



**The SOS  
Schools Pack**

Ages 7-11

Instructions and Resources  
for Teachers

## Welcome to the Sumatran Orangutan Society's Schools Pack

This pack was created to support teaching about rainforests, orangutans, endangered species and conservation. By exploring the rainforests of Sumatra, we hope that your pupils will understand how important it is to protect this precious ecosystem, and become inspired to help us in our mission to save the Sumatran orangutan and its forest home.

We have created materials to support learning in literacy, numeracy, science, geography, citizenship and art, so that you have lots of opportunities to incorporate rainforests into your lessons and achieve key learning objectives. The resources also support the development of key skills such as creativity, communication, team work and problem solving.

The pack is divided into two age groups: 5-7, and 7-11.

Not all the activities will take an entire lesson to complete, so you can mix and match to create an engaging and interactive session.

There is also an accompanying multimedia CD with a range of additional resources, including videos, a rainforest sounds audio track, and an orangutan song! To register for your free CD please go to our website: [www.orangutans-sos.org/schools](http://www.orangutans-sos.org/schools)

We have produced a special schools fundraising pack, as once your class have learnt about the plight of Sumatran orangutans, we hope that they will want to undertake some fundraising activities to support our work to protect them and their forest homes. This can be downloaded from our website, and is included on the multimedia CD too.

We will award an SOS certificate of achievement to a class when they complete the following levels:

- OranguFans – completed a lesson.
- Rainforest Guardians – completed a lesson and an assembly to the rest of the school.
- Rainforest Heroes – completed a lesson, an assembly, and a fundraising activity.

You can contact us on [schools@orangutans-sos.org](mailto:schools@orangutans-sos.org) to let us know when your class has completed one of the levels; we will send out your certificate and add your school's name to our website.

We want to create a network of engaged young people all around the world, and inspire the next generation of conservationists to take action to protect wildlife and forests. The Sumatran rainforest is a very special place, and we hope that you and your class enjoy the journey of discovery!

## Planning your rainforest learning

You can use the resources in this pack at any time of year, or choose a day, week or month to hold rainforest-themed lessons and activities. Here are some ideas:

### Ape-ril

In Ape-ril each year, we ask people all around the world to show their solidarity with orangutans, their Great Ape cousins in the animal kingdom.

Your class could create and wear orangutan masks (templates are available in the age 5-7 Worksheets pack on our website), learn about orangutans and hold an assembly for the rest of the school to share what they have learned.

Earth Day is on 22<sup>nd</sup> April each year, so this could make a good focus date for activities.

### 22<sup>nd</sup> May: World Biodiversity Day

A perfect day to learn about and celebrate the amazing diversity of life found in Sumatra's rainforests – the only place on Earth where orangutans, tigers, elephants and rhinos all roam together under the same forest canopy.

### 5<sup>th</sup> June: World Environment Day

This would make a great day for an assembly about the Sumatran rainforest. The students can make a presentation about orangutans, and some of the ways that we can all help to save them and their forest homes. You could even plant some trees in the school grounds or in your local area, and raise money for us to plant trees in Sumatra for orangutans.

### Orange October

Do something positive for orangutans in October! Choose a day in October to raise awareness and funds for orangutan conservation – such as having an Orange Day at school with pupils and teachers wearing something orange for the day! Our fundraising pack has lots more ideas.

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## Activity 1: Orangutan Quiz

**Objectives:** A listening and comprehension exercise that provides an introduction to orangutans.

### **Resources provided**

*Orangutan Quiz* worksheet

### **Additional resources required**

None

### **Instructions**

Read the following passage aloud to the class, and then instruct students to complete the quiz as a warm-up activity. The students should listen carefully and try to remember as much as possible about orangutans so that they can complete the quiz - you should only hand out the quiz sheets after you have finished reading the passage so that they do not fill out the answers as you are reading. When complete, go through the correct answers on the board, referring to the answer sheet on the next page.

“Orangutans are Great Apes. The other Great Apes, chimpanzees, gorillas and bonobos, all live in Africa, but orangutans only live on the islands of Sumatra and Borneo in South East Asia. The orangutans found on these two islands are two separate species, and they have several differences, such as different face-shapes, and Sumatran orangutans have lighter hair.

