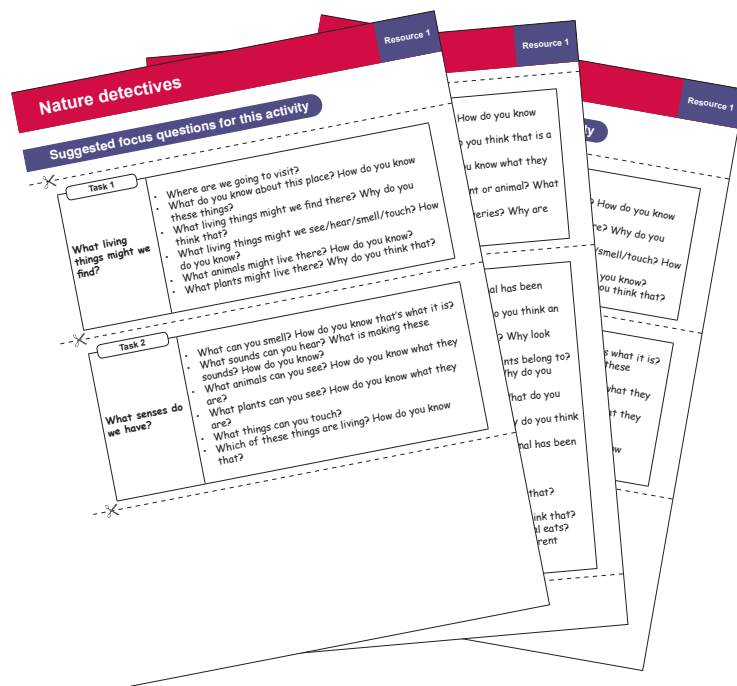
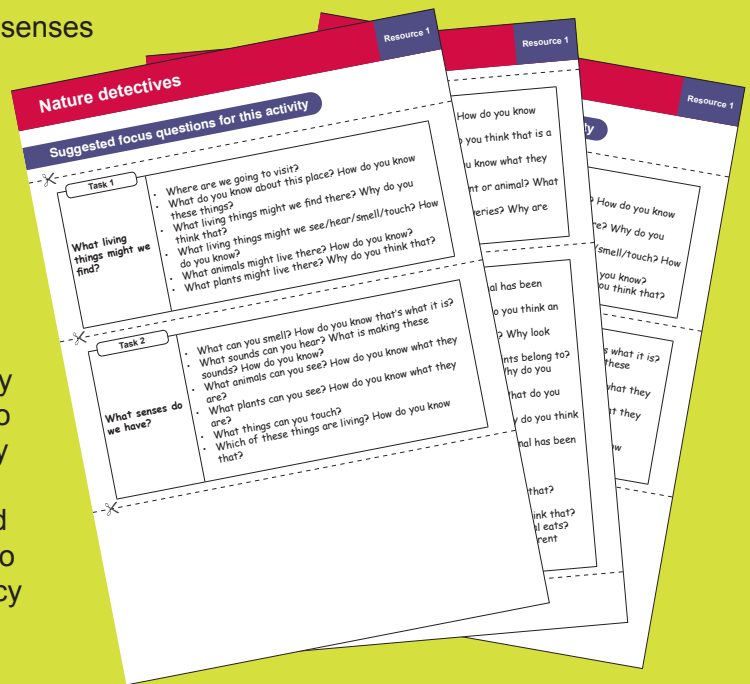


Nature detectives



Bridgend Outdoor Schools
Ysgolion Awyr agored
Pen-y-Bont ar Ogwr

Learners are informed that they will use their senses to explore the plants and animals in a local outdoor space. They consider what they might find prior to visiting and practice using their senses in the school grounds. Then, learners lay out a length of string and explore what is beneath it using a magnifying glass before looking for evidence of animal life in the form of homes, footprints and so on in the outdoor space. Learners consider and record the sounds they can hear during the visit and compare them to the sounds heard in the school grounds. They play a game where they are blindfolded and challenged to recognise a tree from smell and touch. Finally, there is an option for learners to engage in tasks to further develop their literacy and numeracy skills.



Opportunities to develop

LN^F

Literacy

Oracy across the curriculum: Developing and presenting information and ideas.

Writing across the curriculum: Organising ideas and information.

Numeracy

Developing numerical reasoning: Identify processes and connections, Represent and communicate, Review.

Using number skills: Use number facts and relationships.

Using measuring skills: Length, weight/mass, capacity, Angle and position.

Using data skills: Collect and record data, Present and analyse data, Interpret results.

