree, angrily addressing a tiger waiting for him below.

Temples and shrines are constructed to worship the tiger. The Hindu goddess Durga is depicted riding a tiger. Astride the tiger, Durga fights the evil forces in order to bring new life to earth. In Islam, it is believed that Allah has sent the tiger to protect his followers and punish traitors. A disciple of Buddha rides a tiger to show that he possesses supernatural powers.

Tribal beliefs, arts and crafts often place the tiger as a central symbol of worship. For example, the Warli tribe in Maharashtra believes that the tiger is the greatest of all gods, and donate part of their harvest every season to the worship of the tiger. The people of the Bhil tribe believe that they have descended from tigers.

In China, over the ages, the tiger has been considered both a regal creature and a powerful messenger between humans and spirits.

In the traditional Chinese system of medicine, tiger bones and other body parts have been used for thousands of years as a cure for various ailments, and in order to acquire tiger characteristics such as strength and courage.

In Western culture, the power and beauty of tigers have appeared in many media—in art, literature, folklore, sports and advertising.

Tigers are among the most popular animals in zoos, circuses and menageries of all sorts.

And India's National Animal is also the tiger.

Tigers have been adopted as mascots of several sporting events, sports teams and military units, as well as symbols of political parties.



Hodori: The mascot of the Seoul Olympic Games

Tigers Around Us



Objective

To help students understand the place of tigers in our history and traditions, and recognise the importance of tigers in our lives even today.

Before You Begin

Discuss with the students why tigers are so widespread in arts, literature, legends, myths, and religious and other traditions across Asia and even Europe. If possible, you can show some photographs or pictures from books, along with a brief introduction about the influence of tigers in our lives. You can also discuss the long and varied role that tigers have played in our culture.

The Activity

Explain to the students that, though they may not realise it, tigers are an important part of our lives. Tell each student to look around carefully in and around his/her home and list down all objects, pictures and paintings, artifacts and statues which have tiger motifs. Ask the students to, if possible, get some of these articles to school so that they can share these with the other students in their class.

In the second part of this activity, tell the students to look through newspapers, magazines or watch out for advertisements and logos which use the tiger as a symbol. Ask them to bring these references and display them in class. They should explain why they think the product has used the tiger imagery.

For the third part of this activity, divide the class into groups of three students each. Each group should collect clippings of at least two newspaper or magazine items, articles, photographs, etc. on tigers. These items may cover a wide range of issues. They can also get cuttings of tiger pictures, stories and poems.

Once the groups have collected these items, give each group a chart paper. Ask the students in each group to get together and make a collage of all the items, as if it were a tabloid of tiger news. The articles should be arranged by themes and issues and displayed with suitable headlines, visuals, graphs, etc. They should also use the advertisement and logo cuttings they had collected in Part B. Also, ask the students to think of a catchy title for the collage.

The chart papers, when completed, can be put up on the class display board.

Level

Intermediate and Advanced

Subjects

Social Science, Arts and Crafts

Group Size

Groups of three students each

Place

Inside the classroom

Duration

45 minutes

Materials

Old magazines and newspapers, chart paper, pencils, colour, glue, scissors.



The qualities of power, beauty and fighting force associated with tigers provide an attractive image to advertise and sell a variety of products, from tea to petrol, balms to biscuits.



Tiger Facts

Endangered Tigers

Once, tigers roamed freely from eastern Russia to the Black Sea. Now, their geographical range has shrunk to less than 5 per cent of their former vast domain. Tigers have completely disappeared from west Asia and the Indonesian islands of Bali and Java. They are near extinction in China. In India, at the end of the nineteenth century, there were estimated to be 40,000 wild tigers. By the early-1970s, this population had plummeted to less than 2,000.

Loss of habitat has been a major cause of the decline in tiger populations. Tigers are solitary and territorial animals, and need a lot of space to meet their requirements of food, water and shelter. The size of a tiger's range depends on the amount of food available. For example, in some parts of India where there is plenty of prey, a male tiger only needs 20 to 150 sq. km. In Sumatra, where there is less prey, a male tiger may need as much as 400 sq km. And in Siberia, where there is little prey to be found, male tiger territories are as large as 1000 sq. km.

As the forests and grasslands that have long been home to tigers disappear, so also do tigers. Several factors—mainly driven by humans—have contributed to the permanent destruction and degradation of the tiger's natural habitats.

The expansion of agricultural activities into forests that were once the tiger's exclusive domain has, in the past century, been the strongest force in shrinking tiger habitats. To meet the needs of the ever-increasing population, the demand for farmland has also grown sharply. As a result, prime tiger habitats such as forests and grasslands are being converted for agriculture and settlements.

Large areas of natural forest cover have been converted into agricultural lands, monoculture plantations of timber, and commercial crops like coffee, tea, rubber, soya and spices. The natural vegetation has been felled, cleared and burned for this.

The forests that harbour tigers also contain many other products of utility or commercial value to humans, such as timber, bamboo, rattan, ginseng and other roots, leaves, flowers, fruits, nuts, resins and even the bark of many tree species. As a result of new economic policies, improved transportation and better linkages with outside markets, forest products are being over-used and over-extracted.

Construction of roads, dams and canals in tiger habitats, and railway tracks criss-crossing the habitat have emerged as major threats to the habitat.

Conversion of large areas of tiger habitat into agricultural fields, settlements, dams, reservoirs, roads, etc. has not only led to the reduction of the habitat, but also its fragmentation. Small areas with small, isolated tiger populations, are vulnerable to many problems, such as increased human encroachment for fuelwood collection, and hunting of tiger prey species. Also, the probability of such small, isolated populations getting wiped out due to an epidemic, forest fire, etc. is very high.

Fragmentation and isolation create another threat to the long-term survival of the wild tiger. This threat involves the complicated science of genetics and is often overlooked. In their small, isolated habitats, tiger populations have been reduced to such an extent that related individuals are mating with each other—causing inbreeding depression. This can result in serious problems including blindness, cleft palate, sway backs and crossed eyes. Ultimately, inbreeding leads to weakened immune systems, lowered rates of cub survival, and inability to adapt to ever-changing environments.