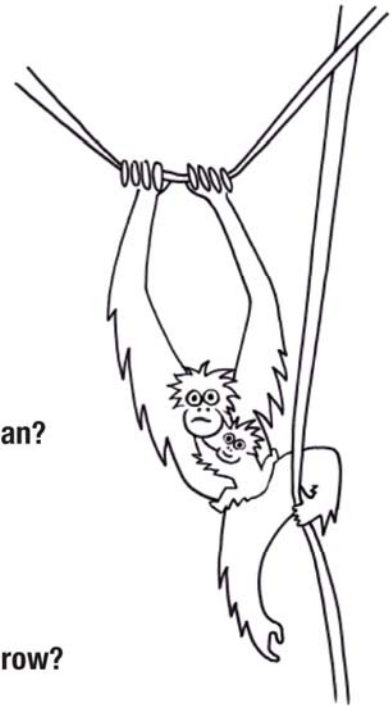
They live for around 45 years in the wild, grow to around 1.5 metres tall, and have a baby around every 7-8 years. Mother orangutans have incredibly strong bonds with their babies, and they stay together for around 8 years before the young orangutan goes off to live independently in the forest.

They mostly eat fruit, and spend their lives high in the trees. They even build nests in the trees to sleep in every night. In fact, the word orangutan means ‘person of the forest’ in the local language. Only the males make a call, called a ‘longcall’, which can be heard for many miles in the forest.

Sadly, there are less than 7,000 Sumatran orangutans left in the wild, and only around 45,000 Bornean orangutans. This is because they are losing their homes as humans cut down the forests to make space for farmlands. Sometimes orangutans are killed by people, and the babies are stolen for the pet trade. We need to make sure that orangutans have safe forests to live in so that they continue to survive.”

# Orangutan Quiz - Answer Sheet

Ring the letter of your answer



- 1) **Where in the world do orangutans live?**  
a) Peru and Bolivia  
 b) Sumatra and Borneo  
c) Uganda and Rwanda
- 2) **How do Sumatran orangutans differ from Bornean orangutans?**  
 a) They have much lighter hair  
b) They have much longer arms  
c) They are faster
- 3) **How long do orangutans live?**  
 a) 45 years  
b) 60 years  
c) 100 years
- 4) **On average, how often does a female orangutan have a baby?**  
a) Every 3-4 years  
 b) Every 7-8 years  
c) Every 10-12 years
- 5) **How long do baby orangutans stay with their mothers?**  
a) 2 years  
 b) 8 years  
c) 12 years
- 6) **What do orangutans eat?**  
a) Fish  
b) Birds  
 c) Fruit
- 7) **What does orangutan mean?**  
a) Orange ape  
b) Lives in the trees  
 c) Person of the forest
- 8) **How big do orangutans grow?**  
a) 2 metres tall  
 b) 1.5 metres tall  
c) 50cm tall
- 9) **There are various differences between male and female orangutans. Which sex makes a very loud, booming, 'long call'?**  
 a) Adult Male  
b) Adult Female  
c) Both
- 10) **How many Sumatran orangutans are left in the wild?**  
 a) Less than 7,000  
b) Around 10,000  
c) More than 20,000
- 11) **Why are orangutans endangered?**  
a) Because rainforests in Indonesia are being cut down  
b) Because they are being killed by humans  
c) Because baby orangutans are taken to be sold as pets  
 d) All of the above

## Activity 2: Learning the Indonesian language

**Objectives:** Students will learn a few words of the Indonesian language, including numbers and common phrases, animals, and conservation phrases.

### **Resources provided**

*Translations* worksheets

### **Additional resources required**

None

### **Instructions**

Hand out the *Translations* worksheets. Go through each sheet aloud with the class, and then ask the students to work in pairs to practice.

For page 1, the students, working in pairs, should take it in turns to choose an animal on the page and then say the name of the animal in Indonesian, and then the other student must identify the animal in English. They should complete the right hand side of the worksheet as they go through.

