

## **Planet Earth**

Suitable for Key Stages 1 and 2 and most appropriate for KS2, adapted to suit the requirements of each individual group. For KS1 more emphasis is placed on valuing, respecting and caring for the environment than on the potential effects of climate change. Each school's specific learning objectives are incorporated into the programme plan for their visit.

This programme is designed to encourage children to understand the concepts of sustainability and respect for the environment. The programme content highlights the importance of living with nature as opposed to exploiting it. Children learn about the trees, plants and animals of the forest. Human influences on climate change are included as appropriate. The programme includes a range of practical games and activities to engage children in their learning.

### ***Key Concepts***

Sustainable living and respect for nature and the environment.

Taking personal responsibility for the environment.

Forests have value as habitats for plants and animals, as a source of renewable materials, of medicinal plants and in mitigating the effects of climate change.

Language work can be combined with cultural and environmental learning.

### ***Learning Outcomes***

By the end of the programme pupils should

- understand the concept of sustainability and the need to live in harmony with nature if there are to be resources for the future.
- be aware that the forest is managed in a sustainable way.
- have increased their knowledge of trees and forests.
- have a greater respect for the natural world and forests in particular.
- know that forests provide habitats for a great variety of plants and animals.
- know that trees provide us with renewable resources to make things.
- know that trees have an important contribution to make in relation to climate change but that climate change will have a serious effect on today's ecosystems.
- know that forests are exciting places to visit.

## **Introduction**

Learning objective – to prepare pupils for activities in the forest and ensure that safety rules are understood by adults and children.

1. Welcome to Alice Holt - lovely woods; lots of different trees and open spaces; a place for animals; a place for people; a place to produce timber; looked after by the Forestry Commission.
2. Define environment and link responsibility for our own surroundings to global environment.
3. Define resources and energy and consider finite resources, reuse and recycling
4. Discussion on the role of trees and forests as appropriate for the age/ability group e.g. wildlife habitats, production of timber and other resources, energy efficiency of wood in manufacturing, production of oxygen, absorption of carbon and link with mitigation of results of climate change, woodfuel versus other fuels.
5. Plan for the day
6. Safety, including foxgloves, fungi, slips and trips. Please keep together as a class unless asked to do otherwise. Please don't hold hands in the woods (mainly KS1) and don't overtake the leader. No need to regroup with your assigned adult when moving a short distance within the woods.

## Morning

Learning Objectives	Activity
To be aware of the variety within a forest environment and to observe that given suitable conditions some trees and plants will reproduce without being planted by humans.	<b>Observe</b> variety of plants along the way and notice natural regeneration of trees and plants
To reinforce understanding of basic needs of a plant. To gain some understanding of the interdependency of plants and animals, both the animals' need of food and shelter and the plants need of the animals to transport and plant seeds and to pollinate. To understand some problems which a warming climate is causing. To take part in physical activity conducive to the development of co-ordination and general fitness.	<b>The Deer Browsing /Seed Game</b> – children take on the role of seeds and run to collect basic necessities of soil, air, sunlight and water. The game is replayed with seed eating animals 'collecting' seeds and deer eating saplings i.e. running and tagging seed children. If a suitable balance of seeds and seed eaters has been chosen there will be sufficient trees left growing well and producing seeds for the future. Link to global warming and loss of synchronisation between plants and animals in springtime.
To understand how climate change will affect ponds and wetlands	<b>Observe the pond</b> and consider what lives and grows there, how these are adapted to their environment. Effect of hot, dry summers and sudden very heavy rain on this environment
To understand how trees provide habitats for animals even when	<b>Deer damaged tree</b> Story of stages of damage to tree starting with deer,

<p>damaged and sometimes because they're damaged. To understand how trees function and to introduce the concept of photosynthesis</p>	<p>followed by beetle attack, woodpecker damage, growth of fungi. Explain how trees heal surface damage by growing bark over the damaged area and why sap is sticky.</p>
<p>To reinforce learning about damaged trees.</p>	<p>Move to thinned area of Western Hemlock trees, noting deer damaged trees and trees where bark has completely closed over damage</p>
<p>To understand that trees grow better when they have space to grow and can obtain all their essential needs. To understand that when we use resources from the forest (or any source) we need to leave enough for others to use in the future and to replace what's lost. Plants and animals are all renewable resources if we use them carefully. To understand that climate change will affect tree growth, resulting in less growth because of drier summers and instability in shallow rooted species</p>	<p>Look at <b>growth rings in tree stumps and logs</b> in thinned area. Explain thinning process and use of timber as a renewable resource. Trees have seeds which can be planted to replace trees lost when they're felled.</p>
<p>To develop knowledge and understanding of the animal life in the forest, particularly the role of invertebrates.</p>	<p><b>Minibeast Hunt</b> employing patience, careful observation, signs left by invertebrates e.g. boreholes, nibbled leaves etc., respect for invertebrate homes and care of the creatures in captivity. <b>Discuss</b> role of minibeasts in <b>natural recycling</b> and in the <b>food chain</b>.</p>
<p>To look in more detail at individual invertebrates, their role and their adaptations to habitat and lifestyle. To encourage careful observation and confidence in communicating with peers and adults.</p>	<p><b>Minibeast Sculpture</b> Children use information cards as guidance, having returned invertebrates to the forest floor, and build 'sculptures' from sticks, leaves etc. All children then tour the 'Minibeast Gallery' and each group tells the class all about the creature they've sculpted.</p>

