KS1 Outdoor Science Opportunities

For pupils in or working at KS1 level

How to use these resources

The aim of these slides is to provide practical ideas to take curriculum science learning outside the classroom.

Please take and adapt these ideas in any way that suits you and your class. You may need to tweak an activity to suit the needs or numbers of your cohort, or you might see an idea for a different area that you feel would work in your current topic. The hope is that there is the flexibility to make the resources work for you.

The activities can be as quick or extended as you choose. They can be used as starters, main activities, plenaries, revision lessons or intervention sessions.

Plants

Leaf comparison

Task your pupils with collecting a range of different leaves. Then, using PE hoops or similar, ask each group to sort their leaves in any way of their choosing.

For example, they could choose to sort the leaves by colour, shape, size, number of points or any other characteristics that stand out. Label the headings for both categories on whiteboards (e.g. ‘Leaves that have more than 3 points’ and ‘Leaves that have 3 points or less’). Can each group think of more than one way to sort their collection of leaves?

Once you have introduced the idea of deciduous and evergreen trees, ask each group to see if they can re-sort their leaves under these headings. Which features helped them to decide whether a leaf has come from a deciduous or evergreen tree?

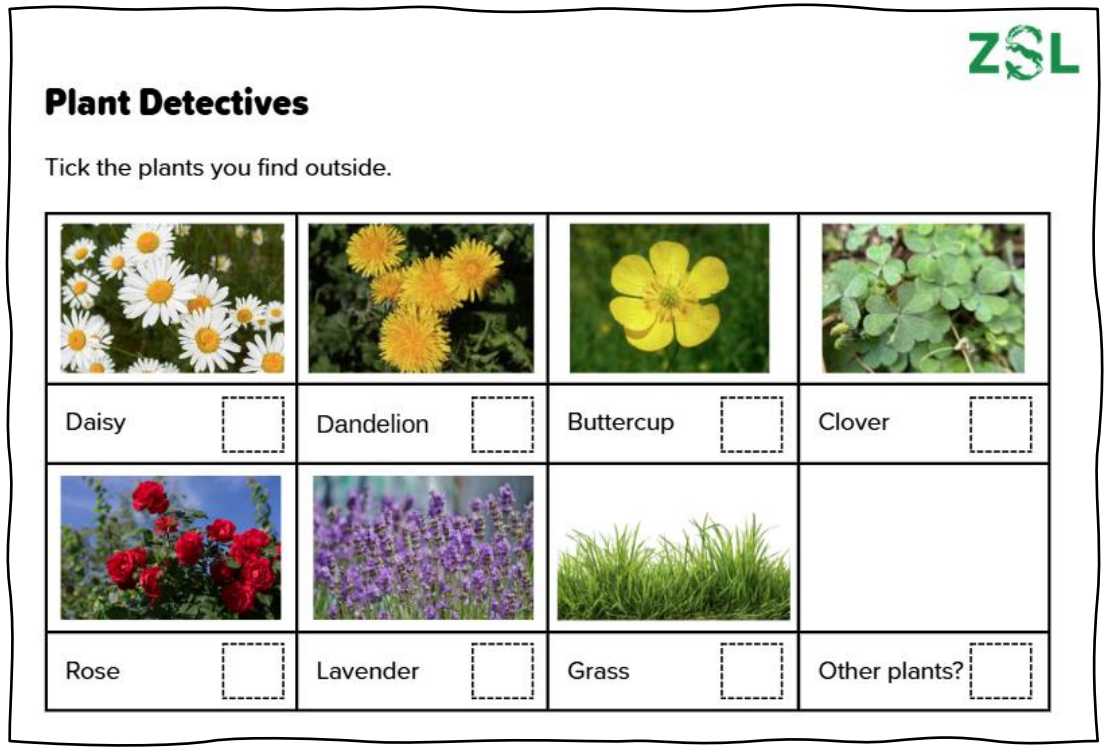
Depending on the season/time of year, pupils could then conduct a further search for signs of new growth/changing colours/large piles of leaves on the ground.

N.C. statement: identify and name a variety of common wild and garden plants, including deciduous and evergreen trees (Year 1)

Plant detectives

Provide pupils with a checklist (available **here**) for plants to find around the school grounds. Pupils can tick off the plants they find and draw any other examples.

Then challenge pupils to sort what they have found into **'Garden plants'** and **'Wild plants'**. They could either cut up their checklist sheet or write and/or draw the plants on whiteboards and sort these into hoops (either from the PE cupboard or drawn in chalk).



Plant Detectives

Tick the plants you find outside.

Daisy ☐	Dandelion ☐	Buttercup ☐	Clover ☐
Rose ☐	Lavender ☐	Grass ☐	Other plants? ☐

N.C. statement: identify and name a variety of common wild and garden plants, including deciduous and evergreen trees (Year 1)

Investigating trees

Take pupils on a tree walk around your school site.

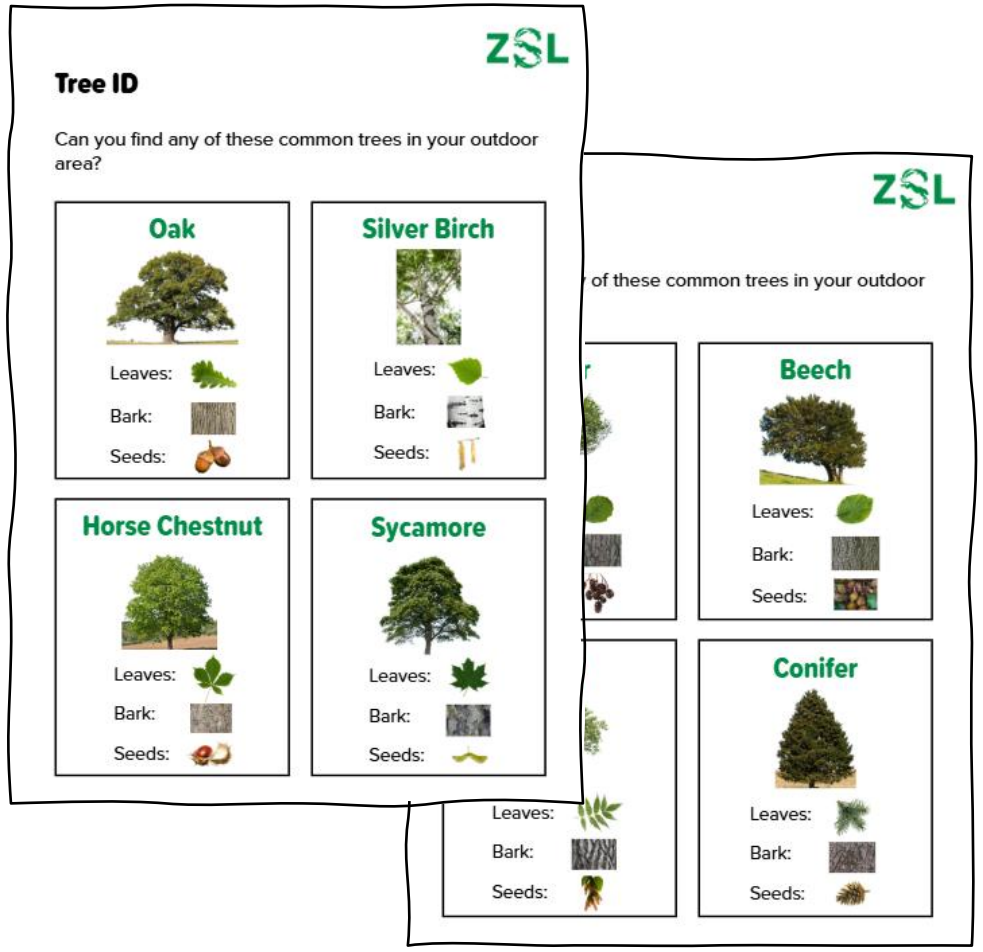
Encourage them to investigate:

- Bark texture
- Leaf shape
- Size of the tree

What differences do they observe?