For page 2, they should practice answering the questions at the bottom of the page aloud before filling in the answers, using the phrases at the top of the page.

For page 3, they should take it in turns to ask their partner how many there are of a certain animal of their choice. For example, 'How many snakes are there?' – their partner should answer in English, showing that they understand the Indonesian word written on the worksheet. There is a list of numbers in English and Indonesian in the top right corner to help them. To make it more difficult, the students could use the Indonesian names for the animals, from page 1, for example 'How many Ular are there?'

For page 4, the teacher should read the phrases aloud to the whole class, and ask the students to find the phrase on their worksheet, and write the English underneath (if you have read an Indonesian phrase) or write the Indonesian underneath (if you have read an English phrase).

## Activity 3: Biology and Behaviour – How Orangutans Survive in the Rainforest

**Objectives:** Students will learn about the concept of adaptation – the process whereby a species evolves physical characteristics and behaviours that help them survive in a particular environment or habitat.

### **Resources provided**

*Adaptations* worksheet

*Orangutan photos* (multimedia CD)

*Orangutan Nest Cookbook* worksheets

### **Additional resources needed**

None

### **Instructions**

Go through the *Orangutan photos* (on the multimedia CD) with the class.

Encourage students to discuss the images as a class.

Then hand out an *Adaptations* worksheet to each student. The answers are below:

Orangutans are very good climbers. They have long **arms**, and as well as their hands being very similar to our hands, their feet are also **adapted** to be great at grasping branches. Their big toes are ‘opposable’, which means they are like our **thumbs**!

The rainforest is a very **complex** place to live. Orangutan babies stay with their **mothers** for at least 5 years, learning about how to find **food**, build nests and travel through the trees.

Orangutans are very **intelligent** animals. They make mental **maps** of the forest so that they can remember which trees will have fruit at different times of year.

Orangutans very rarely spend any time on the ground – they even build a new **nest** each night to sleep in, high in the trees. This keeps them safe from predators such as **tigers**. Sleeping in a nest means that they get a better night’s sleep than if they were on the ground or trying to sleep whilst balancing on a **branch**.

When it rains, orangutans have sometimes been seen using big leaves as **umbrellas** to stop them getting wet.

Orangutans sometimes use a handful of leaves like a **glove** when they are eating spiny fruits.

Then hand out a copy of the *Orangutan Nest Cookbook* worksheet. The answers are on the following page.

## The Orangutan Nest Cookbook – Answer Sheet

Orangutans spend most of their lives in the forest canopy, and build a new nest each night to sleep in. Sometimes they even build an extra one during the day to have a rest.

They must choose the correct materials and position for their nest and must learn how to build a comfortable and safe nest quickly. When they are young, orangutans spend a lot of time copying their mothers and practising nest building. Building a nest can be hard work, but usually only takes around 10 minutes.

The rainforest provides a range of ingredients but it is orangutans, the master chefs of nest building, that cook up these jungle structures!

**See if you have the know-how build a comfortable orangutan nest.**

### Stage 1. Choosing the right spot

Orangutans must choose a good place for a nest, usually found up in the trees of the forest canopy.

**Where would you put your nest?**

- A) Close to the tree at the base of the branch
- B) At the end of a branch far away from the trunk
- C) At the top of a tree in between two branches
- D) Use the branches of two different trees tied together

**Answer: All of them are correct! Orangutans use all these locations to build nests. Researchers have found that different nest positions are more common in different parts of the Sumatran rainforest. This might mean that orangutans living in different areas have different cultural preferences for how and where they build their nests.**

### Stage 2. Building a Nest Base

Once they have found a good spot, orangutans must build a solid base for their nest, using the materials around them.