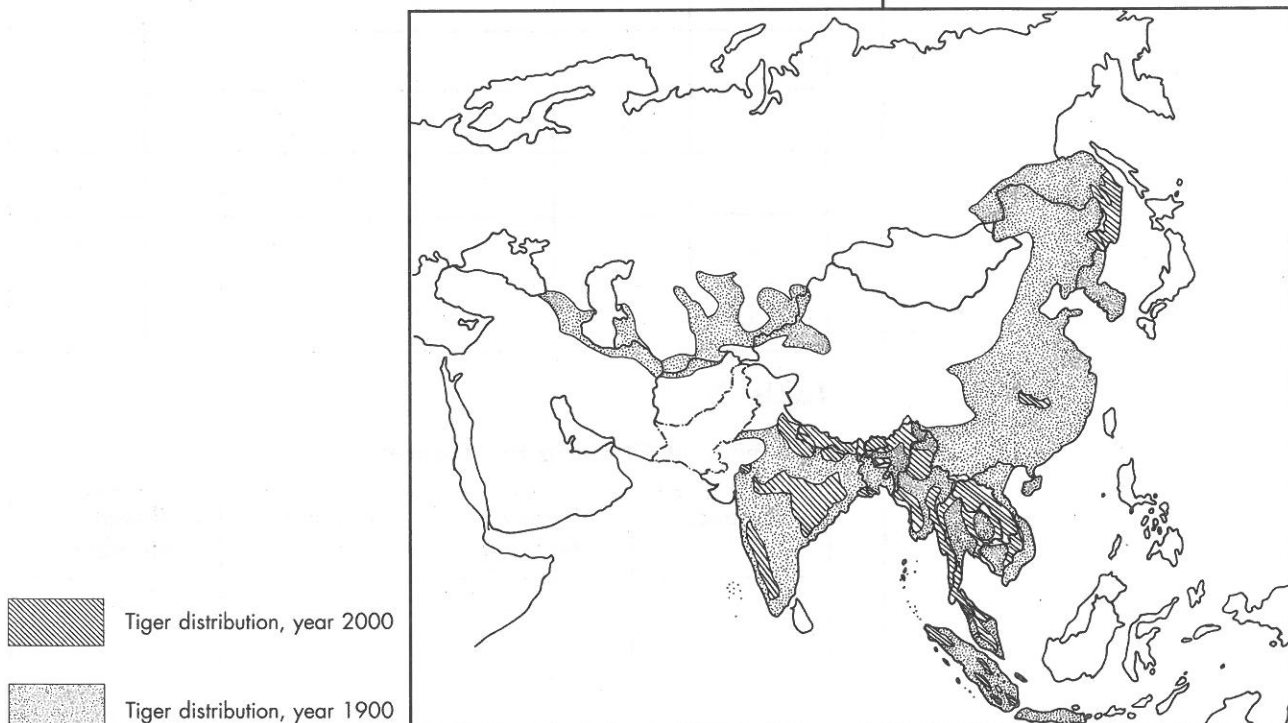




Table A

Threat Number	Threat	No. of newspapers sheets for the threat
1	A long road has been built across your habitat.	4
2	Deforestation is taking place near human settlements.	8
3	A part of the area where you live has been converted to fields.	3
4	Many villages are coming up in your area.	4
5	Construction of a dam is on in your area.	3
6	A railway line is being built across the forest.	4

Figure A

Placement of Sheets

3	4	1	2	8	7
2	5	5	1	2	8
6	5	7	7	1	2
7	6	2	8	8	1
4	7	6	2	7	2
3	4	2	6	4	3

Table B

Sequence of Reading the Threats

Sequence	Threat Number	Sequence	Threat Number
1	3	4	5
2	4	5	1
3	2	6	6

Shrinking Habitats



Objective

To help students understand the consequences of a shrinking habitat.

Before You Begin

A day before the activity, you will need to do the following things:

- Take several newspaper sheets. Tear them in half and make two sheets. Number each newspaper sheet from 1 to 6 according to the instructions given in Table A. For example, for threat 1, make 4 sheets that have number 1 written on them. You also have to make sheets corresponding to numbers 7 and 8. These numbers are arbitrary and do not correspond to any threat. They will be needed to fill empty spaces in the rectangle. To get the exact number of sheets that need to be made corresponding to these numbers, see "Placement of Sheets" (Figure A on page 30).
- Prepare Tiger Habitat Threat Cards. For making these threat cards, use the list of threats given (Table A). You should write one statement on each card. On each threat card, indicate the Threat Number.
- Arrange for a tape recorder and an audio cassette (or a plate and spoon).

Before you begin the game, spread the sheets on the floor so as to make a large rectangle. (For the arrangement of the numbered sheets, see "Placement of Sheets", Figure A).

This game may be played by 20 to 25 students. In case the class is larger, you can divide it into groups of 25 students and each group can play the game alternately.

The Activity

Begin the activity by telling the students that the large rectangle created by placing newspaper sheets on the ground represents the place where a tiger lives. Tell them that, for this game, they should consider themselves as tigers living in this home range and moving around to fulfil their daily requirements of food and water.

Tell them that this game is similar to musical chairs. As the music plays, they should move about randomly, just as tigers move in their habitat. When the music stops, one of the Tiger Habitat Threat Cards will be read out (the sequence of reading the threat cards is given in Table B) and the number written on the threat card will also be called out. The newspaper/s

Level

Intermediate

Subject

Science

Group Size

Groups of 20–25 students each

Place

Outside the classroom

Duration

45 minutes

Materials

Newspapers, markers, Tiger Habitat Threat Cards, any device to play music or make sound



corresponding to that threat number will be removed from the large rectangle and, as the tigers standing on those newspapers will have no place to go, they will be considered dead and will have to leave the game.

The game ends when all the sheets with Threat Numbers 1 to 6 have been removed from the rectangle, or there are no more tigers left, whichever is earlier.

Rules for the Game

Explain the following rules to the students before starting the game.

- Do not to step out of the newspapers. If you do so, you will be considered dead.
- Stand inside the newspapers with both your feet firmly on the ground. You are not allowed to stand on more than one sheet.
- Only one student can occupy one newspaper sheet. If there is crowding due to less space, then the one who occupies any given newspaper first will be allowed to stand, the others will be considered dead and will have to leave the game.
- Do not stand on the blank spaces created during the game when the newspapers are removed. If you do so, you will be considered dead.
- If you are found outside the habitat after the music has stopped, you will be considered dead.

