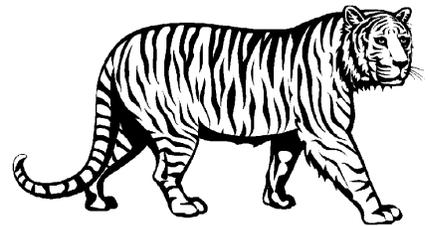


WILD

TIGER



#tinytiger

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Created By: Felicita Wight

Wild Tiger

What? Wild Tiger is a 501c3 non-profit dedicated to conserving India's Bengal tigers and their habitats. We believe that tigers can survive and rural communities can develop sustainably together.

Why? The diversity of wildlife found in India are maintained and supported by the tiger. People who depend on the ecosystem for food, cash crops, and natural products also benefit from conserving the tiger. Protecting the apex predator means protecting everything else in the ecosystem.

How? We work to protect the largest remaining population of tigers in the world. India's Bengal tigers are threatened by a number of global and local issues. Scientific research and education is fundamental to successful conservation.

Research: Field research in India examines both the biological environment and human dimensions of the tiger's existence. India's tiger population is critical to long-term conservation as the largest concentration of tigers left in the wild. We provide resources supporting year-round research in Central India.

Education: Education is essential in our efforts to save tigers and promote coexistence.

A variety of threats, like wildlife crime, climate change, and habitat encroachment face tigers in the wild. An interdisciplinary understanding of threats is required to meet 21st century conservation needs as traditional conservation strategies have failed. The tiger's future is in our hands. Innovative solutions need to be found. Tigers need STEM leaders who engage in critical thinking. We rely on educating the future generation, providing them skills and knowledge, so they may be able to save endangered species in the future.

About This Activity Guide

Despite the combined efforts of the international community, governments and civil society there has been a significant increase in wildlife crime. Wildlife trade is the fourth largest global illegal trade after narcotics, counterfeiting, and human trafficking. Creating the material for school age students presented the opportunity to introduce the issue to a broad audience. The material was designed as an activity guide because various facets of the topic could be explored through basic science principles and social studies skills. Through a multi-disciplinary approach, students will gain a deeper understanding of the role wildlife play in the environment and how legal and illegal trade affects a species' survival. This activity guide provides a hands-on, problem-solving activity which create the opportunity to learn about wildlife trade issues in an interactive and thought provoking manner.

Go to www.wild-tiger.org for further STEM exploration and to download more activity guides!

How to Use This Activity Guide

The purpose of this education activity guide designed to acquaint students with the increasing problems associated with wildlife trade. This guide is intended to be useable for both formal and non-formal facilities. The activities are aimed at upper elementary through high school students. There are three units, each consists of a topic overview with two to three activities based on the subject matter. Every activity includes an objective, method, background information and procedure accompanied which include an introduction, conclusion, and discussion questions as well as extension suggestions. All activities have **key terms** which highlight the learning objectives. Supplemental materials are provided at the end of each activity. Each section also has a supplemental case study for students or teachers to examine the topic deeper.

This activity guide can be used as a tool for educators to incorporate the topic of wildlife crime into programming or a school curriculum. The activities are designed to cover broad environmental science topics and introduce key terms in a fun and interactive manner. Through a multi-disciplinary approach, this booklet will provide students with a deeper understanding of the role wildlife plays in the environment and how legal and illegal trade affects wildlife survival, as well as stimulate environmental stewardship beyond the classroom.

Pangolin Perspective

Intro:

While many non-charismatic species are threatened due to illegal poaching, species like the pangolin are not as appealing as tigers or elephants. Little is known about **pangolins**, also known as scaly anteaters. There is insufficient data available on pangolin distribution and population status to enable an assessment of their conservation needs (Newton et al., 2009). Governments in the pangolins range have implemented bans on hunting or trading the animals and violators face harsh penalties with potential imprisonment. Annual seizures have been estimated at roughly 10,000 animals (Davies, 2014). However, experts warn the illegal trade is far greater because these numbers only represent what has been reported.