If there are fallen leaves, you may want pupils to collect these to bring back to class and create leaf rubbings or detailed drawings.

Simple tree ID cards available here



N.C. statement: identify and name a variety of common wild and garden plants, including deciduous and evergreen trees (Year 1)

Structures of plants

Spend time outside looking for the different structures that pupils have learnt about in common flowering plants and trees (leaves, roots, branches, stems and flowers). Ask them to share what they know about the functions of the different parts with a partner.

Pull up plants that have been identified as weeds and use this as an opportunity to look at root structures. Show pupils how the roots help to anchor the plant as well as transporting water and nutrients.

N.C. statement: identify and describe the basic structure of a variety of common flowering plants, including trees (Year 1)

Plant identification

Start by using photos/ID sheets to name and identify plants, leaves, trees and/or flowers in your outdoor area.

- Do pupils notice anything about where particular plants grow?
- Why might some plants be more suited to certain areas of your site?
- Is there any evidence of berries, seeds or nuts that could lead to new plant growth?

Then allow pupils the chance to inspect a range of seeds and bulbs from supermarkets/garden centres. Can they name any? Have they seen any of the examples before and, if so, where?

After studying the bulbs closely, ask pupils make a careful observational drawing. You may also want to cut the bulbs in half to allow pupils to see the interior structures.

Cross-section of a tulip bulb

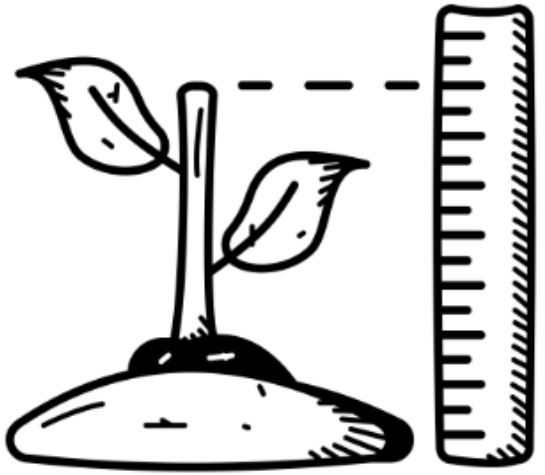
N.C. statement: identify and describe the basic structure of a variety of common flowering plants, including trees (Year 1)

Plant growth investigation

If you have space in your outdoor area, planting seeds or bulbs outside would be a great way to put learning into practice.

Ask pupils to assess the area: will the plants get enough sunlight? What is the soil like? Is there enough room to grow? As a class, decide on how much and how often you will water your plants.

Throughout the investigation, encourage pupils to draw changes they observe, compare differences in the plants (particularly if you have planted differed varieties), and measure weekly growth. You could use this data to create bar graphs, using practical resources such as cubes, if appropriate.



N.C. statement: identify and describe the basic structure of a variety of common flowering plants, including trees (Year 1)

End of unit plant trail

As a form of practical assessment, set up stations in your outdoor area or provide pupils with a checklist to complete:

1) Name [a/this] tree
2) Find evidence of a plant that has sunlight, soil and space to grow
3) What do we call the part of a flower that holds up the head?
4) Find two different types of leaf
5) Find evidence that a plant has water
6) Can you find an example of: new leaves appearing; plants dying back; or seeds forming?
7) Explain how animals use plants
8) Tally how many examples of each colour you can find: red, yellow, white, purple

N.C. statement:
- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees (Year 1)
- identify and describe the basic structure of a variety of common flowering plants, including trees (Year 1)

Growing herbs

In groups, ask pupils to plant different herbs in pots and consider the requirements for strong and healthy plant growth. How will each group ensure their herb gets what it needs?

Allow pupils to record their observations from initial planting to growth. Can they explain why certain changes are taking place? They could further document the process by taking photographs of each stage.

The herbs could eventually be transferred outside if they grow large enough and used in future Food Technology lessons!

Smelling the herbs can tie in with Year 1 learning about **senses**.

N.C. statement: observe and describe how seeds and bulbs grow into mature plants (Year 2)

Observe mature flowering plants

Visit flowering areas around your school site and look out for pollinators such as bees, butterflies, hoverflies and others.

Discuss why the insects visit the flowers and how flowering plants attract various pollinators.

This links back to learning on seeds and bulbs and helps to create a wider understanding of plant life cycles.

- **Pollinator survey sheet available here**
- **Further supporting resources available on Nature-Based Curriculum Resources under 'Surveying school grounds for biodiversity'**

N.C. statement: observe and describe how seeds and bulbs grow into mature plants (Year 2)

Glove germination

Do plants need soil to grow? This investigation allows pupils better visibility of seed germination and to experience the different rates at which seeds start to germinate.

Provide pupils (in groups) a plastic glove, cotton wool and 5 different seed types. Wet the cotton wool and place this in the bottom of each of the glove fingers before adding a different seed type to each one. Write on the fingers which seed type is in each, then put the gloves somewhere with access to light. Hanging the gloves from a classroom washing line is ideal, or you could tape them to a window.

Pupils will be able to observe the seed changes on a day-to-day basis and notice the differences between rates of germination.

N.C. statement: find out and describe how plants need water, light and a suitable temperature to grow and stay healthy (Year 2)

Investigating what plants need

Plant several identical seedlings in pots outdoors and apply the following variables:

A) Plant watered regularly

B) Plant not watered

C) Plant in a shaded area

D) Plant in a sunny area

Ask pupils to predict what will happen to the seedlings in each pot. Plan for opportunities to observe any changes on a weekly basis and keep a plant diary documenting these.

At the end of the investigation, compare your notes and the plants. Ask pupils to take on the role of Plant Doctors: can they explain why a plant is healthy or unhealthy? What remedies would they recommend for the 'unwell' plants?

N.C. statement: find out and describe how plants need water, light and a suitable temperature to grow and stay healthy (Year 2)

School grounds plant survey

Take pupils around your outdoor area with clipboards. Tell them to look out for plants with examples of:

✓ **Green leaves**	✗ **Wilting leaves**
✓ **Strong stems**	✗ **Brown patches**
✓ **Flowers/Buds/Seeds**	✗ **Broken stems**

What might be causing these differences?

Consider the area that the different plants are growing in.

You may also want to take photos for pupils to compare and discuss in future lessons.

N.C. statement: find out and describe how plants need water, light and a suitable temperature to grow and stay healthy (Year 2)

Animals including Humans

Outdoor senses

Focus on each sense while outside: what can you see, hear, feel, touch, taste?

Notice that we can experience things with different senses, e.g.:

- “I can’t smell the sun, but I can feel it is hot on my skin.”
- “The air doesn’t taste of anything, but I can feel it in my mouth.”

N.C. statement: identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (Year 1)

Outdoor senses continued

For more opportunities to head outdoors and experience nature using the senses, see our **5-minute activities for Nature Connectedness** slides and accompanying resources on the **Nature-Based Curriculum Resources webpage**.

