

Research and identify five endangered species as the focal points of the educational toy collection. Evaluate each species' significance in biodiversity conservation efforts.

JAVAN RHINO

<https://www.worldwildlife.org/species/javan-rhino>

Rhinoceros sondaicus

Population: 76

Height: 4.6 - 5.8 feet

Weight: 1984 - 5071 lbs

Length: 10 - 10.5 ft

Habitat: Tropical forest

Horn length: 10 in.

Where they live now: Ujung Kulon National Park. Java, Indonesia

Reasons for Endangerment: illegal wildlife trade/poaching, habitat loss, small population causes inbreeding, invasive plant species overgrowing their food, area in park has reached carrying capacity, area prone to tsunamis

<https://rhinos.org/about-rhinos/rhino-species/javan-rhino/>

Lifespan: 30-40 years

Nature: solitary

Height: 5 - 5.5 feet

Weight: 2000 - 5060 lbs

Length: 6 - 11.5 ft

Horn: Males have 10 in horns, female have smaller or no horn

<https://www.oneearth.org/species-of-the-week-javan-rhinoceros/>

Why are they important?

- Eat large amounts of vegetation to keep forest healthy
- Causes more biodiversity in plants
- More plants mean more carbon sequestration
- Knock down and trample vegetation; natural pruning → helps forest maintain health and store CO₂ and produce clean air

<https://www.ifaw.org/animals/javan-rhinos>

- Baby rhinos weigh 40 - 64 kg
- Javan rhinos are good at climbing and swimming
- Diet consists of over 100 different plant species
- Eat 110 lb of plants a day → make room for new plants to grow, keep forest healthy
- Healthy forest can store more carbon dioxide and produce more oxygen
- Javan rhinos disperse the seeds through their poop which encourages growth of new plants and increases spread of biodiversity

<https://www.savetherhino.org/rhino-info/rhino-species/javan-rhino>

- Insignificant size difference between males and females

- Javan rhinos can smell and hear well, but can't see well

<https://www.britannica.com/animal/Javan-rhinoceros>

- Weight: 2000 - 5100 lb
- Length: 6 - 11 feet
- Horn: males have 10 in, females have smaller or none
- Habitat: forests, marsh areas, bamboo, active mountain climber
- Population: 68 - 74

Traits and Abilities:

- **Weight: 2000 - 5100 lb, anywhere from 2 to 5 grand pianos!**
- **Length: 6 - 11 feet, the length of one or two twin beds**
- **Horn: 10 in, $\frac{2}{3}$ tall as a bowling pin**

Javan Rhinos live in many different habitats, including forests, marsh areas, bamboo forests, and around mountains. Surprisingly, despite their size, these heavy creatures are actually excellent climbers!

Unfortunately, their population is very low due to poachers taking their horns. Male Javan Rhinos have one horn about 10 inches tall, while female Javan Rhinos have shorter, or even no horn at all.

These fascinating creatures are vegetarians, and their diet consists of over 100 different plant species! When rhinos eat plants, they are making room for newer plants to grow, and this helps keep their forest environment healthy. With healthy plants, the forest can store more carbon dioxide, and take it out of the atmosphere. This is like nature's way of cleaning the air.

Additionally, rhinos play an important role in increasing the forest's biodiversity. When they eat plants and poop out the seeds, it helps different types of plants to grow, creating a more diverse and balanced ecosystem.

Glossary:

Habitat: where an animal lives

Poachers: Humans who hunt animals in order to sell them for money.

Carbon Dioxide: A type of air that is unhealthy for the environment.

Atmosphere: The area above a certain place.

Biodiversity: The variety of different species living in a particular area.

Ecosystem: Group of organisms that work together in an environment.

SUMATRAN ELEPHANT

<https://www.worldwildlife.org/species/sumatran-elephant>

- Population: 2400 - 2800
- Scientific name: *elephas maximus sumatranus*
- Height: 5 - 9 feet at shoulder
- Weight: 5 tons

- Length: 20 ft
- Habitat: broadleaf moist tropical forests
- Eats a variety of plants and deposits seeds through their poop and contribute to healthy forest ecosystem → also benefits other endangered species: sumatran rhino, tiger, and orangutan
- 70% of their habitat was destroyed in one generation, causing half of its population to die in 2012
- Sumatran elephants have smaller tusks, but poachers still kill them
- Since humans encroach on their habitat, elephants are more likely to run into humans and accidentally break things or hurt/kill people. This makes the people retaliate by killing the elephants
- Elephants go to farms and plantations looking for food