Objective:

Be able to advocate about little known or misunderstood wildlife.

Method:

Students will reinvent the image of the pangolin by designing a poster campaign.

Background:

Little is known about **pangolins**, also known as scaly anteaters. Their diet consists of insects and they have a long sticky tongue. Eight species of pangolins are found on two continents. Four species live in Africa and four in Asia. These species are rarely observed due to their secretive, solitary, and nocturnal habits. Large scales cover the entire body and are made of keratin, just like our fingernails and rhino horns.

Between 1993 and 2003, more than 80,000 pangolin skins were illegally exported from Laos to international markets, primarily in the United States and Mexico (Felbab-Brown, 2011). The word “pangolin” is derived from the Malay word “pengguling,” which loosely translates to “something that rolls up.” When the species feels threatened, they curl up into a tight, almost impenetrable ball. Unfortunately, this defense makes it easy for poachers to collect and transport them unnoticed.

Demand for pangolin is in the form of meat and scales. Their meat is considered a delicacy. The biggest threat to all pangolin species today is illegal, commercial hunting for bushmeat. **Bushmeat** is wild meat or game meat intended for human consumption. The International Union for Conservation of Nature (IUCN) estimates a decline in pangolin species at a rate of over 50% in the next 15 years. (Mulqueeny & Cordon, 2014). Because these creatures have a low recruitment rate, giving birth to a single offspring every year, it is impossible for their natural population to contend with human demand. Pangolin scales are used in traditional medicine and folk remedies to treat a range of ailments from asthma to rheumatism and arthritis (WWF c, n.d). Their scales, blood, and other body parts are also widely used in traditional Chinese medicines. Indonesia and Malaysia now make up the bulk of the supply to the pangolin markets in East Asia (Mulqueeny & Cordon, 2014).

Grade level: 3-9

Subject Areas: Biology, Social Studies

Duration: 20-30 minutes

Materials:

- ✓ Pangolin Fact Sheet
- ✓ Poster paper
- ✓ Markers, pens, pencils

Key terms: pangolin, bushmeat

Procedure:**Before the Activity**

1. Decide if you will have it be a class, small group or solo activity
2. Provide poster size paper or use plain computer paper
3. *Optional: Find and print 4-6 images of the pangolin- Create copies

Intro:

The pangolin species' biggest hurdle to survival is public education. While many non-charismatic species are threatened due to illegal poaching, species like the pangolin are not as appealing as tigers or elephants. The more people know, the more likely they are to care about it going extinct. Perhaps, these non-charismatic species just need to reinvent their image.

Activity:

1. Hand out Pangolin Fact Sheet
2. Split students into groups if applicable
3. Have students come up with a fun and educational campaign for the pangolin to create a greater public awareness about the species
4. Start by reinventing the image of the pangolin and come up with slogan to capture people's attention
5. Give students 15-20 minutes to design a campaign poster for the pangolin
6. Use the Internet to find images of the pangolin
7. **Older Students** could create an info graph (a visual image such as a chart or diagram used to represent information or data) of the species
8. Give students 15-20 minutes of research
9. Discuss as a class other ways to create public awareness for the species.

Conclusion Statement:

Little is known about the current distribution and range of the various pangolin species. Without information on population status, it is hard to assess their conservational needs. The illegal wildlife trade affects a wide range of wildlife not solely iconic species such as elephants or tigers. Sharks and pangolins are not the most attractive species but perhaps that is why they need our help even more.

Questions:

1. Discuss why we should be aware of and advocate for species that do not live in our own backyard.
2. How can wildlife educational campaigns be effective for species such as the pangolin?
3. Seeds and plants are also being taken in mass quantities for illegal trade. Why should be concerned about this type of illegal trade?