Links to the Curriculum

Foundation Phase – Knowledge and Understanding of the World

Skills

- exploring and experimenting
- thinking about questions and then asking them and listening to the answers
- listening to others' ideas
- identifying what they want to find out and how to do it
- thinking about how they will know if something has worked

- making comparisons and identifying similarities and differences
- thinking creatively and imaginatively
- communicating observations and measurements
- describing what they have found out and offering simple explanations
- expressing their own opinions and feelings, and making decisions while considering the viewpoints of others
- using and becoming familiar with common words and phrases for their world
- reflecting on and evaluating their own and others' work.

Range – Places and people

- learn about where their locality is
- learn about distance and how to follow directions and routes
- recognise how people's actions can improve or damage the environment.

Myself and living things

- learn the names of the external parts of the human body and plants
- observe differences between animals and plants, different animals, and different plants in order to group them
- learn about the senses that humans and other animals have and use to enable them to be aware of the world around them
- identify some animals and plants that live in the outdoor environment
- identify the effects the different seasons have on some animals and plants.

Myself and non- living things

- understand that there are many kinds and sources of sound, that sounds travel away from sources and that they are heard when they enter the ear.

Resources

Resources included with this activity

- 1 Suggested focus questions in sets, relating to each task, which can be given to each pair as they start each task. Conversely, these questions can be used by the teacher.

Resources that need to be made available

Digital cameras, string, safe scissors, short stakes, magnifying glasses, paper and toothpicks (optional), blindfolds.

Risk assessment

Prior to carrying out outdoor activities, please read [Assessing risk in outdoor spaces](#) (hyperlinked). You will need to follow your own school's health and safety guidelines and subsequently make your own risk assessments that directly relate to the outdoor space that you are going to use.

How to run the activity

Preparation

Explain to the learners that they are going to visit a local outdoor space and search for and explore things that live in this place. There is always a possibility that some items learners encounter could be poisonous and the Schools Biodiversity Action Plan (SBAP) would provide a useful reference to read prior to the visit.

Doing the activity

Task 1: What living things might we find?

Explain to the learners that they are going to explore what is living in a local outdoor space. Inform them of the name of the outdoor space they will visit and provide them with some background information about the place. Ask the learners to think about and discuss what living things they might find evidence of when they visit the place. They could draw or write their ideas or record them as a mind map, for example.

- Where are we going to visit?
- What do you know about this place? How do you know these things?
- What living things might we find there? Why do you think that?
- What living things might we see/hear/smell/touch? How do you know?
- What animals might live there? How do you know?
- What plants might live there? Why do you think that?

Task 2: What senses do we have?

Explain to the learners that they are going to practice using their senses. Take them outside into the school grounds and encourage them to use their senses to explore the environment. They might be encouraged to consider what they can see, hear, smell and touch and to record their ideas.

- What can you smell? How do you know that's what it is?
- What sounds can you hear? What is making these sounds? How do you know?
- What animals can you see? How do you know what they are?
- What plants can you see? How do you know what they are?
- What things can you touch?
- Which of these things are living? How do you know that?

Plan and organise an opportunity for learners to visit the chosen outdoor space. During the visit encourage the learners to use their senses to experience and explore the living things in this environment.

Task 3: What can we see?

Ask learners to measure out approximately six or seven metres of string. Help them to tie each end of the string to a short stake, such as a tent stake. Invite learners to stretch the string across a piece of land that has some variation. For example, they might run it across a piece of grass, under an arching shrub and alongside a bed of flowers or a fence. Explain that the string does not have to be straight and ask learners to secure the string using the stakes if necessary.

Invite learners to start at one end of the string on their hands and knees and to use a magnifying glass to examine everything under the string. They might look for different kinds of plants, such as moss and grass and animals such as spiders, insects and worms. Encourage them to move along the string searching for every living thing they can find.

Learners might write or draw their observations and compare them with what other children have observed. You could ask learners to use paper and toothpicks to make tiny signs to mark their most interesting discoveries (without spearing any animals!) and invite other children to follow their string trail.

- What can you see under the string? How do you know that's what it is?
- What plants have you found? Why do you think that is a plant?
- What animals can you see? How do you know what they are?
- What have you found that is not a plant or animal? What is it? How do you know?
- What are your most interesting discoveries? Why are they interesting?

Task 4: What signs of animal life can we see?

Ask learners to explore their surroundings and to look for signs of animal life. They might search for where animals live, such as nests or burrows, where animals might have been moving around, for example, footprints, droppings, small bones, feathers, wool or fur in bushes and so on.