N.C. statement: identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (Year 1)

Exploring touch

Fill balloons or small opaque bags with a range of different objects. These can be items from the classroom, a cupboard and/or your outdoor area.

Initially, just let pupils feel the balloons or bags and make their own guesses about what could be inside, focusing on their sense of touch. Then, provide labelled pictures of what is included in each and see if pupils can match the correct balloon or bag with the correct image.

Ideas for what you could include:

Cotton wool	Pebbles	Paint	Leaves
Pasta	Marbles	Small twigs	Flour and water mix
Washing up liquid	PVA glue	Hama beads	Acorns
Rice	Bubble wrap	Base 10 ones	Sand

N.C. statement: identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (Year 1)

Exploring sound

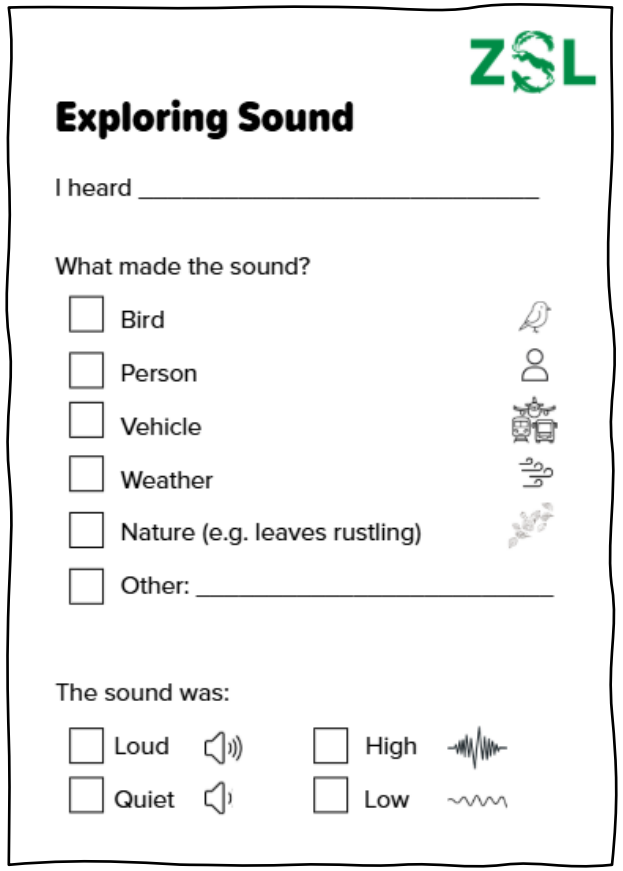
Spend time outside, encouraging pupils to listen to the sounds around them as carefully as they can.

Stand quietly for one minute at a time in different locations around your outdoor area. Discuss or ask pupils to record what they heard and the volume of the sound.

While doing this, you could also have Merlin Bird ID app running in the background so that you can show pupils the different types of birds that were identified in the area.

Discuss why hearing is important for people and animals. Why would the birds have been making noises?

Worksheet available here



ZSL

Exploring Sound

I heard _____

What made the sound?

- ☐ Bird
- ☐ Person
- ☐ Vehicle
- ☐ Weather
- ☐ Nature (e.g. leaves rustling)
- ☐ Other: _____

The sound was:

- ☐ Loud
- ☐ Quiet
- ☐ High
- ☐ Low

N.C. statement: identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (Year 1)

Identifying animal groups

When learning about vertebrates, discuss which of the five groups (mammals, reptiles, amphibians, birds, fish) you would expect to find examples of in your school grounds and/or local area. Pupils may be able to name some specific species from these groups.

Which groups/species are they unlikely to see on your school site? Can they explain why this is?

Head outside to test these predictions, looking for vertebrate animals that pupils can identify and classify around your school grounds. (Remember that they count as mammals!) You may wish to create tallies of the different species and/or groups observed for a data collection task.

Vertebrate mats available here

N.C. statement: identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals (Year 1)

Animal diets outside your classroom

Create a list or a tally of all the different animals found around your school site – both vertebrates and invertebrates. You may want to include any evidence that an animal has been in a particular area (for example: tracks, habitat construction or droppings) as well as physical sightings.

Can pupils sort the identified creatures based on whether they are a carnivore, herbivore or omnivore? This could be done back in the classroom, or you could continue to work outside by creating lists on whiteboards or using PE hoops to sort the names of different animals into.

Links to ID sheets available here

What evidence might there be to prove or support pupils' answers regarding an animal's diet? (You might be able to find bird droppings with seed cases inside, for example.) What do pupils suggest carnivores, herbivores and omnivores could eat from around your school site?

N.C. statement: identify and name a variety of common animals that are carnivores, herbivores and omnivores (Year 1)

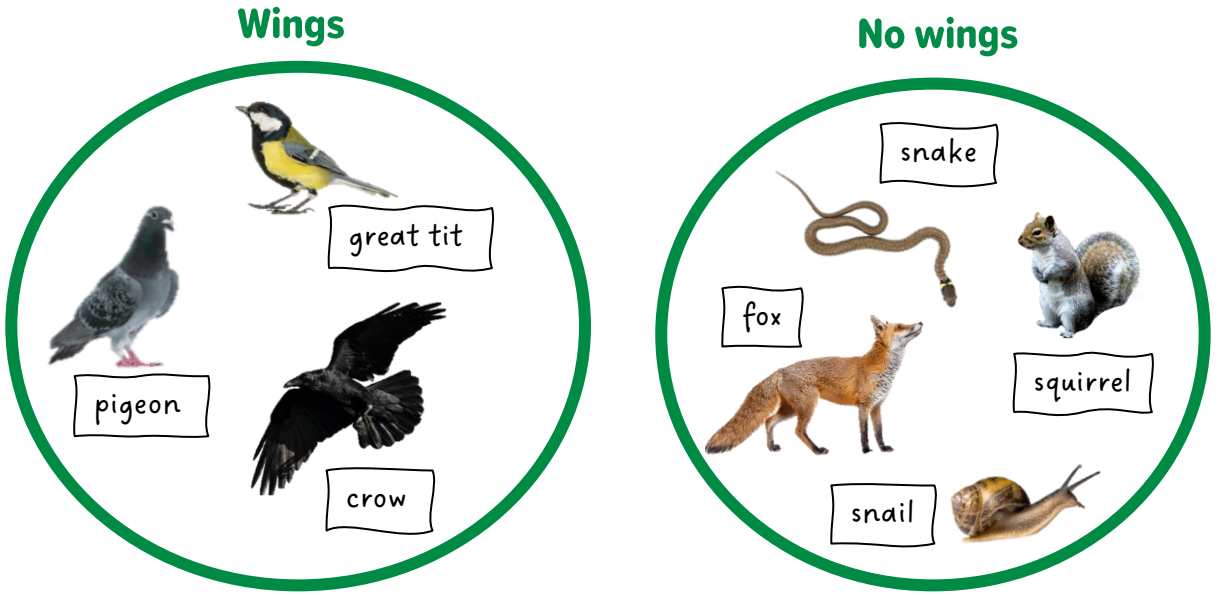
Sorting animals based on their structures

Place large hoops outside for pupils to sort animals into.

You could use either examples of animals spotted around your site, provide a range of animal cards/animal names, or ask each pupil to write down an animal of their choice on a whiteboard or post it note.

