

STAUNTON

Guided Session Plan Key Stage 2 Plants

National curriculum links:

- Geo- pupils are taught to identify and describe what places are like.
- Geo- pupils are taught to identify and describe where places are.
- Geo- pupils are taught to recognise how places compare with other places.
- Geo- pupils are taught to recognise how places are linked to other places in the world.
- Geo- pupils are taught to recognise changes in the environment.
- Geo- pupils are taught to recognise how the environment may be improved.

Introduction:

Objectives:

- To understand the meaning of vocabulary e.g. habitat, invertebrate, canopy
- To be able to use a map to locate habitats
- Learn about animals and plants living in different habitats
- To understand that adaptations can be the reason for plant and animal distribution.
- To understand the importance of rainforest on a local and global scale

Introduction	Learning Outcomes
<p>Introduce the day by asking the children if they already know anything about plants.</p> <p>Explain that the class are going to explore plants, what they need to grow, where they live and how they are adapted to their environment.</p>	<p>To understand what the words : <i>habitat</i>.</p> <p>To know the aims of the day</p>

Activity	Outcomes Children:
<p>Build a tree</p> <p>Show the group a wood slice and indicate to the children the different parts of the tree.</p> <p><i>What can you tell by the rings on a tree?</i></p> <p>Show how you can tell if it has been a good or bad year weather wise and how old the tree is.</p> <p>Children will then be asked to make a tree, using themselves. T</p>	<ul style="list-style-type: none"> • Understand the parts of the tree and their functions. • Heart wood – Oldest, strongest , dead part of the tree • Sap wood – Nutrients and water transported up the trunk to the leaves in the branches. • Roots – Absorb the water and nutrients from the soil to help the tree grow. They also support the tree and hold it up right. • Bark – The outer layer of the tree, to protect it from the weather,

<p>he children will form the various parts of the tree and be asked what the function of this part of the tree is. The children will then perform the function of that part of the tree. This will help them to understand the function of the various parts of the tree and how a tree receives water and nutrients.</p> <ul style="list-style-type: none"> • Heart wood – Oldest, strongest , dead part of the tree • Sap wood – Nutrients and water transported up the trunk to the leaves in the branches. • Roots – Absorb the water and nutrients from the soil to help the tree grow. They also support the tree and hold it up right. • Bark – The outer layer of the tree, to protect it from the weather, animals and damage. 	<p>animals and damage</p>
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<p>Leaf slides <i>What do the leaves of tree do?</i> Children must find a leaf that they particularly like and stick it into their slide frame, then hold up their slides to the light. The veins of the leaf will be much clearer and the children will be able to see how water and gases are transported through the tree. The children will then be encouraged to compare the leaves on the tree to the leaves on the ground.</p> <ul style="list-style-type: none"> • Discuss the importance of chlorophyll in the function of the tree and how leaves are adapted to different habitats depending on the amount of water. Mention that leaves transpire water (evapo-transpiration) through holes in the leaves called stomata, explain how cacti conserve water by reducing the amount of stomata. • Discuss seasonality and the concept of deciduous and evergreen trees. 	<ul style="list-style-type: none"> • Understand the function of a leaf. • Recognise what happens to trees throughout the different seasons. • Identify how leaves are adapted. • Understand key words: <i>deciduous, evergreen, chlorophyll, stomata</i>
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<p>Natures Palette Explain to the children that nature has lots of different colours. Children must match the colours on the plants to their colour palettes. Re-enforce that they must look and not pick the plants. <i>What was the easiest colour to find? (response varies due to season)</i> <i>Green – Spring/Summer – Why? Plants are growing</i> Discuss why plants are green – Chlorophyll pigment used for photosynthesis. <i>What are the colourful parts of the plant called? Petals</i> <i>Why are they colourful? To attract bees</i> <i>Why are bees important? They collect pollen.</i> Explain to the group how bees transport pollen from one flower to another, and that it's an important part of the life cycle of a plant – Fertilisation enables seeds to be produced</p>	<ul style="list-style-type: none"> • Identify parts of a plant. E.g. <i>Petal, Stem, Leaves, roots</i> • Understand the function of a plant e.g. <i>Petals for attracting pollinators, roots for structure and anchorage.</i> • Understand how flowers attract insects to pollinate plants. • Recognise that plants and animals need each other to survive. • Recognise that pollination is part of a plant's life cycle.
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<p>Discuss what the problems are with bee numbers. Quote Einstein' "If the bee disappears from the surface of the earth, man would have no more than four years to live." And the Bee Movie.</p>	
<p>Smelly cocktails Walk over to the herb garden and explain that flowers can use scent to attract animals. Ask the students how we use plants and herbs in everyday products e.g. <i>perfume, cooking flavours, toothpaste, medicine, food.</i> The students are given a pot each and asked to collect the leaves from the herbs to make a smelly cocktail. Explain that the fragrant part are the leaves not the flowers. Ask the children to invent a name for their cocktails.</p>	<ul style="list-style-type: none"> • Recognise that plants have different fragrance. • Understand that scent can be used by plants to attract animals and insects.
<p>Soil recipe The children will have to create their own soil recipes and then make their own soil using the recipes they have created. Discuss the ingredients needed to make soil. Stones, humus, leaves, worms, water, air, time This will help the children to understand the process of decomposition and nutrient recycling.</p>	<ul style="list-style-type: none"> • Understand that soil is made up of different components. • Understand that microbes help decompose the soil.
<p>Germination game This is an active game that demonstrates the requirements of a seed to grow into a tree. The accompanying staff and education officer will form stations where water, sunlight, nutrient and oxygen cards can be collected. There will also be a leaf station where one of each of the cards can be traded in for a leaf. The more leaves the seeds get the bigger they are growing. However there are hazards out there. Four children will become 'killers'; a cow, a lawnmower, pesticide and pollution. The killers can catch the seeds and remove all of their cards from them. This game will help children understand the requirements of living things and the hazards within the environment.</p>	<ul style="list-style-type: none"> • Understand the life cycle of a plant. • Recognise that plants have a number of threats to survive.
<p>Meet a tree</p> <ul style="list-style-type: none"> • Children to work in pairs. One of the pair will be blindfolded. The partner should then lead the blindfolded child to a tree. The blindfolded child will be asked feel the texture of the bark and then after returning to the start, guess which tree they met. • Discuss parts of the tree. 	<ul style="list-style-type: none"> • Understand the different elements of a tree and to interact with the tree.