Extensions:

- ❖ Explore other non-charismatic species in the wildlife trade
- ❖ Create a research paper on the pangolins or another non-charismatic species
- ❖ Make it a contest

Pangolin Fact Sheet

Description

There are eight species of **Pangolins**, also known as scaly anteaters, found on two continents; four species live in Africa and four in Asia and are found in a variety of habitats. Both species are covered in large scales which are made of keratin, just like our fingernails and rhino horns but Asian pangolins have bristles between the scales which African species lack. The scales of these critters comprise about twenty percent of their total body weight. Like anteaters, their diet consists of insects and they have long sticky tongues. Pangolins have slow population growth, giving birth to a single offspring every year. Similar to skunks, they have special glands that release an unpleasant odor. Some species have prehensile tails that help to climb trees and branches. The word “pangolin”, is derived from the Malay word “pengguling”, which loosely translates to “something that rolls up”. When the species is threatened, they curl up into a tight, almost impenetrable ball. These species are rarely observed because they are nocturnal, secretive and solitary in nature.



Threats

All species of pangolin are threatened and several are endangered. Little is known about the species except that the illegal trade of them is on a massive scale. Making it one of the most heavily traded wild animal in the world. The demand for pangolin is in the form of meat, it is considered a delicacy, and scales. The biggest threat to all pangolin species today is illegal, commercial hunting for human consumption of bushmeat. Pangolin scales are used in traditional medicine and folk remedies to treat a range of ailments from asthma to rheumatism and arthritis. Their scales, blood, and other body parts are also widely used in traditional Chinese medicines. The pangolins biggest threat is a lack of public awareness or education.

Resources:
Pangolins.org
WWF- Species Pangolin

Glossary

Domesticated-tamed animals- animals that have become adapted over time to life alongside humans, such as chickens, goats, cows, dogs.

Illegal wildlife trade or trafficking -the illicit procurement, transport, and distribution, internationally and domestically, of animals, and animal parts in violation of laws, foreign and domestic, and treaties.

Apex predators- are animals (adult), have no natural predators within their ecosystems and are at the top of the food chain.

Biodiversity -is the diversity among and within plant and animal species in a particular ecosystem.

Black market- where goods are traded illegally whether it be a physical locatable shop or on the Internet.

Bushmeat- is wild meat or game meat; referring to meat from non-domesticated mammals.

Captive breeding -refers to the method of breeding animals in a controlled environment and raising them under human care.

Captive-bred animals - term allotted to at minimum second-generation captive-bred animals, in other words an animal born in captivity to captive parents.

Domesticated (tamed)- species that have become adapted over time to life alongside humans.

Exotic pets- are species that have not been intensively and selectively bred for life with humans, this can include captive raised or wild caught species.

Exotic species -is an organism that is not native to that habitat.

Export- is in an item going out of the country to any other country of the world.

Illegal -not permitted or allowed.

Import -is an item coming inside a country from any other country.

Invasive species -is an exotic species whose introduction into an ecosystem in which the species is not native causes or is likely to cause environmental or economic harm or harm to human health.

Keystone species-are species that play essential roles in maintaining biological diversity of the ecological community and how an ecosystem functions.

Legal- permitted, allowed, lawful.

Live Auction is a method of buying goods at a location where the item is sold to the highest bidder.

Native species- species that occurs naturally within a region.

Non-native-a species living outside its native distributional range.

Pangolins- known as scaly anteaters, the species is at risk of extinction due the commercial hunting for human consumption.

Poaching- is when an animal is killed illegally, which could mean taking a wild resource out of season or through an illegal means.

Ranger- wildlife rangers are the men and women on the frontline of poaching, responsible for protecting endangered species within a protected natural area.

Smuggling- is the illegal transportation of objects or people including crossing international borders.

Traffic-is more conventionally used to indicate a tainted version of “trade;” refers to the act of trade (buying and selling) of flora and fauna illegally or against the law.

Wild-caught-species caught alive in the wild.

Wildlife farming- refers to the rearing of non-domesticated animals for the purpose of captive breeding.

Wildlife trade- is the selling of or exchange of wild animal and plant resources. This can include live animals and plants or a diverse range of products needed or prized by people such as skins, meat, medicinal ingredients, tourist trinkets, timber, fish and other food products.