**What shape would you build your nest?**

- A) Oval like an egg, just a bit bigger than an orangutan
- B) Like a leafy triangle
- C) A big rectangle like a bed
- D) A diamond shaped nest

**Answer: [A] Orangutan nests tend to be oval in shape, and just a little bit bigger than the orangutan who is going to sleep in it.**



**What would you build the base out of?**

- A) One or two really big branches that are not flexible and hard to move
- B) Lots of medium sized branches that can be bent, broken and twisted
- C) Loads of tiny little twigs all mashed together
- D) Just out of leaves
- E) Just out of vines

**Answer: [B] Orangutan nests usually have a base of medium sized branches that are flexible enough to move about into position.**

**How would you put the base together?**

- A) Hold all the branches together and quickly sit on top before they spring back
- B) Bend, break and weave the branches together making a hard edge and softer middle
- C) Bend, break and weave the branches together making a soft edge and hard middle
- D) Break off all the branches and stack them up in a pile
- E) Superglue!

**Answer: [B] Orangutans make the base of the nest by bending branches and weaving them together. They make the nest with a soft middle and rigid edges, probably to make it safe and comfortable to lie on.**

**Stage 3: Extra ingredients for a good night's sleep**

Orangutans make their nests nicer places to spend the night by adding extra features such as a mattress or lining.

**How would you make the mattress or lining for the nest?**

- A) Place moss on the base to make a lovely cushion
- B) Mix mud and leaves together and use the paste to make a sleeping platform
- C) Collect feathers from the surrounding area to make the base more comfortable during the night
- D) Use small, flexible, leafy branches to build a softer layer in the nest.

**Answer: [D] Orangutans build the mattress and lining of their nests using smaller more flexible branches. These are usually placed on top of the base structure.**

**Choose some extra ingredients for your nest!**

- A) A nest roof
- B) A blanket
- C) A pillow
- D) An extra bunk

**Answer: All of these have been seen in orangutan nests. Orangutans probably choose what accessories to add to their nests depending on their needs at the time.**

## Activity 4: Habitats and Ecosystems

**Objectives:** At the end of this activity students should understand that habitats are dependent on the species that live in them.

### **Resources provided**

*Rainforests* film (multimedia CD)  
*Foods* worksheets  
*Life Cycle* worksheet  
*Rainforests and Biodiversity Fact Sheet*

### **Additional resources required**

None

### **Instructions**

Show the *Rainforests* film to the class. Tell the students that orangutans eat more than 400 different types of foods that they find in the rainforest, and spend up to 6 hours each day feeding and searching for food. One of their favourite foods is a fruit called a durian. Durians are covered in sharp spines and are very smelly. Some people say that they taste like garlic custard! Ask the students to complete the *Foods* worksheet.

Hand out a copy of the *Rainforests and Biodiversity Fact Sheet* to each student, then read the following explanation of an ecosystem to the class:

“An ecosystem is a community of living organisms, such as animals and plants, and the non-living parts of their environment, such as air, water, and soil, that all interact together.

The Sumatran tropical rainforest is an example of an ecosystem.

All the species that share the rainforest have a part to play in the health of the ecosystem. Orangutans don't just live in the forest – they play a very important role in keeping their habitat healthy too.