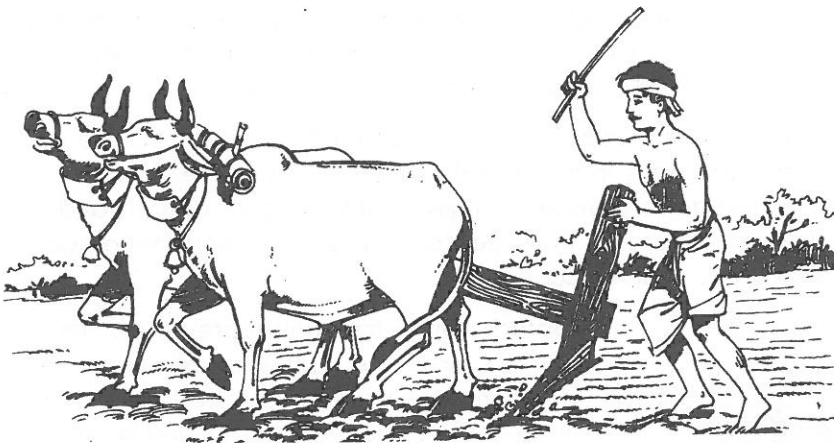
Discussion

Follow the activity with a discussion with the students on what they think happened during the activity. Begin the discussion by asking the students how many tigers were present at the beginning of the activity. Then ask them to count the number of tigers left at the end of the activity.



Points of Discussion

- How did they feel at the beginning of the activity?
- What do they think happened to the tiger habitat during the course of the activity? Why?
- How did they feel then?
- Who do they think is responsible for the degradation and fragmentation of the tiger habitat?
- Do they think these are real threats leading to destruction of the tiger habitat?
- Will these threats result in the decrease of the tiger population in the wild?
- What do they think happens when dams are built in the tiger habitat?
- What happens when a road comes up? Can tigers move about freely?
- How do fields and settlements obstruct the tiger's path? What does this result in?





Tiger Facts

Declining Numbers

Tigers are one of the animals that are most at risk of vanishing in the wild. There are now thought to be only about 4,500 to 7,000 wild tigers left in the world, compared to double that number being kept in captivity in the United States alone. In many ways, tigers are an ideal example of animals that we greatly admire and yet are driving towards extinction.

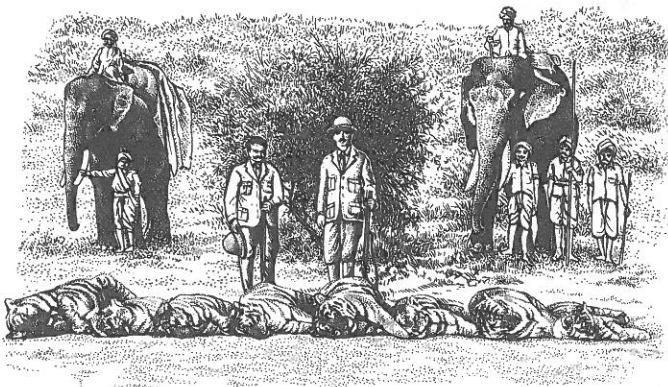
For centuries, tiger habitat has been encroached upon and fragmented. Over the years, the causes have changed—by settlements, fields and, more recently, by development projects.

The prey-base of tigers is diminishing due to over-hunting of prey animals by humans for sale or consumption. Tigers are extremely vulnerable to this indirect threat as they are large carnivores, and their population densities and survival rates are strongly tied to the abundance of prey.

For the past several centuries, people have hunted tigers for a variety of reasons: to protect livestock, to protect human life, for 'sport', to collect their skin, teeth or claws as trophies, and for use in traditional oriental medicine. Hunting of tigers was finally banned in India in 1971. Illegal poaching, however, continues.

Trade in tiger body parts is leading to these magnificent animals being poisoned, electrocuted, snared, shot and even captured as cubs. Even though it is now outlawed in every country where wild tigers are still found, poaching still occurs and is considered to be one of the biggest threats to their survival.

The single-most important factor fueling this trade is the use of tiger body parts in traditional Far-eastern medicines in which it is believed that consuming tiger bones can cure arthritis and strengthen muscles, that tiger blood is a tonic, and that a tiger's tail can cure skin diseases.



In forests where the natural prey base has declined, or where domestic cattle are taken for grazing, tigers have also been known to kill domestic cattle. People affected by such losses are often resentful of the wild animals, and, sometimes, take steps on their own to avenge their loss—by killing the predators.

India has excellent wildlife laws. However, their enforcement is often constrained due to a variety of factors. Tackling wildlife crime requires continuous monitoring and immediate action in case of detection.

What About Me?

Objective

To help students express their feelings regarding the near-extinction of tigers.

The Activity

In India, the Government has set aside areas with special rules to protect tigers and their habitat. Yet, even within these Protected Areas, tigers are finding it difficult to survive.

Discuss with students the various threats driving tigers towards extinction. Explain to the students that the tiger has no natural predators apart from humans. Because of various human activities, there are very few tigers left in the wild, with many of these being confined to small pockets.

Ask them to imagine that they are the last tiger left in the Protected Area. Their neighbours and relatives have been killed by poachers. The students have to put themselves in the tiger's place and write a story, expressing their emotions, thoughts and feelings.

In this fictional story, they can try to answer such questions as: how did they feel when they realized that all the other tigers were dead and they were all alone? Some words that can be used are—bewildered, bemused, angry, hurt, terrorized, wary... Do they feel afraid as they walk through jungles where they and their ancestors had lived for hundreds of years? What do feel when they see a human being?

The students can also mention anything else that they have learnt about tigers and the threats they face. They can describe the way they are hunted and why. What message would they like to give people or other animals?

Tell them to be as imaginative and creative as they like, but they should base their writing on real facts and information in their version of 'The Last Tiger's Tale'.