<https://indonesia.wcs.org/Wildlife/Sumatran-Elephant.aspx>

- Subspecies of asian elephant
- Live in lowland forests of sumatra
- One threat is loss of genetic viability due to small population size

<https://www.ran.org/wildlife-factsheet/wildlife-fact-sheet-sumatran-elephant/>

- Lifespan: 60 years
- Diet: anything plant based, banana and sugarcane, roots, barks, stems
- Can communicate up to two miles away through low pitched sounds that humans can't hear
- Protect skin from sun and bugs by taking mud baths

<https://www.sumatranelephantproject.org/elephants>

- Disappearance of elephants will mean reduced/no dispersal of some plant species, meaning rainforests will lose valuable tree species, which will in turn affect more animals that depend on them

Traits and Abilities:

- **Height: 5 - 9 feet at shoulder, 1 to 2 refrigerators**
- **Weight: 5 tons, 11 horses, 10 grand pianos**
- **Length: 20 ft, half as tall as a telephone pole**

Sumatran Elephants usually inhabit moist tropical forests, but their home is shrinking due to deforestation.

These majestic 5-ton creatures consume a variety of plants, including sugarcane and bananas. As their habitat gets smaller, some elephants wander onto human farms in search of food, leading to unfortunate conflicts with people.

Despite having the smallest tusks among all elephants, Sumatran Elephants are targeted by poachers for their ivory. This poses a serious threat to their survival.

Elephants play a crucial role in their environment. By eating many different types of plants, they deposit seeds through their dung, contributing to increased biodiversity in

forests.

These plants, in turn, become a food source for various animals, including other endangered species, creating a balanced ecosystem.

Glossary:

Habitat: where an animal lives.

Inhabit: to live

Deforestation: the chopping down of trees and forests

Poachers: Humans who hunt animals in order to sell them for money.

Ivory: The material an elephant's tusks are made out of. Very valuable

Biodiversity: The variety of different species living in a particular area.

Ecosystem: Group of organisms that work together in an environment.

AMUR LEOPARD

<https://www.worldwildlife.org/species/amur-leopard>

Panthera pardus orientalis

Population: 100 wild, 200 in captivity

Height:

Weight: 70 - 105 lb

Length:

Speed: 37 mph

Jump: 19 ft horizontally, 10 ft vertically

Location: Far East Russia, Northern China

Lifespan: 10-15 years in the wild, 20 in captivity

- Poached for its spotted fur
- Poachers also take their prey, meaning there is insufficient food for them
- Prey populations need to recover before amur leopards can recover

<https://www.ifaw.org/animals/amur-leopard>

Traits for Cold weather: longer legs, bigger paws, coat grows thicker

- Mainly hunt at night, good night vision
- Habitat in coniferous - deciduous forests
- Regulate populations of prey species → keeps plant life growing
- Deforestation and human settlement has taken over lots of their habitat
- Like to rest in trees
- In the 1970s there were only 30 left in the wild

<https://conservewildcats.org/resources/amur-leopard-facts/>

- Trait for cold weather: lighter color than most leopards, good for snow camouflage
- Coat grows 7.5 cm thick in the winter
- Summer coat is 2.5 cm

<https://www.rosamondgiffordzoo.org/experience/animals/mammals/amur-leopard/>

- Wild population 60 - 80
- Diet: deers, boar, badgers, hares, mice, birds
- Tail length is around 3 ft, use their tail to wrap around themselves in the winter
- Excellent swimmers, one of few cat species that like water

- Population has doubled since 2007

<https://www.onekindplanet.org/animal/amur-leopards/>

- Nocturnal, hunt at night
- The only leopard subspecies able to live in colder climates AND hot climates
- Main threats are poaching for their fur, decreasing prey populations, and habitat loss

Panthera pardus orientalis

Population: Around 300

Weight: 70 - 105 lb

Speed: 37 mph

Jumping height: 19 feet horizontally, 10 feet vertically

Traits and Abilities:

Weight: 70 - 105 lb, four to five times heavier than a dachshund dog

Speed: 37 mph, about half as fast as a cheetah

Jump: 19 ft horizontally, 10 ft vertically, tall as a giraffe horizontally, half of a giraffe vertically

Amur Leopards come from Far East Russia and Northern China. These nocturnal felines typically inhabit deciduous forests, where they enjoy resting in the trees. Remarkably, these amazing creatures can run at 37 mph, and jump 10 ft vertically into the air!