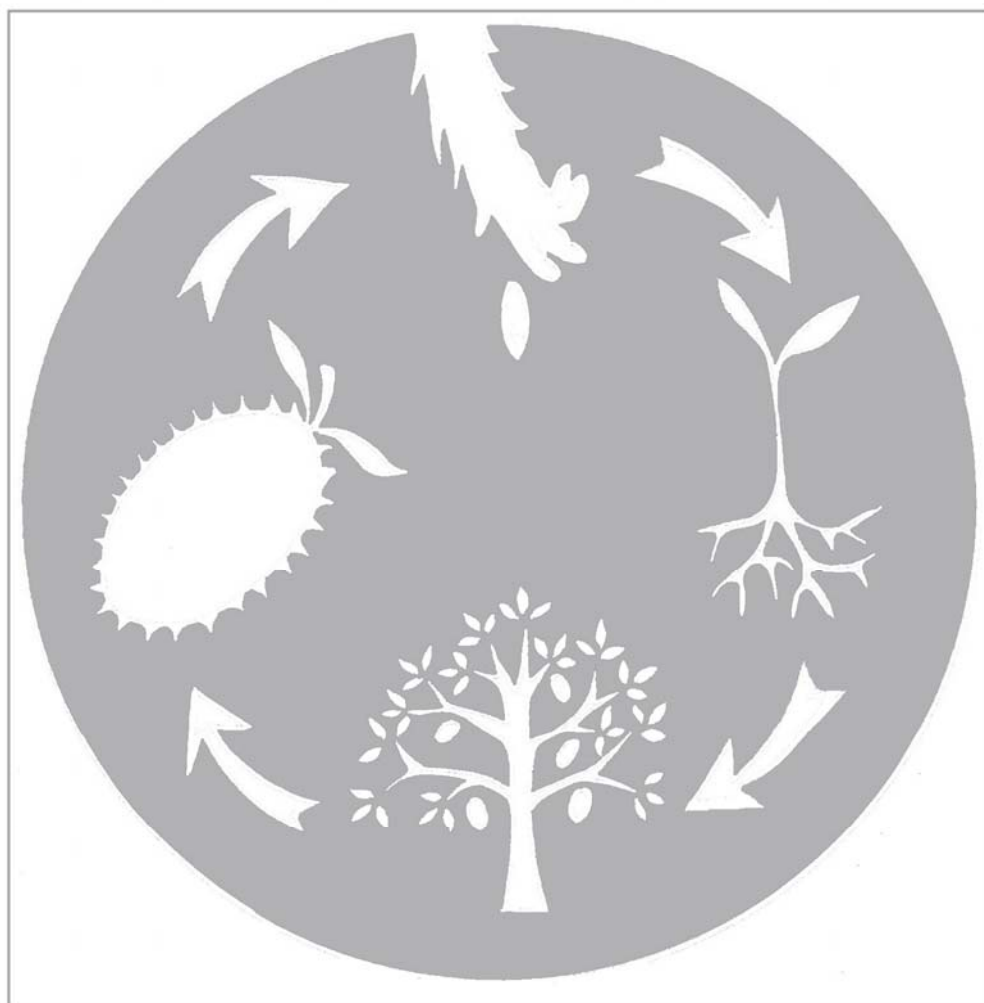
Orangutans are sometimes referred to as ‘gardeners of the forest’. They eat hundreds of different types of fruit, and spread the seeds throughout the forest in their dung, effectively ‘planting’ new trees. The seeds of some types of fruit can only sprout into new seedlings once they have passed through an animal’s digestive system. Orangutans also make a new nest to sleep in every night, breaking branches and allowing light through the thick forest canopy onto the forest floor, which helps young trees to grow.”

Ask the students to complete the *Life Cycle* worksheet. An outline of the process is given on the next page.



## How orangutans help with the life cycle of the Sumatran rainforests.

Write about the four processes of the life cycle.



1 Orangutans eat lots of  
different types of fruit and  
drop the seeds on the  
forest floor in their dung.



2 The seeds germinate and  
take root, growing into  
young saplings. The  
orangutan's dung is like  
fertiliser!



3 Over time the young  
saplings grow into big trees  
in the spot where the  
orangutan dropped the seed.

4 The trees produce fruit,  
attracting orangutans and  
lots of other animals which  
eat the fruit, and the cycle  
starts again.



## Activity 5: Understanding threats to orangutans

**Objectives:** To develop a greater knowledge and understanding of the threats facing the Sumatran orangutan.

### **Resources provided**

*Threats to orangutans* photos (multimedia CD)

*Pet trade* worksheets

*Sentence matching* worksheet

### **Additional resources required**

None

### **Instructions**

Go through the *Threats to orangutans* photos (on the multimedia CD) with the class, using the following talking points:

### **Logging**

- The loss of their habitat is the greatest threat to orangutans, as they live in the rainforest trees. Logging is one of the causes of habitat loss.
- Many types of wood used for furniture, flooring, and construction come from rainforests.
- Most logging in the rainforest is very destructive. Large trees are cut down and dragged through the forest.
- Some animals can survive in logged forests, as long as there are some trees remaining.