### Afternoon

<p>To understand that there are animals living in the forest specially adapted to life underground which contribute to the variety of wildlife supported by the forest. To develop imagination. To discover things about the environment that might not be noticed by using</p>	<p><b>Blindfold Trail</b> – walk blindfolded in a crocodile to the 'entrance to the tunnel', holding onto the person in front, then to move individually along a route holding onto a rope tied between trees.</p>
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sight only. To take small risks and learn how to manage them	
To teach children about the dangers of litter and the many uses of trees and tree	<b>Tree Products Trail</b> –children collect items of litter (placed along the path for the purpose), discuss the disadvantages and dangers of litter briefly, then consider the items collected in more detail. Each item has a link with trees and with a product used by people.
To observe a wide range of trees and plants and recognise how this is important for wildlife and the environment.	<b>Count number of different tree species</b> down the trail. Children feedback their findings to the class.
To observe and recognise the great variety in nature and to appreciate the value of woodland rides for flowering plants and associated wildlife	<b>Palettes</b> Children collect as many colours as they can – small pieces of vegetation stuck onto card
To understand that recognition of pitch and pattern is important for birds and animals, and to use this as a basis for musical skill development.	Children <b>sit and listen</b> to the sounds of the forest, then take part in call and response and voice pitch activity. If time rhythm activity with hands or sticks
To increase understanding of the connections between plants and animals in ecosystems	Both or one of the following activities can be done as time allows:  <b>Food Chain Packs</b> – children place picture cards in the correct food chain order radiating out from the sun. The links are discussed  <b>Webbing game</b> – children form a circle and throw a ball of string across the circle as questions (e.g. Jack is an oak tree, what might eat his leaves?) are answered, the child giving a satisfactory answer receiving the ball of string, to create a food web.
To draw together aspects of the day's learning and to understand that everyday actions can cause pollution, waste of resources, loss of biodiversity, increase in greenhouse gas levels. To consider every individual's responsibility in caring for the planet.	<b>Save the World Game</b> Children hold hands in a circle to represent the world. They move round as a circle – the world turns easily. They are asked a series of questions and the wrong answer e.g. left the lights on results in a forfeit which makes it more difficult to turn the world e.g. going down onto one knee.

### **Other possible activities**

These can be included in the programme in place of some of the above to ensure that the content suits the age and ability of the group members and meets the learning objectives of the school. **Ad hoc discussions and activities** often take place in response to children's observations and questions so programmes are adapted 'in the moment' while continuing to work towards achieving desired learning outcomes.

**Hand map and experiencing a special place** – children follow natural lines on their hands to a tree (either by matching the pattern with a pattern in a tree) or by following the direction). They sit down silently on their own and use their senses to experience this special place. Young children are asked to be able to tell what was the most special thing about the place. Older children record what they see, hear, smell and touch on a small piece of card –this can be done by means of pictures, symbols or words. The activity can be extended to encompass imagination about what might be there when people are not. The **objective** of this is to encourage greater empathy with nature, to understand that patience is needed to really observe and to provide material for creative work (poetry, stories, art etc.)

**Fox and Rabbit** chasing game (**KS1/2**) in which foxes catch some rabbits but can never catch all of them **or Race to Survive (KS2)** running and chasing game involving several levels of the food chain indicating changes in food supplies and natural maintenance of long term balance. These games help children to appreciate the balance in nature between the number of species at different levels in the food chain e.g. without man's interference (or a catastrophic event), there will always be a sufficient supply of food at all levels in the long term.

**Photosynthesis Game and Moving Carbon game** – two games which show how trees take in CO<sub>2</sub>. Lead to discussion on the need to keep growing trees and that we must use them sustainably.

**Recycling** Focus on the need to recycle but that re-using and using less is better – linking this to packed lunches makes it personal to children.

**Global Steps Cards** are useful in making clear the effects of our everyday lifestyles on the planet. They incorporate a points system linked to selected activities which provide an estimate of whether or not the earth can support a person's way of life in the long term.

### **National Curriculum Links**

#### **KS1 and KS2**

Geography, Science, English, Music and more depending on activities chosen