Some example headings for the different hoops could include:

- **Number of legs**
  (e.g. 0 legs, 2–4 legs, 6+ legs)
- **Wings/No wings**
- **Fur/Scales/Feathers**
- **Lays eggs/Has live young**
- **Lives on land/Lives in water/Lives in both**



N.C. statement: describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) (Year 1)

Animal structures

Use natural resources in your outside area to create different animals you have studied.

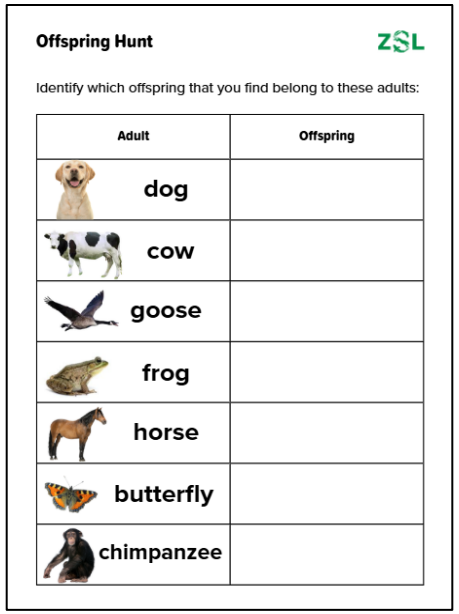
Pupils could either label the different body parts using chalk, whiteboards, post it notes, or they could explain what each part represents to a partner.

N.C. statement: describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) (Year 1)

Offspring hunt

Place pictures of different animals' offspring around your outdoor area for pupils to find. They have to match these to the correct adult on an identification sheet.

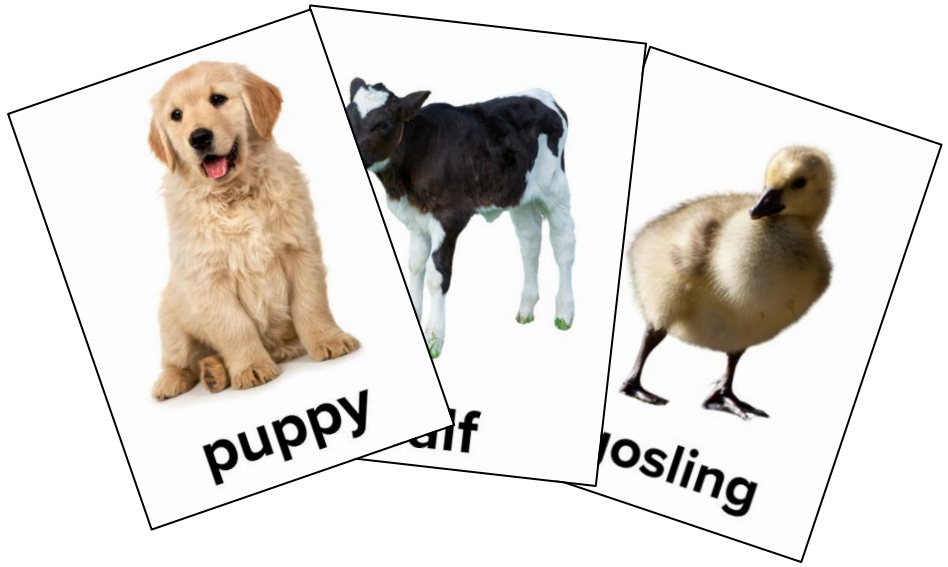
Worksheet and picture cards available here



Offspring Hunt

Identify which offspring that you find belong to these adults:

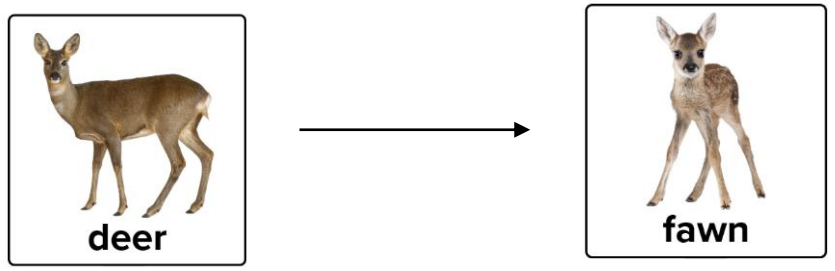
Adult	Offspring
dog	
cow	
goose	
frog	
horse	
butterfly	
chimpanzee	



N.C. statement: notice that animals, including humans, have offspring which grow into adults (Year 2)

Offspring games

- Set up a relay where each team has a selection of pictures of different adult animals. Each pupil takes a picture, then runs to collect the related offspring.
- Attach adult and offspring names to tag rugby resources. Make sure there are more offspring names so that each ‘adult’ animal has to catch the tags of multiple offspring.
- Get your pupils to form a circle and stand in the middle with a ball. Say an adult animal and throw the ball to a student, who then has to respond with its offspring, or vice versa.



Picture cards available here

N.C. statement: notice that animals, including humans, have offspring which grow into adults (Year 2)

Physical activity tests

As part of their learning on why exercise is an important part of keeping healthy, take pupils outside to investigate this, using themselves as the subject matter.

Carry out simple tests such as finding out how many star jumps, bounces, balancing steps, hops, stretches, etc. they can manage in 1 minute. You could also let pupils come up with their own physical activity suggestions.

While resting between each challenge, allow pupils to record both the number of each exercise they managed and how they feel after the exertion (they could write or use smiley face images to do this). You may also want to ask pupils to consider which parts of their body they are using for each activity.

N.C. statement: describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene (Year 2)

Materials

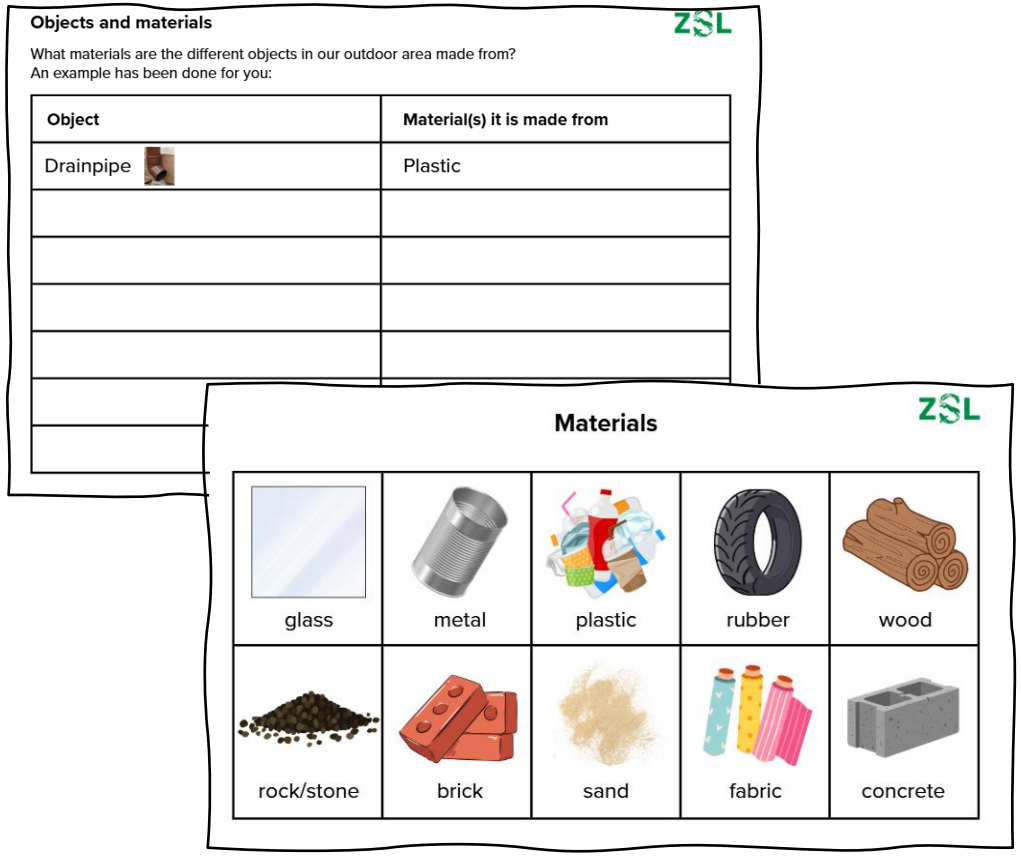
Outdoor objects and materials

Take pupils outside to look at different objects around your school site.