Level

Intermediate and Advanced

Subject

Language

Group Size

Individual

Place

Inside the classroom

Duration

30 minutes

Materials

Writing material, newspaper clippings

Poachers on the prowl kill 6 big cats in MP

By Shree Bhatnagar
 An expedition in central India's Madhya Pradesh state has reported the killing of six tigers in the last few days, the highest number in a single year since 1990. The tigers were killed in the Panna National Park, a tiger reserve in the state. The tigers were killed by poachers who were hunting them for their skins and bones. The poachers were caught by forest guards who were patrolling the park. The forest guards were alerted by a tiger's roar and they found the tigers lying dead. The poachers were arrested and the tigers were taken to the hospital. The forest guards were praised for their bravery and the tigers were given the best medical care. The forest department is now taking steps to protect the tigers and their habitat. The forest guards are being trained to use modern weapons and techniques to hunt poachers. The forest department is also conducting awareness campaigns in the villages around the park to educate the people about the importance of tigers and their habitat. The forest department is also conducting regular patrols in the park to monitor the tiger population and to prevent poaching. The forest department is also conducting research on tigers and their habitat to better understand their needs and to develop effective conservation strategies. The forest department is also conducting education programmes in the schools and colleges to raise awareness about tigers and their habitat. The forest department is also conducting public relations activities to attract tourists to the park and to generate revenue for the park's management. The forest department is also conducting community development projects in the villages around the park to improve the living standards of the people and to reduce their dependence on the forest. The forest department is also conducting various other activities to protect the tigers and their habitat. The forest department is committed to the conservation of tigers and their habitat and is determined to take all necessary steps to ensure their survival.



1972	1979	1984	1988	1993	1997	2002	2006	2010
1,827	3,015	4,005	4,334	3,750	3,500	3,642	<2,000	?

TIGER VANISHES

**Tiger, tiger, burning bright
In the forests of the night,
What immortal hand or eye
Dare frame thy fearful
symmetry?**

— William Blake

TIGER TERRITORY



Tiger Facts

Why Save Tigers?

The value or importance of tigers encompasses all spheres—cultural, symbolic, spiritual, aesthetic, economic, biomedical, scientific, commercial, educational and ecological.

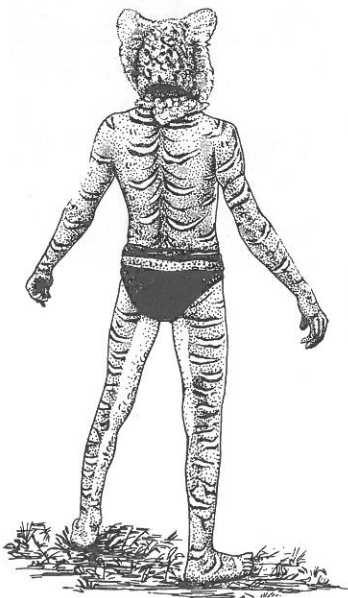
The tiger is a 'crown predator'. It is at the very top of the food pyramid. It eats many other animals, but nothing eats it. As such, it controls the population of prey species. The protection and preservation of tigers leads to the protection of a number of other species that depend on the same habitat, as well as the habitat itself. "Save the Tiger", thus, actually equals "Save the Whole Ecosystem". If humans, in their ignorance or greed, lop off the pinnacle, then a chain reaction starts that alters the structure of the pyramid, making it unstable.

Protecting the habitat of the tiger, with its various resources, will not only benefit tigers but many facets of human life and livelihoods. The forests that are tiger habitats provide innumerable benefits:

- They help in regulating rainwater run-off, preventing soil erosion, recharging ground water and minimizing local climatic fluctuations. A number of traditional communities depend, wholly or partially, on forests for meeting their daily needs.
- If wisely managed, forests can also provide rural and urban populations the fuel, timber, bamboo, rattan and a host of non-timber products needed for their sustenance.
- Saving tiger forests also means protection of the catchment areas of rivers.
- Forests are a treasure house of potential life-supporting products and, so far, scientists have explored only a tiny fraction of it.
- Forests are also a rich resource for education.

For thousands of years, tigers have been a vibrant part of human cultural, religious and social history. They have symbolised beauty, power, and fierceness. People in India have a strong tradition of living in harmony with all living and nonliving things. Conflicts between tigers and humans is not a new phenomenon, but, people have always recognized that animals too have a right to live in their natural surroundings, and have been ready to put up with loss of property and even danger to themselves. It is thanks to this conservation ethic that many wild species, including tigers, are still present in such numbers in India.

If the tiger becomes extinct, the values and legacy that embrace this icon will also be lost for future generations.



Traditional Indian tiger dance

Tiger: For or Against

Objective

To help students form and express opinions on complex issues related to conservation of species.

Before the Activity

Discuss the many and varied values attached to tigers. Emphasize their role in preserving entire ecosystems, on which thousands of species, including human beings, depend. Also remind the students that, in India, tigers also have strong religious, mythological, social and cultural links with humans.

The Activity

Divide the class into two groups. One group will argue FOR the need to save tigers, the other group will argue AGAINST. Each group should be given adequate time to discuss and prepare their arguments. Explain to the students that, through their arguments, they should attempt to reach a consensus on the issue. Thus, the focus should not only be to argue For or Against the motion, but also to take into account all the different views.

After the allotted time is over, one person from the "FOR" group will stand up and present his/her arguments. He/she will be given 3 minutes. After he/she has finished, one student from the "AGAINST" group will be allowed to ask one question to the speaker on his/her argument. (You will need to make sure that the interjector asks a question and does not make a statement.) The speaker will be given 1 minute to respond to the question.

Similarly, one person from the "AGAINST" group will stand up and present his/her arguments for 3 minutes. This process will continue back-and-forth until the class period is up. (In case you and the students wish to extend it over one more period, you can do so.)

At the end of the allocated time, hold a vote on whether the class thinks tigers should be saved or not. It is not necessary that, just because a person was in the "AGAINST" group, he/she has to vote against the motion.



Level

Advanced

Subject

Language

Group Size

Two groups

Place

Inside the classroom

Duration

45 minutes

Materials

Writing material



Tiger Facts

Protected for Tigers

At present, all tiger populations, however large or small, are at some risk of extinction due to loss of habitat and prey, fragmentation of habitat, hunting and poaching, and increasing conflicts between people and wild tigers. The smaller the population, the higher is the probability of extinction.

Most experts agree that protection of the tiger's habitat is the key to its survival. The Government of India has long recognised the serious threats posed to tigers. Tiger hunting was banned in 1970 under the leadership of Prime Minister Mrs. Indira Gandhi. The Wildlife Protection Act came into force in 1972, with the objective of effectively controlling poaching and illegal trade in wild animals, birds and plants, and their derivatives. This Act was amended in January 2003, and punishment and penalty for offences under the Act have been made more stringent.