### **Agriculture**

- Every year huge areas of rainforest are destroyed and replaced with farmlands. In Sumatra, almost half of the forests were lost in the last 25 years, and the main cause is farming.
- Replacing forests with farmlands is done by individual farmers growing crops to feed their families, but it is also done by big companies growing products to export to the rest of the world.
- One example is palm oil - which is used in food, cosmetics, and as a fuel. Today palm oil is found in around half of all packaged foods, and its use is growing because it is the cheapest type of vegetable oil.
- This is a photograph of an oil palm plantation – these are young palm trees ready to be planted on land that used to be rainforest.
- Forests are also cleared to grow fast-growing trees which are turned into paper, cardboard packaging and fast-food wrappers.

### **Pet trade**

- When the forest is cut down, roads are needed to move the logs or the harvested crops. These roads make it easier for poachers to catch wildlife for food, and baby orangutans are caught for the pet trade.
- This usually involves killing the mother orangutan.
- Orangutans are very cute when they're babies, but they should not be kept as pets, they should be allowed to live a wild life in the forest. It is illegal to have an orangutan as a pet.

### **Human-wildlife conflict**

- When forests are cleared, sometimes wildlife can become trapped. When this happens to orangutans, they may have to eat some of the crops in order to survive.
- This can cause problems for farmers who may be relying on their crops to feed their families and send their children to school.
- Sometimes farmers see orangutans as pests, and may shoot them or catch them for the pet trade.

Hand out the *Pet trade worksheets* and ask the students to look at the illustrations and write about what happens to orangutans when a baby is caught for the pet trade.

At the end, ask the students to complete the *Sentence matching* worksheet by matching up the relevant phrases to make a selection of sentences relating to the Sumatran orangutan.

We will take a more in-depth look at the causes and consequences of deforestation in the next activity.

## Activity 6: The causes and consequences of deforestation

**Objectives:** Students will learn about the reasons for deforestation and its local effects. They will also learn how global trade and consumer demand puts pressure on the Sumatran rainforest.

### **Resources provided**

*Deforestation* film (multimedia CD)  
*Deforestation Fact Sheet*  
*Rainforest Debate cards*

### **Additional resources required**

None

### **Instructions**

Show the *Deforestation* film to the class, and then ask the students to read the *Deforestation Fact Sheet*. Discuss with the class what deforestation is and why it takes place.

Then divide the class into 6 groups, and hand each group one *Rainforest Debate* card:

- 1) Indonesian politician
- 2) Orangutan
- 3) Logging company
- 4) Conservationist
- 5) Villager
- 6) Shopkeeper

Explain to the class that there are many different points of view when it comes to deforestation. Each group should spend 10 - 15 minutes thinking about and discussing their allocated viewpoint – even if they don't necessarily agree with it. They should nominate a spokesperson to stand up and read their arguments aloud to the rest of the class. They should read the quote given on their card, and then elaborate on the points that their group discussed.

Once each group has spoken, they all have the opportunity to respond. Any member of a group may respond to an argument made by another group by raising their hand and specifying which group they are responding to, then making their point.

The debate should finish with the whole class voting on the winner. A prize could be given to the team with the best arguments, the most well structured debate or the most votes.

## Activity 7: How to help orangutans

**Objectives:** The class should appreciate that taking care of the environment is everyone's responsibility, and understand changes we can all make to help make a difference.

### **Resources provided**

*Helping Orangutans* photos (multimedia CD)  
*Save Armstrong* film (multimedia CD)  
*How to Replant a Rainforest* film (multimedia CD)  
*What Can I Do To Help?* worksheet  
*Pledge to the Planet* worksheet

### **Additional resources required**

Coloured pens or pencils, paper, scissors

### **Instructions**

Go through the *Helping Orangutans* photos (on the multimedia CD) with the class, using the following talking points:

### **Education**

- This is the starting point of all the work carried out by SOS.
- SOS raises awareness of the value of forests, and how local people who live near orangutan habitat can get involved in local conservation action.
- The OranguVan is a mobile environmental library that visits schools and communities.
- They also have a pedal-powered conservation cinema – showing films in the local language about conservation and wildlife.