<p>Tropical I spy</p> <ul style="list-style-type: none"> • Explain that plants and animals are adapted to survive in the rainforest. • Hands up – what examples can you think of. • Remind the students that it relates to the physical conditions and that the students must look at for the plants which fit the description and work out why they are like it. • Students to work in small groups to explore the plants in the glasshouse and match them to the descriptive words. • Review the results with the group – Key questions – what is the big difference between the plants in the glass house to the ones outside? 	<ul style="list-style-type: none"> • Students will recognise the adaptations of plants found in the glasshouse and be able to explain the reasons why they are adapted.
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Points to note

Children may not expect to find any animals in the area. Dependant on seasons.

Children may need to be reminded about replacing objects that they over turn when hunting for animals.

Safety!!

When working outdoors, teachers should check that there is no broken glass etc. Sites unlikely to have been contaminated with dog faeces should be chosen. Ensure that children wash their hands after handling soil etc.

PLTS

Independent enquirers – activities will give the children opportunities to consider beliefs and attitudes through question and evaluation.

Creative thinkers – working in groups will allow children to explore and connect others' ideas and experiences

Reflective learners – ask the children to set their own goals through invitation.

Team workers- working with other on activities, deciding on appropriate distribution of tasks and contributions

Self-managers - activities will allow children to embrace new challenges that require a scientific approach.

Effective participators – through discussion of activities children are able to improve their own performance based on others feedback

VAK

Visual – Activities and equipment will be demonstrated before hand – visual aids used where appropriate.

Auditory – Activities will be introduced to children through verbal communication and feedback at the end of the session

Kinaesthetic - Activities will require hands on approach through collecting and making exercises.

Assessment for learning

Prior Knowledge – Assessed during pre visit with teachers and introduction to session with emphasis on learning outcomes. Use questions to find out what the pupils know, understand and can do about the topic.

Post Knowledge – Children assessed at the end of session with plenary activity and built in review time. Encourage group and self evaluation at end of session.