

CHILDREN IN THE
WILDERNESS



"You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of a difference you want to make

- Jane Goodall



INTRODUCTION

World Pangolin Day is celebrated on the third Saturday in February, and so this year falls on Saturday the 17th February.

World Pangolin Day is an opportunity for people who care about the environment and conservation, to join together in raising awareness about these unique mammals — and the threats they face. Pangolin numbers are rapidly decreasing in Asia and Africa.

The demand for pangolins comes mostly from Asia, where pangolin scales are unfortunately believed to have medicinal purposes and pangolin flesh is considered a delicacy. There is no evidence to show that pangolin scales have medicinal properties or any other part of the pangolin.

LESSON PLAN

Read through the lesson plan in order to organise your Eco-Club session. Make use of the vocabulary list at the end of this lesson plan. Any word that is **bolded in red** in the lesson, will be in the vocabulary list.

Thereafter, follow the numbered steps in order to conduct your lesson. Make sure that you work through this step by step to ensure all parts of this important lesson are covered.

STAGE 1 – ENERGISER



DISCUSSION

Discussion – All about Pangolins

Time – 10mins

Location – Under the trees

1. Sit under the trees outside with the children and talk to them about Pangolins. Be sure to talk about this special lesson on World Pangolin Day. This is just a quick discussion to introduce the children to Pangolins – you will go more in depth later in the lesson.

However, children should pay attention to what pangolins look like and how they behave as it will help them in the energiser game 😊

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Facts about Pangolins:

1. Pangolin scales are made of keratin, just like our finger nails, and make up 20 per cent of their body weight.
2. The word ‘pangolin’ comes from the Malay word ‘penggulung’, which means ‘one that rolls up’. When it is threatened a pangolin will curl itself into a tight ball, which is impenetrable to predators.
3. The mammal can eat up to 20,000 ants a day. That’s about 73 million ants a year!
4. Pangolins can close their ears and nostrils using strong muscles. This helps protect them from ants getting into these tricky places.
5. They have long, sticky tongues, which are often longer than their body and attached near its pelvis and last pair of ribs. If a pangolin fully extends its tongue, it is longer than the animal’s head and body!
6. Pangolins don’t have teeth, so they can’t chew. Instead, they have keratinous spines in their stomach and swallow stones that help them grind up their food.

2. Now play the energiser below with the children.



ACTIVITY

Activity – All about animals

Time – 15mins

Location – Outside in an open space

1. Mark off an open playing area so that the children know where they are allowed to run.
2. The Eco-Mentor is going to be ‘it’, and stands in the middle of the open playing area. All the children stand in a line (shoulder-to-shoulder) facing the Eco-Mentor on the far end of the playing field.





3. Each child must choose an animal. This animal becomes their identity and they should keep their animal a secret 😊 They can choose any animal they like, as long as they know enough about their animal to answer the questions below.
4. Have one of the children randomly choose three other children to be pangolins.
5. The Eco-Mentor then says a characteristics which animals may have (for example: My animal has a beak; My animal has feathers; My animal has four legs; My animal has a long tongue; My animal eats only plants; My animal curls up in a ball when it gets scared, etc.).
6. Instruct the children that if their animal **does have** the feature mentioned they must run across the playing area to the other side without being tagged or going out of the boundaries.
7. The Eco-Mentor tries to tag as many people as possible. If a child is tagged they become a Tree. Trees freeze where they are tagged and though they cannot move their feet they can sway and tag others as they run past. If a Tree tags you, you too become a tree.
8. Children must now stand on that side of the playing area, and the same procedure happens again. The Eco-Mentor will call out characteristics of animals, and if the children's animals have those, they will run across the field to the other side. If they are tagged, they will become trees.
9. The last player who is not a tree wins and gets to be the 'Eco-Mentor' for the next round.

STAGE 2 – THEORETICAL LESSON



OBJECTIVES

Children are introduced to pangolins, why they're important in the ecosystem, why they are in danger and what they can do to protect them.



DISCUSSION

Discussion – All about Pangolins

Time – 15mins

Materials – Paper and pens / markers

Location – Under the trees. Children should bring a piece of paper along so that they can take notes about what they have learnt.

1. Use the notes below to teach and talk to the children about wetlands.

Do not just read the notes to the children, but rather try to engage them during the lesson. You can do this by asking them for their opinions. Encourage them to try to answer questions you might ask around these notes (for example, you could ask: "Why do you think pangolins are becoming extinct" or "Where do you think pangolins live?").





All about pangolins

- Pangolins, also known as scaly anteaters, are unique creatures that are covered in hard, plate-like scales. They are insectivorous (feeding on insects) and are mainly nocturnal (meaning they are active at night).
- You are very lucky if you ever see a pangolin, because they are very secretive, like to be alone, and are nocturnal.
- Pangolins have large, curved claws that they use for digging in ant and termite nests, as well as for pulling bark off trees and logs to find their insect prey.
- Pangolins' scales are made of keratin, the same protein that makes up our own hair and nails, and rhino horns. Their scales cover the entire body from head to tip of tail — except for their undersides, which are covered with a few sparse hairs.
- When pangolins feel threatened, they curl up into a tight, almost **impenetrable** ball to protect their tender undersides. If caught, they will thrash about using their tail muscles. Because their scales have very sharp edges, they can slice the skin of a human or predator when they do this.
- Some species find shelter in trees, while others live in underground burrows.
- Baby pangolins travel around with their mothers by riding on the base of her tail.