Can they identify what each object is made from?

You can use the information gathered during this task to support the activities on the next two slides.

Worksheet and word mat available here



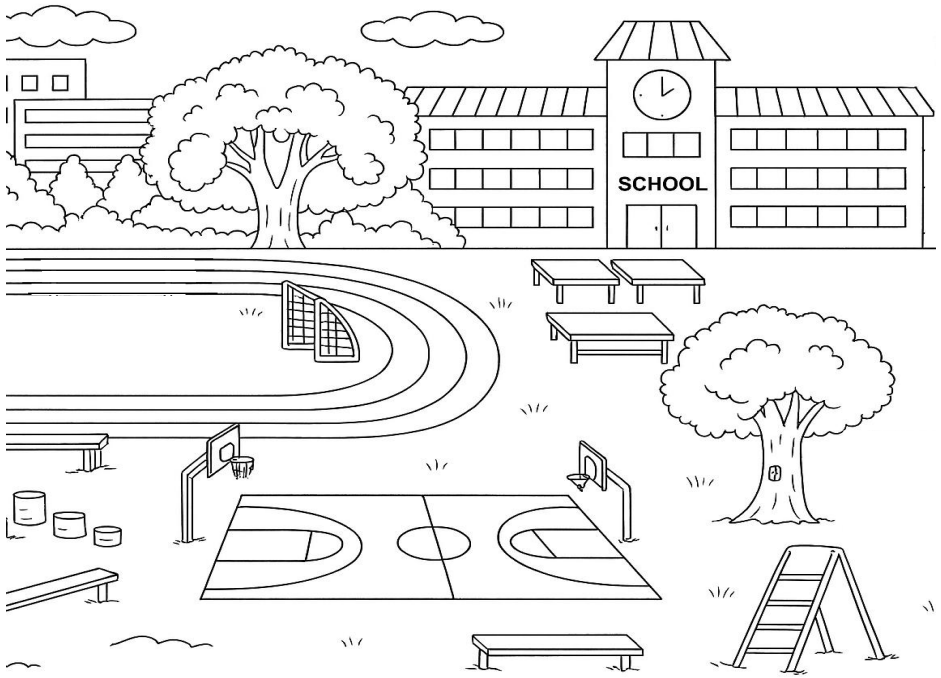
N.C. statement: distinguish between an object and the material from which it is made (Year 1)

Outdoor materials and properties

Investigate materials used to make objects in your outdoor area. Encourage pupils to explain the materials' properties and why they have been chosen for certain jobs: e.g.

- Why are the plant boxes made wood but not the roof?
- Why aren't the windows made from the same materials as the bike racks?

Ask pupils to suggest which materials they would use if they were to design their own playground and why.



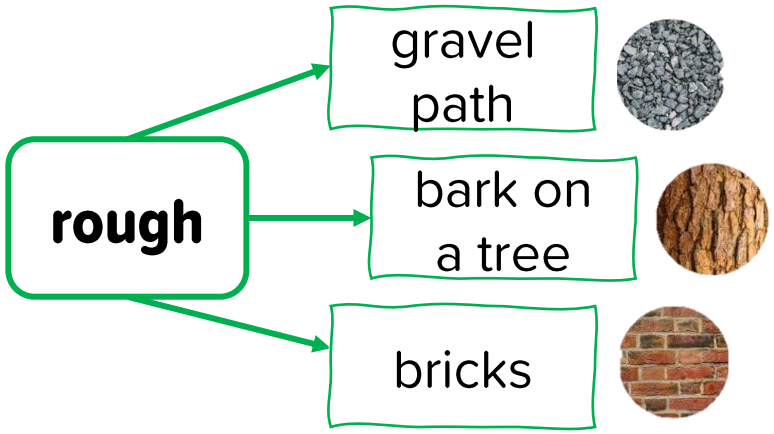
N.C. statement: • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock (Year 1)
• describe the simple physical properties of a variety of everyday materials (Year 1)

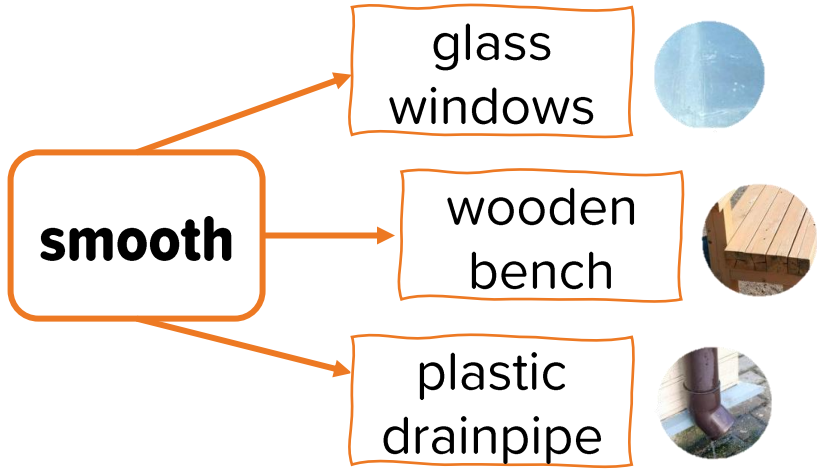
Classifying materials

Take pupils outside to identify as many different materials as they can find. These could be recorded on whiteboards or through photographs.

In groups – either outside or back in the classroom – ask pupils to sort the materials they have identified in a manner of their choosing, based on the materials' physical properties.
For example: rough/smooth; hard/soft; waterproof/absorbent; flexible/rigid, etc.

Encourage pupils to discuss whether certain materials are more likely to have particular properties and not others. Why is this important?





N.C. statement: compare and group together a variety of everyday materials on the basis of their simple physical properties (Year 1)

Identifying properties of materials

Provide pupils with a list of objects and the materials they are made from that you can find around your school site (see example opposite).

Allow pupils to explore these objects for themselves and to take (where possible) a sensory approach to identifying the properties of the materials used to make each object.

You could discuss as a group why these materials were suitable choices for each object or ask pupils to individually record their thoughts on this. You may also want to reflect on why a particular material wouldn't be appropriate to make certain items.