On 1 April 1973, a special conservation initiative, Project Tiger, was launched with the help of the World Wildlife Fund (WWF). The Project pushed India to the forefront of global conservation strategy. The objectives of Project Tiger are two-fold:

- to "ensure the maintenance of a viable population of tigers for scientific, economic, aesthetic, cultural and ecological values", and
- to "preserve for all time, areas of biological importance as a national heritage for the benefit, education and enjoyment of the people."

Although the immediate aim of Project Tiger was to save the tiger, its approach is to view the tiger as an integral part of the ecosystem and tackle all short-term and long-term factors which affect its population, including steps to

- rectify the degradation of tiger habitat
- preserve tiger habitat with minimal human interference
- prevent poaching of tigers
- guard against human depredation of the tiger's natural prey animals
- prevent grazing in forest areas
- completely stop commercial forestry in core areas and rationalise forestry in other areas
- orient community development programmes around tiger reserves to preserving and improving the environmental conditions.

These reserves follow a 'core-buffer' strategy. The core areas have been freed from all human activities, while 'conservation oriented land use' is practiced in the buffer areas.

To date, 28 tiger reserves, covering an area of 37,761 sq. km., have been established under the Project. These reserves are representative of the bio-geographical zones in India.

Project Tiger has faced several challenges in the last 30 years. It has had to address concerns of large scale poaching, habitat loss, and issues of resettlement and livelihoods of the people who have traditionally occupied "tiger territories" that have come under the Protected Area network.

Despite this, Project Tiger has helped in the recovery of threatened habitats, leading to the increase in all animal populations within the tiger reserves, as well as revival of floral diversity.

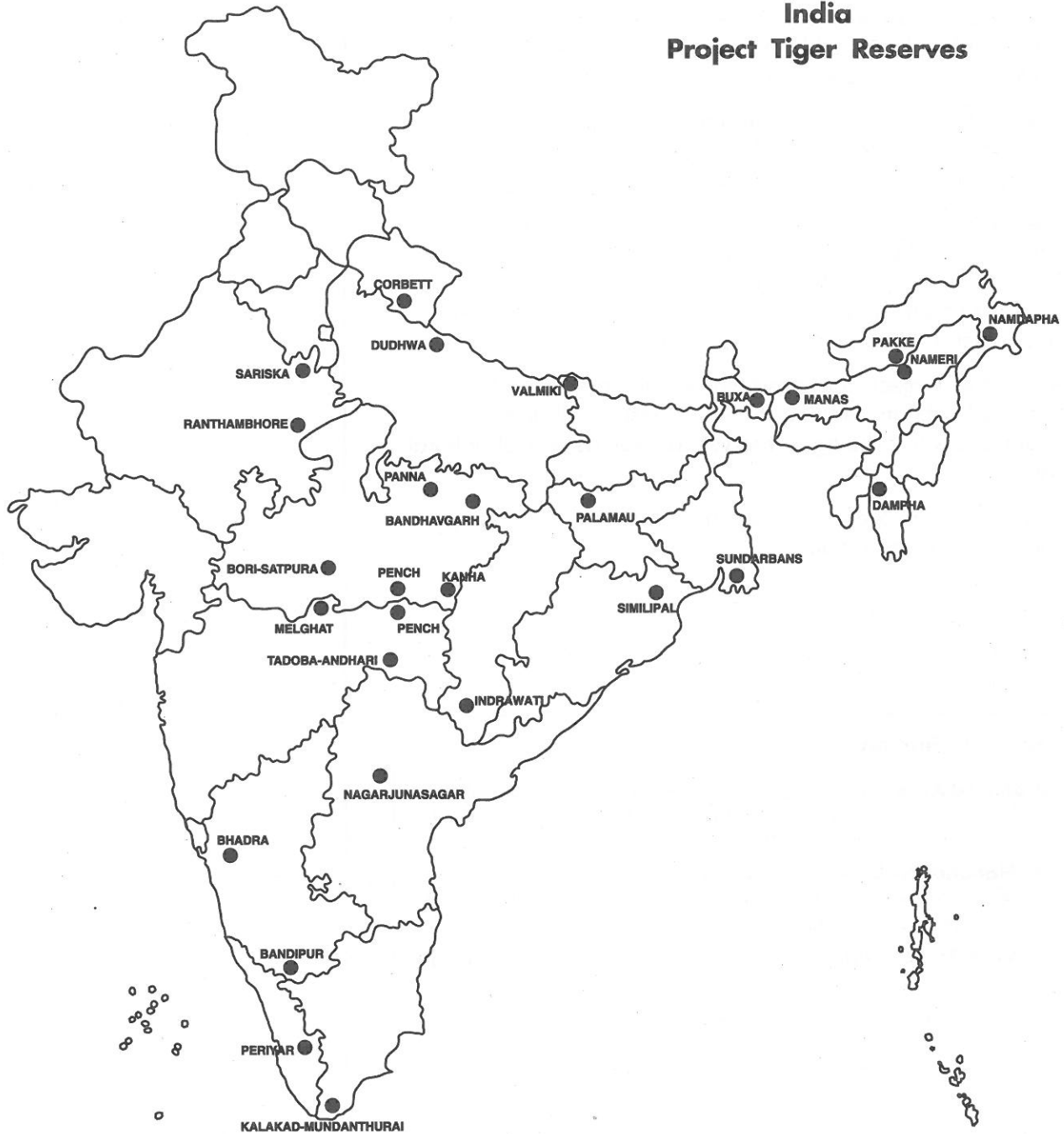
Project Tiger has been an important milestone in the history of tiger conservation in India.

Some Definitions

Protected Area: A protected area is an area of land or sea specially set aside by the Government to protect and maintain the habitat and its wildlife. There are different kinds of protected areas, including

- **National Parks:** An area in which no one is permitted to destroy or remove any wildlife or harm its environment. People cannot own land in this area, nor can they let their animals graze there.
- **Wildlife Sanctuary:** An area in which some amount of human activity may be permitted.

India Project Tiger Reserves



Source: Project Tiger Website, <http://projecttiger.nic.in>

Project Places



Objectives

To help students become aware of the areas protected under Project Tiger.

The Activity

Hang a wall map of India at a place where everyone can see it. Leave enough space on all sides of the map for additional information to be pasted at relevant places alongside the map.

Ask students to, either individually or in groups of 2-3, select one of the Project Tiger Reserves listed in the table "Project Tiger Reserves in India". Make sure that each group has one Reserve and no two students or groups of students have the same Reserve.