During the warmer months, Amur leopards have short fur, around 2.5 centimeters (half of a golf tee) long, with darker gold coloring. However, their coats grow during the winter, when their new fur being 7.5 centimeters (1 and $\frac{3}{8}$ golf tee) with paler gold coloring. In addition, Amur leopards wrap their 3ft (half a twin bed) tails around themselves to help stay warm!

Sadly, the Amur Leopard is losing its habitat to human settlements and deforestation. This not only affects the leopards but also decreases their prey population, making it challenging for them to find food. Additionally, poachers hunt these leopards for their beautiful pelts.

Amur leopards play a vital role as predators in their ecosystem. By keeping the prey population at a steady number through hunting, they contribute to a balanced ecosystem, allowing more plant life to flourish on the land.

Glossary:

Nocturnal: sleeps during the day, active in the night

Deciduous: A tree that sheds its leaves once a year

Inhabit: to live

Deforestation: the chopping down of trees and forests

Poachers: Humans who hunt animals in order to sell them for money.

Vital: very important

Predator: an animal that hunts other animals to eat

Ecosystem: Group of organisms that work together in an environment.

Pelt: the fur of an animal

IRRAWADDY DOLPHIN

<https://www.worldwildlife.org/species/irrawaddy-dolphin>

- *Orcaella brevirostris*
- Weight: 198 - 440 lb
- Length: 5.9 - 9 ft
- Habitat: Rivers in south and southeast asia, bay of bengal, especially the mekong river
- Population: 92
- Large forehead, no beak, small snout
- Critical for health of the whole mekong river, as they eat the 1,100 fish species there
- Mostly threatened by bycatch: meaning they get caught in fishermen's nets by accident, get tangled and drown
- Spit water from their mouths, used to distract prey, exclusive to irrawaddy dolphins

<https://us.whales.org/whales-dolphins/species-guide/irrawaddy-dolphin/>

- Expressive, round and charismatic faces
- Live in small groups, 6 or less
- Many were taken into captivity
- Pollution and dam-building cause habitat degradation and loss
- Six irrawaddy dolphins have been found with skin abnormalities from pollution

<https://animalia.bio/irrawaddy-dolphin?letter=i>

- Lifespan: 30 years
- Top speed 16 mph, easy to catch
- Length: 6.6 - 9.2 ft
- Habitat: bay of bengal, southeast asian coasts
- Stays near the coast
- Affected by prey deflation from overfishing
- $77 + 125 + 70 + 65 + 5383 + 451 = 6171$
- Most of them live on the coast of bangladesh
- Use echolocation in dark areas and at night to locate prey

https://animaldiversity.org/accounts/Orcaella_brevirostris/

- Live in pods of 3 - 6
- Cooperate with fishermen
- Regulate prey populations of fish, crustaceans, and cephalopods

<https://www.riverdolphins.org/river-dolphins-worldwide/irrawaddy-dolphin/>

Orcaella brevirostris

Population: Estimated 6,171

Length: 5.9 - 9 feet

Weight: 198 - 440 lbs

Top Speed: 16 mph

Traits and Abilities:

Length: 5.9 - 9 feet (one refrigerator - one and a half refrigerators)

Weight: 198 - 440 lbs (half a reindeer to one and one fifth a reindeer)

Top Speed: 16 mph (one fourth as fast as a cheetah)

Irrawaddy Dolphins are from the Bay of Bengal and various rivers in South and Southeast Asia. They get their name from the Ayeyarwaddy River in particular. These creatures are recognizable from their unique, expressive faces, their small snout, and the rounded fin on their back. These charming creatures can grow to be 5.9 - 9 feet long, and weigh anywhere from 198 - 440 lbs. Like other dolphins, Irrawaddy Dolphins use echolocation to locate their food in the dark and at night. What's special about Irrawaddy dolphins is their ability to spit water from their mouths, believed to help distract their prey.

Irrawaddy Dolphins face threats from overfishing, pollution, and dams decreasing the size of their habitat and food supply. However, the biggest threat is bycatch, meaning these dolphins get accidentally caught in fishermen's nets, leading to entanglement and drowning.