Object	Material	Properties
window	glass	transparent, rigid, heavy, hard, smooth
drainpipe	plastic	
building	brick	
bench	wood	
climbing frame	metal	

N.C. statement: identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses (Year 2)

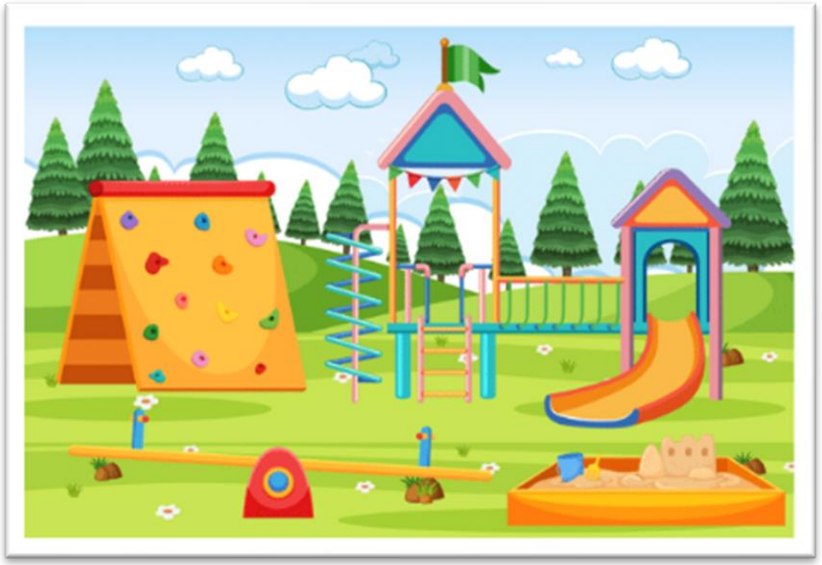
Choosing suitable materials

Ask pupils about their dream school playground – what would they want to include?

Using their knowledge of the school's outdoor site (including areas which are more exposed to the weather), challenge pupils to write short presentations about which materials they would use to make their playground items.

Take them outside to make notes and draw labelled diagrams to support their visualisation of this task. They must explain clearly why they have chosen a particular material(s), focusing on its properties and suitability for use.

Pupils could then present their reasoning to the class in front of the proposed area for one of their new playground objects.



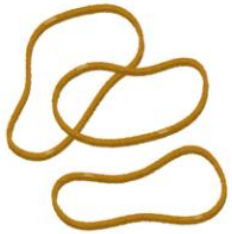
N.C. statement: identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses (Year 2)

Changing materials' shapes

Explore squashing, bending, twisting and stretching with items such as playdough, sand, shaving foam, sponge, rubber gloves or bands. Doing this outside helps avoid potential mess in the classroom!

Question pupils why it is useful for some items to return to their original form after being squashed, bent, twisted or stretched (e.g. a rubber glove), and why it can be useful for an item to retain its new shape after undergoing these forces (e.g. dough).

Can they identify further objects outside that change shape by being squashed, bent, twisted or stretched and those that cannot?






N.C. statement: find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (Year 2)

Tent material

Which properties are most important when choosing the best material for a tent? Brainstorm as a class. You may consider ideas such as material that is waterproof, breathable, strong (i.e. won't rip), light to carry and warm.

Ask pupils to choose – for example – 3 properties that they think are the most important for a tent, with one property being the flexibility of the material (can it be squashed, bent, twisted or stretched).

Outside, investigate different materials to see whether one has all the properties pupils have identified as most important.

Material	**Property 1** Flexible	**Property 2** Waterproof	**Property 3** Light
Fabric	✓	✗	✓
Wood			
Rubber			
Metal			
Paper			

NB: You could adapt this activity to make a link to the story of 'The Three Little Pigs' or plan a cross-curricular D&T project whereby pupils create miniature tents out of their chosen material.

N.C. statement: find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (Year 2)

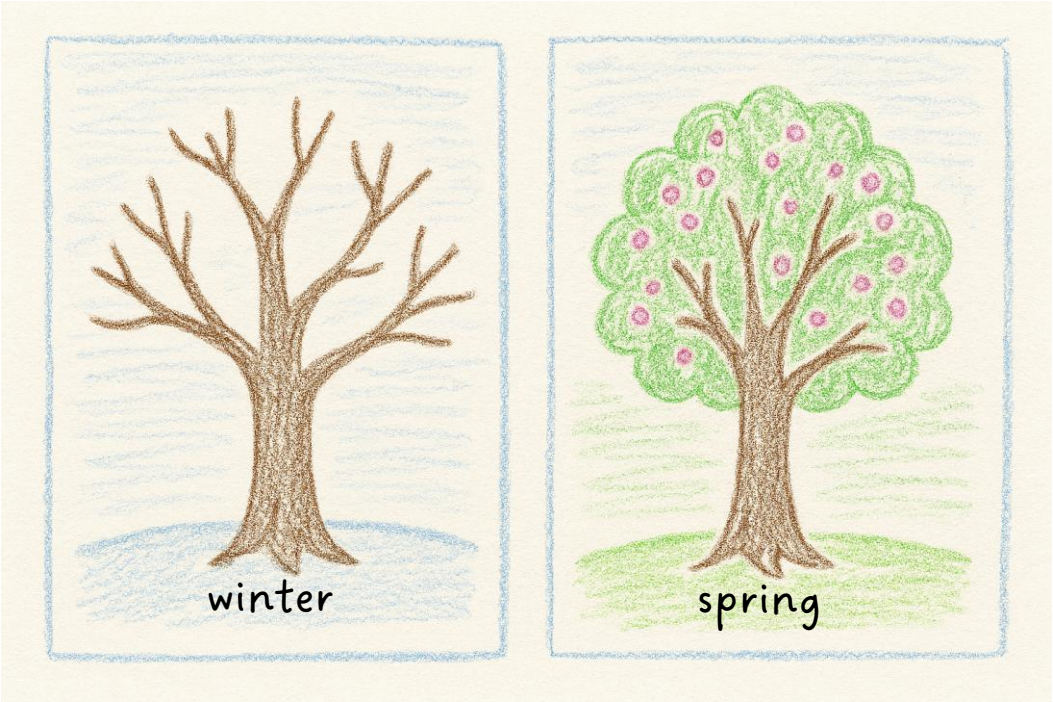
Seasonal Changes

A tree in different seasons

Explore the plants and wildlife in the school grounds. How do they change over the course of a school year?

As a class, pick a chosen tree(s). Every season, return to this tree to make observations.

Get your pupils to draw (and, if they are able, to label) the tree in its different states and explain the differences they have observed from last time.