On a piece of chart paper, the size of a postcard, tell each student or team to illustrate their Project Tiger Reserve. While doing this, they should make a text box where they can list out the details given in the Fact Finder. Tell them to draw some of the important animals of the area. If possible, they can collect additional information on their own.

Once the students are ready with their postcards, ask each to go up to the wall map and locate their Reserve. Tell them to stick their postcard on an empty section of the map which is close to the location of the reserve. Stretch a string from the location to the postcard, to link the two. The Project Tiger map is ready!

Ask each student/team to talk briefly about their Reserve to the rest of the class.

Level

Elementary and Intermediate

Subject

Geography

Group Size

Individually or in groups

Place

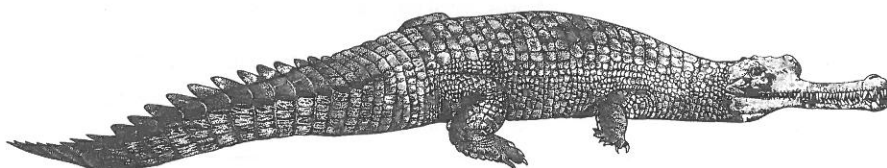
Inside the classroom

Duration

30-45 min

Material

Wall map of India; chart paper; drawing materials; string; tape/glue



Gharial



Lion-tailed macaque



Project Tiger Reserves in India

Sr. No.	Name of the Reserve	State	Area (sq. km)	Important wildlife (other than tiger)
1	Bandhavgarh	Madhya Pradesh	1162	Chital, sambar, hyena, jackal, leopard, wild dog, rhesus monkey
2	Bandipur	Karnataka	872	Leopard, sloth bear, wild dog, pangolin, mouse deer, black buck, chinkara, chausingha, mugger
3	Bhadra	Karnataka	492	Leopard, elephant, gaur, chital, sambar, barking deer, bonnet macaque
4	Bori-Satpura-Pachmarhi	Madhya Pradesh	1486	Leopard, gaur, chital, chinkara, chausingha, civet, jackal, giant squirrel
5	Buxa	West Bengal	761	Civet, mongoose, hog deer, chital, sambar, elephant, leopard
6	Corbett	Uttaranchal	1319	Elephant, chital, hog deer, peafowl, jungle fowl, partridge, gharial, cobra
7	Dampha	Mizoram	500	Clouded leopard, wild boar, otter, slow loris, barking deer, gaur
8	Dudhwa	Uttar Pradesh	884	Rhinoceros, chital, swamp deer, Hispid hare, Bengal florican, Black necked stork
9	Indravati	Chattisgarh	2799	Striped hyena, wolf, sloth bear, sambar, barking deer, fresh water crocodile, chameleon
10	Kalakad-Mundanthurai	Tamil Nadu	895	Brown mongoose, Nilgiri martin, gaur, slender loris, lion-tailed macaque
11	Kanha	Madhya Pradesh	1949	Barasingha, barking deer, gaur, wild pig, Russell's viper, Indian monitor lizard, fan-throated lizard
12	Manas	Assam	2840	Assamese macaque, leopard cat, clouded leopard, wild cat, smooth Indian otter, porcupine, water buffalo
13	Melghat	Maharashtra	1677	Nilgai, flying squirrel, wild boar, rhesus monkey, caracal, sambar, python
14	Nagarjunsagar-Srisailem	Andhra Pradesh	3568	Wild dog, pangolin, chital, mouse deer, black buck, chinkara, chausingha, mugger, cobra, peafowl

Sr. No.	Name of the Reserve	State	Area (sq. km)	Important wildlife (other than tiger)
15	Namdapha	Arunachal Pradesh	1985	Clouded leopard, snow leopard, sambar, barking deer, Himalayan black bear, gaur, Hoolock gibbon
16	Nameri	Assam	344	Himalayan black bear, elephant, Indian bison, Himalayan yellow-throated martin
17	Pakke	Arunachal Pradesh	862	Himalayan black bear, elephant, Indian bison, Himalayan yellow-throated martin
18	Palamau	Jharkhand	1026	Leopard, barking deer, wolf, wild dog, elephant, mouse deer, pangolin, chausingha, Indian ratel
19	Panna	Madhya Pradesh	542	Jungle cat, leopard, hyena, sambar, nilgai, chinkara, hare, ratel, tree shrew
20	Pench	Madhya Pradesh	758	Mongoose, striped hyena, pangolin, chital, sambar, barking deer, nilgai, wild pig, gaur
21	Pench	Maharashtra	257	Leopard, gaur, sambar, chital, barking deer, nilgai, langur, civet cat
22	Periyar	Kerala	777	Elephant, sambar, leopard, wild dog, barking deer, lion-tailed macaque, Nilgiri langur, Nilgiri tahr
23	Ranthambhore	Rajasthan	1334	Leopard, caracal, ratel, jungle cat, sambar, nilgai, chinkara, sloth bear, jackal, hyena, langur, common fox
24	Sariska	Rajasthan	866	Rusty spotted cat, jungle cat, chausingha, sambar, chital, wild boar, nilgai, jackal, hyena
25	Similipal	Orissa	2750	Leopard, gaur, elephant, pangolin, giant squirrel, bison
26	Sunderbans	West Bengal	2585	Fishing cat, chital, wild boar, estuarine crocodile, Olive Ridley turtle, Gangetic dolphin, horse-shoe crab
27	Tadoba-Andhari	Maharashtra	625	Spotted cat, ratel, Indian mouse deer, chital, sambar, wild boar, chausingha, flying squirrel
28	Valmiki	Bihar	910	Leopard, fishing cat, leopard cat, chital, sambar, black buck, gaur, rhesus monkey
Total			37761	
Source: Project Tiger Website, http://projecttiger.nic.in				



Tiger Facts

Saving the Tiger

Tigers all over the world are endangered and stand at the brink of extinction. One of the major factors affecting their survival is the uncontrolled increase in human population, and the ever-increasing demand for land and natural resources to meet human needs.