- What do you see that shows you an animal has been here? Why do you think that?
- Do you see any homes of animals? Why do you think an animal might live there?
- Where will you look for animal footprints? Why look there?
- How will you know what animal a set of prints belong to?
- Where have you seen animal droppings? Why do you think they are in this place?
- Have you seen any small bones? Where? What do you think this means?
- Where have you seen fur or feathers? Why do you think they were in these places?
- What else might you find that shows an animal has been here? Why do you think that?

At the start of the visit learners could set up a feeding station. For example, they might fill a shoe box lid with sand and place some food in the sand. The lid could be left somewhere and learners return to discover if any footprints have been left in the sand towards the end of the visit.

- Where has the food gone? How do you know that?
- How would you describe the footprints?
- What animal made the prints? Why do you think that?
- What does this tell you about what this animal eats?
- How could you find out more about what different animals eat?

Task 5: What can we hear?

Ask learners to listen carefully to the sounds they can hear during the visit. They might be blindfolded during this task so that they concentrate on listening. Encourage learners to record the sounds they hear and to consider which sounds are from animals and whether they can identify the animal. They might also consider whether plants are able to make sounds, for example, leaves rustling in a breeze, long grass when people walk through it or the bough of a tree creaking.

- What sounds can you hear? What is making these sounds? How do you know?
- What animals can you hear? How do you know what they are?
- How are the sounds they make different and similar? Why do you think that?
- Can you hear sounds made by plants? What are they? How do you know?
- What sounds do you hear that you didn't hear in the school grounds? Why can you hear these sounds here?
- What sounds that you heard in the school grounds don't you hear? Why can't you hear these sounds here?

Task 6: How can we use touch and smell?

This task would be best carried out in a park or woodland area where there are a range of trees.

Explain to learners that they will work in pairs and one of them will be blindfolded. Ask the learner who is not blindfolded to guide the learner who is, either by hand or body direction to a tree in the area. Ensure they do this in a random and confusing way to disorient the blindfolded learner but to do this in a sensible and compassionate manner.

Ask the blindfolded learner to get to know their tree. Encourage them to use their sense of touch and smell, they might circle the tree, touch or hug it at different heights, rub their faces gently against the bark and so on. When they have finished, lead them back to the starting point, again in a confusing pattern. Then take off their blindfold and put the challenge before them – 'Find your tree!'

After the first learner successfully finds their tree, the partners switch to allow the other learner to have a turn at the task.

- What does the tree smell like? Why do you think that?
- Does it smell the same all over? Why do you think that?
- How would you recognise the smell again?
- What does the tree feel like?
- Which part is the roughest/smoothest? How can you tell the difference?
- What is it similar to touching? Why do you think that?
- How would you describe the tree? Why?

How else could we explore?

There are many activities that might be carried out to encourage learners to explore the environment and to further develop their literacy and numeracy skills.

You could play a simple game of tree tag. Use a space with open running room and a good variety of shrubs and trees on the border or spaced throughout like a meadow or open forest. Ensure you set up some outside boundaries. Call out descriptions of trees, for example, you might say 'You're safe if you are touching an oak tree' or 'an evergreen tree' or 'a smooth tree with large leaves' and so on. Learners have to touch the tree you describe to stay in the game. You could also encourage learners to become the person who does the calling out.

Learners might carry out a range of numeracy tasks in the space that you visit. For example, they might find the largest and smallest tree using non-standard or standard units to measure the circumference. They might be encouraged to count trees, flowers, benches and so on and record the numbers of each, by tallying, for example.

Encourage them to collect items that might be taken back to school and used for sorting and classifying activities, for example, leaves, seeds and so on.

Assessment against the LNF

Many aspects and elements could be demonstrated by learners as they carry out this activity. The main focus areas of the activity within the LNF are shown as shaded boxes in the tables below.

Literacy		
Strand	Element	Aspect
Oracy across the curriculum	Developing and presenting information and ideas	Speaking
		Listening
		Collaboration and discussion
Reading across the curriculum	Locating, selecting and using information	Reading strategies
	Responding to what has been read	Comprehension
		Response and analysis
Writing across the curriculum	Organising ideas and information	Meaning, purposes, readers
		Structure and organisation
	Writing accurately	Language
		Handwriting, Punctuation, Spelling, Grammar

Numeracy	
Strand	Element
Developing numerical reasoning	Identify processes and connections
	Represent and communicate
	Review
Using number skills	Use number facts and relationships
	Fractions, decimals, percentages and ratio
	Calculate using mental and written methods
	Estimate and check
	Manage money
Using measuring skills	Length, weight/mass, capacity
	Time
	Temperature
	Area and volume; Angle and position
Using data skills	Collect and record data; Present and analyse data; Interpret results