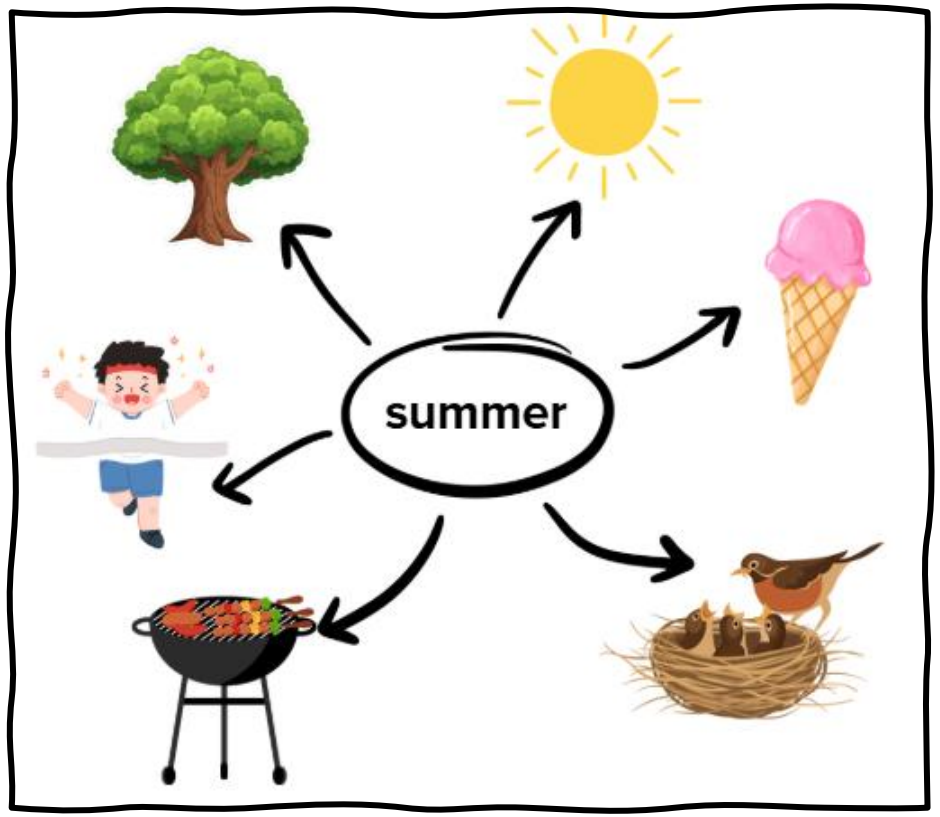
N.C. statement: observe changes across the four seasons (Year 1)

Seasonal mind maps

Head outside with clipboards, plain paper and pencils and have pupils write the current season in the middle of their page.

Ask them to draw or write down anything that they can think of that is linked to this season. This can include colours, public holidays, weather, traditions, animals, plants and anything else they associate with the time of year.

What is their understanding of the seasons?



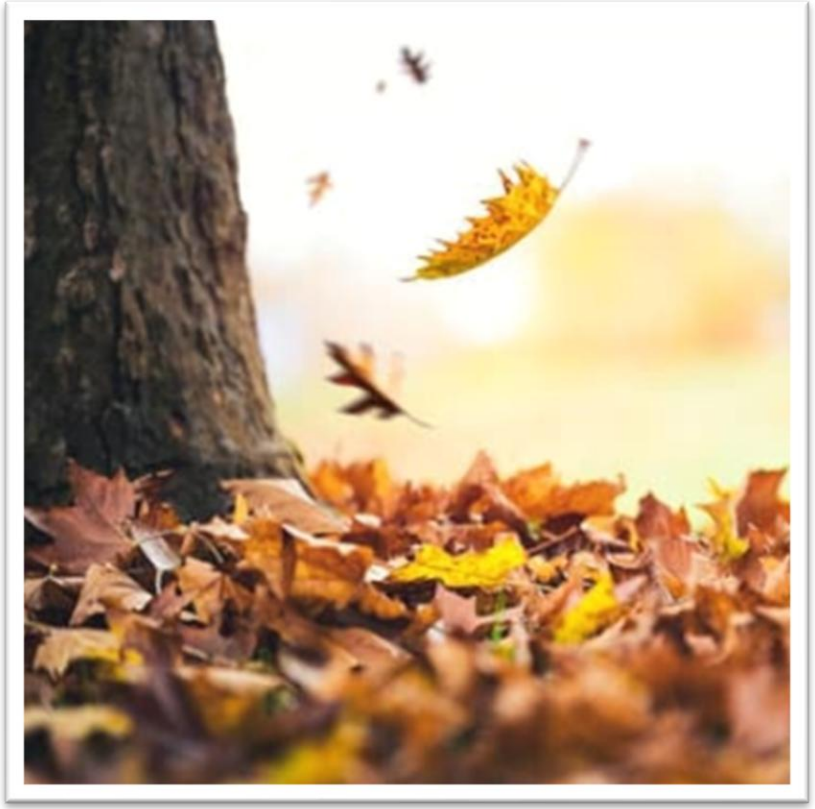
N.C. statement: • observe changes across the four seasons
• observe and describe weather associated with the seasons and how day length varies (Year 1)

Leaf comparisons

Ask pupils to compare the leaves they find on the ground compared to those still on branches and trees.

As a class, create a comparison list or Venn diagram of all the similarities and differences they notice.

Discuss why some trees shed their leaves while others do not. This could also pre-empt Year 2 learning around things that are alive, were once alive or have never been alive.



N.C. statement: observe changes across the four seasons (Year 1)

Animals across the seasons

Investigate how animals across the school grounds adapt to the changing seasons. Which creatures can we see in spring/summer compared to autumn/winter?

If your school has bird feeders, bug hotels, or other similar spaces for animals, you could track what you find at these sites across the year.

Our **Nature-Based Curriculum Resources webpage** includes resources and guides for surveying biodiversity on your site.

N.C. statement: observe changes across the four seasons (Year 1)

Shadow drawing

To investigate how the length of shadows change throughout the day, take pupils outside in the morning, at midday and later in the afternoon on a sunny day.

Ask each pupil to choose a spot on the playground. A partner then draws around their feet with chalk and writes their initials inside, before drawing an outline of their whole shadow.

Each time your return outside, get pupils to return to their feet outline and stand in the same spot. Their partner then draws around their new shadow outline.

What happens to the length of their shadow throughout the day? Can they explain why?

Discuss why a task like this would be trickier to do in winter months, even if it was a bright day (fewer sunlight hours might mean that it is too dark to trace a shadow in the early morning/late afternoon).

N.C. statement: observe and describe weather associated with the seasons and how day length varies (Year 1)

Shadow drawing continued

Take objects from around your classroom outside and set these up in front of plain paper. You may want to use clipboards or stones to hold the sheets of paper down.

Encourage pupils to experiment with where to position their object (they may need support with this) so that the shadow fits onto their paper and they are able to trace around this.

You could also trace the shadows of natural objects like leaves, acorns or flowers. This may help pupils to notice intricate details more acutely, such as the serration around leaf edges.

N.C. statement: observe and describe weather associated with the seasons and how day length varies (Year 1)

Living Things and their Habitats

Living, dead and never alive

Exploring outside is a great opportunity to establish what pupils understand about things that are living, were once alive or have never been alive, and to address any misconceptions early on.

You can also use this as an opportunity to discuss what living things need to stay alive.

Pupils can use the examples they have found outside to create an ‘odd one out’ selection for a partner. This will help to reinforce pupils’ understanding of the different categories.

Which is the odd one out?

“The tree is the odd one out, because it is the only one that is still living.”

N.C. statement: explore and compare the differences between things that are living, dead, and things that have never been alive (Year 2)

Living, dead and never alive continued

With your class, take photographs of things in your outside area that are living, dead and never alive.

If you have enough tablets for pupils to work in groups, provide them with post it notes so that they can label the objects with the correct term before taking a picture.

Use these pictures to support pupils to create a definition or criteria for each of the terms.

If pupils have worked in groups, ask them to share which items they found to match each definition and discuss as a class whether these objects match your criteria.