Irrawaddy dolphins play a crucial role in their ecosystem. As predators, they regulate the populations of fish, crustaceans, and cephalopods. Their flexible diet allows them to control many different fish species' populations.

Glossary:

Echolocation: Using sound waves to sense where objects are

Overfishing: catching fish without waiting for the population to grow back to normal

Bycatch: other creatures accidentally caught in fishermen's nets

Habitat: where an animal lives

Crucial: very important

Predator: an animal that hunts other animals to eat

Ecosystem: Group of organisms that work together in an environment.

Crustacean:

Cephalopod:

KAKAPO

<https://www.doc.govt.nz/nature/native-animals/birds/birds-a-z/kakapo/>

Strigops habroptilus

Population: 247

Habitat: New Zealand rainforest

- Nocturnal, flightless parrot
- Threats: predators, disease, genetic inbreeding, infertility
- Diet: eats leaves and fruits of native plants, vegetarian
- Maybe longest living bird in the world, 60 - 90 years
- Evolved without mammals present, became large and flightless, strong claws can climb 20 m trees

- When cats and stoats were introduced to the area, the birds were easy to hunt on the ground
- Rats pose threats to eggs and chicks

<https://nzbirdsonline.org.nz/species/kakapo>

- Low point of 50 birds in the 1990s
- No close relatives
- Nests have a strong smell, easy for predators to find

<https://www.oneearth.org/species-of-the-week-kakapo/>

- Habitat: rainforest
- Only flightless parrot
- Around 9 lb
- One of the world's longest living birds
- Culturally meaningful for native people of new zealand, maori

<https://www.britannica.com/animal/kakapo>

- 25 inches tall
- 13 pounds
- Rats, weasels, cats, and ferrets were introduced to the environment in the 1950s, making the kakapo become nearly extinct
- Nickname, owl parrot

<https://www.edgeofexistence.org/blog/kakapos-the-flightless-bird-whose-numbers-are-soaring/>

Lifespan: up to 100 years

<https://www.nhm.ac.uk/discover/new-zealands-quirky-kakapo-are-pulled-back-from-extinction.html>

- Appear in maori folklore and legends
- Feathers used in cloaks that are passed down from generation to generation
- 'Night parrot'
- Rimu fruit tree

Strigops habroptilus

Population: 247

Height: 25 in.

Weight: 9 lbs

Lifespan: up to 100 years

Traits and Abilities:

Height: 25 in. (2/5 of danny devito)

Weight: 9 lbs (12 times as heavy as a can of soup)

Lifespan: up to 90 years

Kākāpōs, often nicknamed ‘owl parrots’ for their owl-like face, are extraordinary parrots native to various rainforests in New Zealand. These unusual parrots are some of the longest living birds in the world, and are the only flightless parrots! Even though they can’t fly, Kākāpōs have incredibly strong feet and claws, allowing them to climb trees up to 66 feet (one third as tall as the leaning tower of pisa) tall.

Kākāpōs get their name from their nocturnal nature, as it means ‘night parrot’ in Maori. They search for their food at night, enjoying a vegetarian diet consisting of leaves and fruits, especially from the rimu fruit tree.

Kākāpōs faced a threat in the 1950s with the introduction of mammals, including cats, stoats, rats, and ferrets to their habitat. Since these heavy parrots cannot fly, they became vulnerable to being eaten by these introduced mammals. The rats in particular posed a significant threat to eggs and young chicks.

Kākāpōs hold cultural significance for the native people of New Zealand, the Maori, appearing in their legends and folklore. Additionally, the Maori people traditionally used Kākāpō feathers in their cloaks, which are passed down through generations.

Glossary:

Nocturnal: Awake during the night, sleep during the day

Rimu Fruit: small red fruits that grow on trees

Vulnerable: could be easily hurt

Cultural Significance: important to a community of people

Maori: the indigenous people of new zealand

Mammals: animals that nurse their young

Folklore: traditional stories from a community that are passed down from generation to generation

<https://www.pbs.org/newshour/show/the-tough-decision-of-which-species-to-save-from-extinction>

<https://theconversation.com/even-ugly-animals-can-win-hearts-and-dollars-to-save-them-from-extinction-78507>

<https://e360.yale.edu/features/the-real-case-for-saving-species-we-dont-need-them-but-they-need-us>