Why are pangolins important in an ecosystem?

Pangolins are soil caretakers

Their large claws allow them to burrow underground for shelter and to dig in ant and termite nests for food.

In doing so, the soil is mixed and **aerated (meaning it gets air)** —much like what happens when we plough our crops.

This improves the **nutrient** quality of the soil.

Pangolins help keep the balance in ecosystems

It is said that a single pangolin consumes as much as 70 million insects per year—mainly ants and termites. Pangolins certainly help to control their insect prey's numbers, contributing to the delicate balance of the ecosystems they inhabit.

Why are pangolins in danger?

The demand for pangolins comes mostly from Asia, where pangolin scales are unfortunately believed to have medicinal purposes and pangolin flesh is considered a delicacy. There is no evidence to show that pangolin scales have medicinal properties or any other part of the pangolin.

There are a total of eight species of pangolin on our planet.

Four live in Asia:

- Indian Pangolin (also called Thick-tailed Pangolin) — 'Endangered'
- Phillipine Pangolin — 'Endangered'
- Sunda Pangolin (also called Malayan Pangolin) — 'Critically Endangered'
- Chinese Pangolin — 'Critically Endangered'

Four others live in Africa:

- White Bellied Tree Pangolin (also called Three-cusped Pangolin — 'Vulnerable')





- Giant Ground Pangolin — ‘Vulnerable’
- Ground Pangolin (also called Temminck’s Pangolin — ‘Vulnerable’
- Black Bellied Tree Pangolin — ‘Vulnerable’

- Critically endangered (CR): facing a very high risk of extinction in the wild
- Endangered (EN): likely to become extinct
- Vulnerable (VU): likely to become endangered unless the circumstances threatening its survival improve
- Extinct (EX) when there are no more of a species left

The biggest threat to all pangolin species today is illegal, commercial hunting for human consumption.

African species are largely hunted as bushmeat, but more recently are being poached in order to supply Asian countries with pangolins.

In China and Vietnam (the primary sources of demand for pangolins), the flesh of pangolins is considered a delicacy and some mistakenly believe they will be blessed with health benefits if they eat it. Their scales, blood, and other body parts are also widely used in traditional Chinese medicines and ‘health tonics’. According to Traditional Chinese medicine, pangolins can provide good luck, keep evil spirits at bay, increase blood circulation, cure asthma and prevent cancer, just to name a few.

What can you do to protect them?

SHARE pangolin information with your friends, family and community

CREATE pangolin art — paint, draw, sculpt, collect natural materials to make a pangolin (it might be fun to find leaves that could represent their scales)

EDUCATE by giving a presentation about pangolins at school or in your community

INFORM traditional medicine prescribers that the use of pangolin scales is illegal (and there are no proven health benefits to consuming scales — they are made of keratin, just like fingernails!)

NOTIFY the authorities if you see pangolins for sale at markets, or know that pangolins are being poached.





STAGE 3 – DIRECT EXPERIENCE

✓ OBJECTIVES

Children are going to apply the knowledge learnt in the theoretical part of the lesson, as they create a pangolin out of natural materials, and share their learnings with the class.

✈ ACTIVITY

Activity – Pangolins, pangolins everywhere!

Time – 20mins

Materials – Pens / pencils; paper; glue; natural materials found around the school grounds; string / rope; etc.

Location – Under the trees or in a classroom

1. Divide the children into groups of 5 or 6.
2. In their groups, the children should brainstorm how they're going to make a pangolin out of natural materials.
3. They should then go out into the school grounds and collect natural materials that they can use to make a pangolin. For example: leaves, sticks, rocks, twigs, etc. They should **not** break off plants unnecessarily, but rather look for items that have fallen naturally.
4. The most important thing is to think about the pangolin's scales – they should find something in nature that looks like the scales.
5. They may use glue or string when putting their pangolins together.
6. They should also come up with a song or a poem about pangolins and what they learnt about them. They can also do a dance about pangolins, but the dance must obviously show that it is about pangolins. Here's an example of a creature made from natural materials (except the eyes 😊)





7. Once they have made their pangolin, they should stand up as a group to present their model pangolin and song / dance / poem to the rest of the class.



An example from our World Pangolin Day 2019 Celebrations

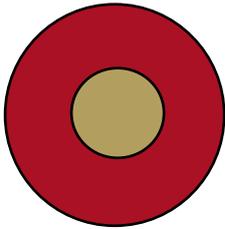




STAGE 4 – DEBRIEF



Divide the children into two groups - one group makes an inner circle and the other group makes an outer circle. The children in the inner circle and the outer circle face each other to form pairs. The children take turns to report their information, or share an idea with their partner. At the end of a set period of time (say a minute or so), the children are asked to move (for example, the children in the outer circle move two places to the left), thus creating new pairs. The children now share their information with a new partner.



With each new partner, the children should share three things:

- ✓ One thing they learnt about pangolins that they didn't know before
- ✓ Why pangolins are in danger
- ✓ One thing which they could do to help save pangolins

VOCABULARY

- **Impenetrable** - impossible to pass through or enter.
- **Aerated** – to introduce air into something
- **Nutrient** - a substance that provides nourishment essential for the maintenance of life and for growth.

REFERENCES

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