### **Forest Restoration**

- SOS have already planted more than a million trees!
- They are planting trees in an area of the national park that was illegally cut down and turned into an oil palm plantation.
- The aim of this work is to turn the land back into rainforest, as wildlife cannot survive in plantations.

### **Wildlife returning**

- There are lots of species starting to come back to the area, including Sumatran elephants, macaques, muntjac, leopard cats and wild pigs.
- These animals are actually helping the restoration by eating fruit and bringing seeds in their dung – especially birds, and elephants.
- Orangutans have started returning to the new forest too!

## Communities

- SOS provides training in agroforestry and organic farming for local people living next to orangutan habitat so that they can make the most of the land that they are already farming, and reduce the need to expand farmlands into forests.
- People from all over the world visit Sumatra to see wild orangutans. SOS trains ecotourism guides so that people can make a living from sharing their amazing forests and biodiversity with visitors, and whole communities benefit through running guesthouses and restaurants too.

## Orangutan rescues

- SOS also rescues orangutans that are trapped in small patches of forest that are being cleared by bulldozers, and release them back to safe forests.

Explain that one of the most important ways that the Sumatran Orangutan Society helps orangutans is by making sure they have safe forests to live in.

Show the *Save Armstrong* film (on the multimedia CD). If you will be doing some fundraising, explain that the money you raise will help to plant trees in Sumatra for orangutans and many other animals. (See separate Fundraising Pack for ideas and tips!)

Watch the *How to Replant a Rainforest* film (on the multimedia CD). Split the class into 5 groups, and ask each group to create a poster for one of the stages:

- 1) Selecting which trees to plant and growing seedlings in a tree nursery.
- 2) Planting fast-growing, or 'pioneer', tree seedlings, providing shade from the sun and improving the soil.
- 3) Maintenance – weeding, adding compost, and planting more different species of trees to increase the diversity.
- 4) Measuring rainfall, temperature and humidity every day.
- 5) Lots of animals such as orangutans, elephants, and birds start to return to the planting site, bringing more different types of seeds in their droppings!

Explain that it is up to every one of us to make sure that we look after the environment. Hand out a copy of the *What Can I Do To Help?* worksheet to each student. Go around the class and ask them to name one thing from the worksheet that they already do. If they don't do any of the activities listed, they could suggest something else that they do to help the environment, or pick something that they intend to start doing.

Hand out a copy of the *Pledge to the Planet* worksheet to each student. Ask them to write a pledge about something they will do to help protect the environment. It could be something that they will do at home or at school, individually, as a family, or as a class. They should then cut out their pledge leaf. Create a classroom display with the pledges.



## Homework ideas

### 1. Draw an Orangutan Family

**Objectives:** A creative activity to encourage children to think about the differences between male, female and baby orangutans.

**Resources provided:** *How to Draw an Orangutan* worksheet

**Additional resources required:** Coloured pens or pencils

#### **Instructions**

Give a copy of the *How to Draw an Orangutan* worksheet to each pupil and ask them to draw an orangutan family – a male, a female and a baby orangutan, by following the instructions.

### 2. Write an Orangutan Poem

**Objectives:** Children's author Laura Dockrill has provided some instructions and inspiration to help students write their own orangutan poems.

**Resources provided:** *How to Write an Orangutan Poem* worksheet

**Additional resources required:** None

#### **Instructions**

Hand out a copy of the *How to Write an Orangutan Poem* worksheet to each pupil and ask them to write a poem about orangutans. Choose some students to read their poems aloud to the class the next day.

You can send us the poems, by scanning them in and emailing them to [schools@orangutans-sos.org](mailto:schools@orangutans-sos.org) and we will add them to our online gallery to inspire other students around the world!

### 3. Postcards from the Rainforest

**Objectives:** A creative writing exercise to encourage students to use their imaginations, based on all that they have learnt about rainforests.

**Resources provided:** *Postcards from the Rainforest* worksheet

**Additional resources required:** Coloured pens or pencils

#### **Instructions**

Tell the students to imagine they are visiting the Gunung Leuser National Park in Sumatra. They should draw a rainforest scene on the front of the postcard, and then choose someone to write to and describe the sights and sounds of the forest on the back.