To counter the threats to the existing populations of wild tigers, a multifaceted tiger survival strategy is required that takes into account economic, traditional and political circumstances within the tiger countries. Several steps have been, taken by International Agencies, Governments and Non-government Organisations as part of the strategy to save the tiger. Some of these are listed here:

- In 1976, the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) voted to regulate the international trade of tigers and their parts. Tigers have been declared as endangered, and are listed under CITES Appendix I, thereby prohibiting all international trade.
- The Indian Forest Act 1927, the Wildlife (Protection) Act 1972 and the Environment (Protection) Act 1986 are some of the laws enacted by the Government of India for the protection and improvement of the environment, wildlife and forests.
- To protect tiger and tiger habitats, the Government of India launched Project Tiger in 1973 as a special conservation initiative (see pages 38–43).
- Efforts have been made to relocate people and livestock from critical tiger habitats, since much of the pressure on tiger reserves (and, more generally, forest areas) comes from human and livestock populations. It is recognized that this needs to be done in consultation with the affected people, understanding their needs and with adequate and appropriate compensation being provided.
- Green belts are being created outside the Protected Areas in order to deflect, absorb and minimize the pressure of fuelwood and fodder demands on the reserves.
- Schemes for compensation and insurance for cattle and human kills are being put in place in case of loss of life and/or property. While these are not solutions for human–tiger conflicts, they do, to some extent, help the people who have suffered losses.



- The livelihoods of local communities that live near tiger forests depend on use of resources from the forests. In order to protect the tiger and its habitat, it is vital to involve these communities. This can be done by increasing collaboration with the local people, making them part of the management process of Protected Areas (PAs), implementing income generation programmes (including eco-tourism) to replace income lost due to restricted use of the forests, and educating people on the need and benefits of conservation.
- Properly managed wildlife tourism promotes both education and conservation opportunities. Tours through reserves help to educate local people and tourists. Tourism also generates revenue for the reserve, and jobs and income for local citizens, thus increasing their stake in the reserve and its conservation.
- International agencies and governments are placing importance and putting resources into scientific research on all aspects of tiger behaviour and habitats in order to make informed, rational decisions regarding species conservation and management, and development of long-term solutions.
- It is increasingly recognized that laws and policies cannot be effective without adequate public awareness and support. Education is a vital force that can bring about the necessary attitude changes among politicians, officials, media, social activists and the public. Without public awareness and a committed political leadership, it is impossible to usher in any major changes.



A radio collared tigress



Threat Game

1 Start Here 	2	3 You have reached an agricultural field. Farmers are threatening you. Move two squares back!	4	5 
10 Tourists are having fun. They are chasing you for photographs. Stay motionless. Miss a chance!	9	8	7 Researchers are studying you. They want to protect you. Throw die again!	6
11	12 A dam is being built. The reservoir water will inundate your habitat. Move three squares back!	13	14 You are in a protected area. Give a roar and leap two squares forward!	15
20	19	18 Poachers are around the corner. Hide in the dense forest. Miss 2 chances!	17	16
21	22 Loggers have cut down your forest. Back to square one!	23	24	25 Den at last!! You can now relax!

For making the Instruction Cards, you can take pieces of chart paper, each one the size of an A-4 sheet. Write one statement given in the grid on each paper. Make seven to eight Instruction Cards.

Reach the Den



Objective

To help students understand the various threats faced by tigers and the steps being taken for their conservation.

Before You Begin

Before the activity, draw a large square on the ground with 25 small squares inside. Each of the 25 squares should be about 36 cm x 36 cm.

Also make Instruction Cards for the game based on the list of threats and conservation issues given in the Tiger Facts on pages 44-45. Place these Instruction Cards on the ground in squares numbered 1 to 25. (See sample Threat Game on page 46.)

The Activity

Discuss with students the various threats faced by tigers in the wild. As you discuss these, list them down on the blackboard. Also list the conservation measures that are taken by NGOs, people and Government organisations for conservation of tigers.

Tell the students that they are going to play a game to learn about the threats faced by tigers and some of the steps taken for their conservation. In this game, at any given time, there should not be more than five students playing in the large square. One student at a time can roll the die and move along the squares. You can also have three to four Tiger Den games going on simultaneously, so that more students can play.

Tell the students that during the activity, each player is a tiger that has to reach its den where it can be safe. As tigers, they will face a number of threats on their way to the den, but if they are lucky they may also encounter tiger friendly measures. The game will be played with a die numbered 1 to 6. The sequence of the players can be decided by asking each player to roll the die once. The one with the maximum number will play first, then the second, and so on in decreasing order.

Ask the first player to roll the die. He/she should move as many spaces as indicated by the die. If he/she comes to a square that has an Instruction Card, explain the instruction to the player and ask him/her to act accordingly. The chance then passes to the next player and thus the game continues. The game will end when one of the players reaches the den. The player who wins the game should be asked what he/she learned from the game and how he/she will help conserve tigers.

Level

Advanced

Subject

Science

Group Size

Groups of 5 students

Place

Outside the classroom

Duration

30 minutes

Materials

Instruction Cards, chalk, dice

Some Tips for Writing Opinion Pieces

1. Choose a current topic as a starting point, e.g., recent capture of poachers or an interesting development with the tigers at the local zoo.
2. Write about 800 words, not too much more or too much less.
3. Express your point of view clearly and boldly in the first paragraph.
4. Make the argument as logical as possible, ideally limiting themselves to three major points.
5. Use simple, short sentences. Write in short paragraphs - say, three sentences apiece.
6. Close on a strong note, using a short, powerful last paragraph to drive your message home.
7. At the very end of the piece, provide a line about yourself and a word count in the following way:
Ravi or Swati is a student/teacher/etc. living in xyz town.
809 words

Global People's Petition for Wildlife

We, the undersigned, call upon the leaders of all the world's nations to ensure the conservation and protection of our world's wildlife.

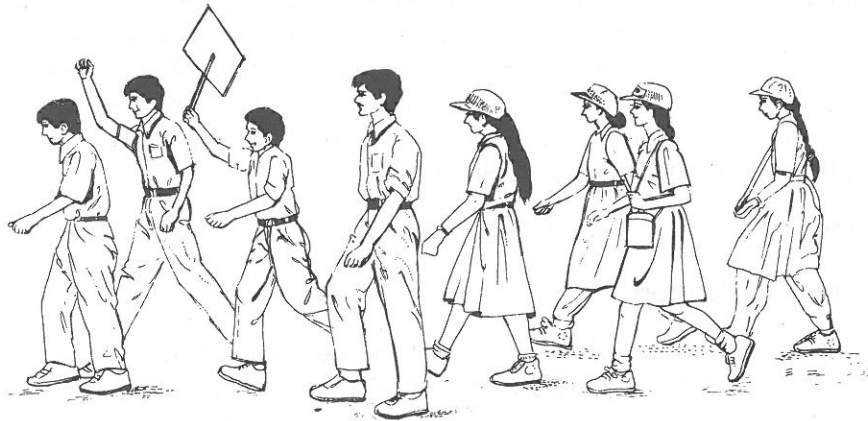
We call upon world leaders to devote far greater efforts to ensure the protection of wilderness areas and act, immediately, to eliminate the illegal trade in wildlife.

We most strongly and urgently urge the leaders of all developed nations to provide greatly increased financial assistance to developing nations to aid them in their conservation priorities.

We personally pledge never to knowingly purchase or consume illegal wildlife parts or products.

We say to our leaders: if we all come together we can ensure the children of future generations can experience the beauty and benefits of our natural world—when we all come together, we can do anything.

(Source: *WildAid*)



One such petition is reproduced on page 50. Students can use the same petition or write one on their own.

Start a Chain Mail

Spreading awareness is a very important task. There are many people across the world who do not know anything about tigers. In this activity, students will use the concept of 'chain mail' for a constructive purpose. They will use it to tell people about tigers and explain the need for their conservation. The more the number of people they can reach out to, the more effective and successful their activity is. Some students might want to send e-mails. You should encourage them.

A day before the activity, tell each student in the class to buy five postcards. Tell them to also think of five people they will send these to and collect their postal addresses. These five people can include grandparents, uncles, aunts, cousins, friends, etc. Each student can design and write out either one message and make five copies of it, or can design five different messages. Each postcard should end with a request to the recipient to copy or create five similar postcards, and send these to five people in their circle of friends or relatives.

Write an Opinion Piece or a Letter to the Editor

An effective way of taking local action to help tigers is to write a letter to the editor or an opinion piece in a local newspaper, a children's magazine or a magazine which focuses on environmental issues, discussing the threats faced by tigers and the need for their conservation.

Before they write their letters or opinion pieces, discuss with the students the structure of the letter. Some tips for writing opinion pieces are given.

Once they have written their letters or opinion pieces, the students can call up the local newspaper or magazine and ask for the name and mailing address, email address or fax number of the Editor. Then, they can send their piece with a short cover letter to the Editor. The cover letter should explain in a couple of sentences what the piece is about, who they are and where they live, and how to get in touch with them. Alternatively, you could yourself forward some of the letters to the editor.



Tiger Craft

Here are some interesting activities that your students can do.

1. Rock Tiger

They will need

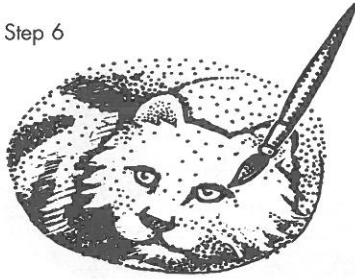
- picture of a tiger
- smooth, egg-shaped rock
- dishwashing soap
- water
- scrub brush
- newspapers
- sharp pencil
- oil/acrylic paints
- wide brush (finger-width) and fine brush
- Piece of cloth or cotton wool

Hint: If you mess up painting your rock, wash it, let it dry off, and paint it again!

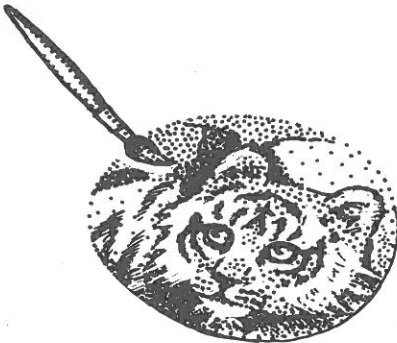
What to do

1. Look through magazines for a picture of a tiger. Encourage them to use their imagination.
2. Find a smooth rock, the basic shape of the tiger's face or body.
3. Scrub the rock with soap and water. Rinse it well, and let it dry completely.
4. Cover the work area with newspaper.
5. Sketch the design of the tiger's body or face on the rock.
6. Paint the outlines and shadows of the tiger using a fine brush.
7. Fill in big blocks of colouring with a wide brush. Let the rock dry.
8. Add details using the fine brush. Wipe mistakes away with a damp cloth or cotton wool. Add white dots to the tiger's eyes to make them sparkle.

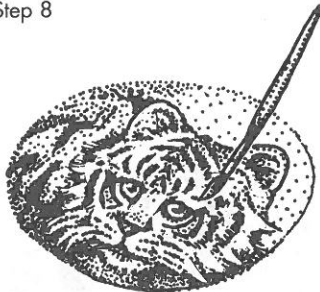
Step 6



Step 7



Step 8



2. Paper Plate Tiger

They will need

- Paper plate or cardboard cut into a circle
- Orange paint or orange chart paper
- White paper
- Sketch pens
- Black paint or black marker pen
- Glue and scissors
- Bits of wool

What to do

1. Paint the paper plate orange, or glue orange chart paper onto the plate.
2. Draw stripes with the black marker or paint
3. Cut out eyes, ears and nose from the white paper, colour them as shown and paste them onto the plate.
4. Stick bits of wool in the shape of a mouth as shown.



3. Turn into a Tiger

They will need

- Paint, preferably the type used by actors for make-up (Make sure that the paints used are not toxic or harmful to the skin or eyes)
- Cold cream

What to Do

1. Tie the hair away from the face.
2. Put some cold cream on the face and wipe it off. (This will make it easier to clean up the paint later.)
3. Now apply white paint around the eyes and mouth.
4. Rub a yellow orange paint over the rest of the face. With a brush or thick black pencil draw thick stripes on the forehead and the areas of the eyes, and thin stripes for whiskers.
5. Dab on some pink on the nose. Paint on fangs at the corners of the mouth.

Now all they need to do is roar!

Make sure they don't forget to wipe off all the paint with cotton wool and cold cream.





Notes

[Faint, illegible text, likely bleed-through from the reverse side of the page.]



Centre for Environment Education

Thaltej Tekra, Ahmedabad-380 054, Gujarat, INDIA
Phone : 91-79-26858002 to 09 Fax : 91-79-26858010
Email : cee@ceeindia.org
Website : www.ceeindia.org, www.kidsrgreen.org

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