Living

- It can breathe
- It grows
- It eats or makes its own food

Dead

- It doesn't move by itself
- It has stopped growing
- It doesn't breathe anymore

Never alive

- It has never breathed
- It doesn't grow
- It doesn't need any nutrition

N.C. statement: explore and compare the differences between things that are living, dead, and things that have never been alive (Year 2)

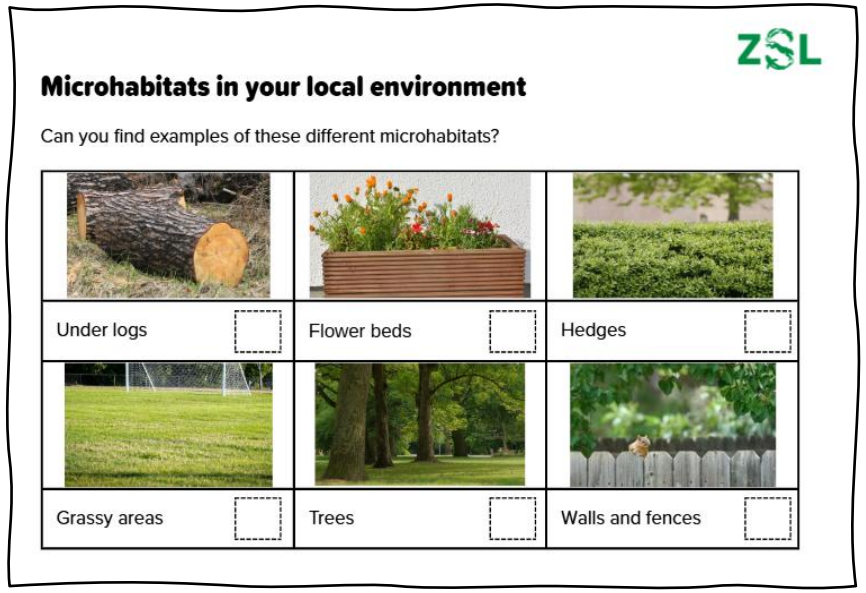
Habitat hunt

Explore your outdoor area, looking for examples of habitats/microhabitats. Take clipboards to allow pupils to record – either tick or tally – what they have found and magnifying glasses to observe these areas more closely.

Discuss what each habitat is like. Is it damp, dark, sunny or sheltered? Which types of animal might like it here and why?

You could do a more in-depth investigation between two contrasting locations, such as under a log and open grass. Which habitat has the most living things? Why do pupils think this is the case?

Links to microhabitat ID sheet available here



As a plenary or starter for another lesson, show pupils images of animals and/or plants that could live in the microhabitats investigated above. Can pupils suggest which microhabitat they would expect these organisms in and why?

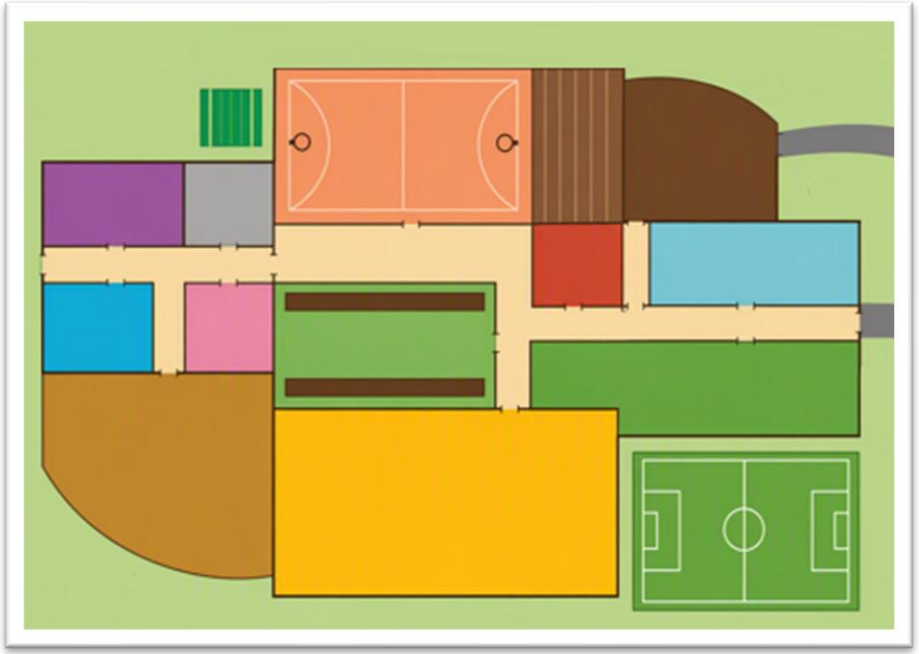
N.C. statement: identify and name a variety of plants and animals in their habitats, including microhabitats (Year 2)

Habitat mapping

To create a cross-curricular geography link, provide pupils with simple maps of your school grounds.

Before going outside, tell pupils to create a key. This could include symbols for habitats and any plants or animals observed.

Once pupils have completed their explorations, allow time to compare maps. Has everyone got markings in similar places? Are some keys easier to understand than others? What were the challenges, if any, when completing this activity?



N.C. statement: identify and name a variety of plants and animals in their habitats, including microhabitats (Year 2)

Animal identification

Using identification cards if needed, allow pupils to explore which creatures can be identified around your school site.

Encourage pupils to record data of the different animals you find and use this to create a bar graph, perhaps using cubes or a computer program.

Alternatively, you could make tallies for different areas around your school site to compare if numbers and species differ between locations.

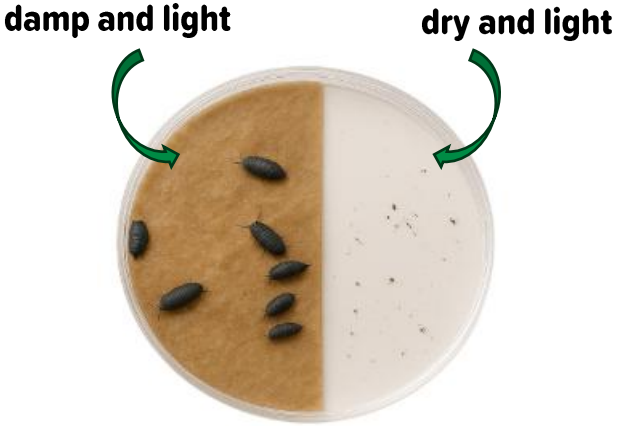
Links to ID sheets available here

N.C. statement: identify and name a variety of plants and animals in their habitats, including microhabitats (Year 2)

Choice chambers

Present pupils with a pre-made choice chamber and discuss which animals would prefer each section. Encourage pupils to draw on their prior knowledge from your exploration of the outdoor area, recalling where they found certain species.

dry and light	dry and dark
damp and light	damp and dark



Collect some invertebrates from outside (e.g. woodlice, ants) and put them into the choice chambers. Use clear pots or petri-dishes to create the different criteria and see whether pupils' predictions are correct.

Remember to return the insects back to where you found them afterwards!

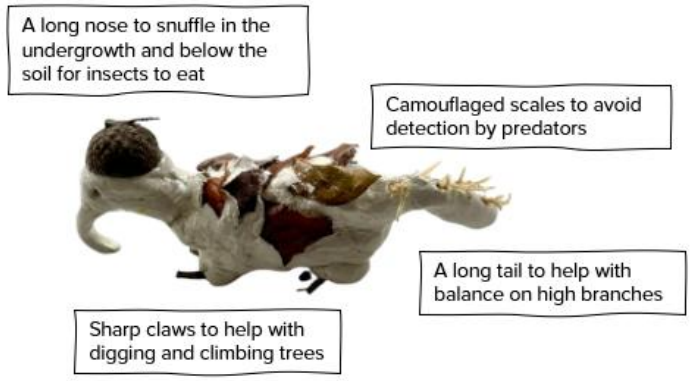
N.C. statement: identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other (Year 2)

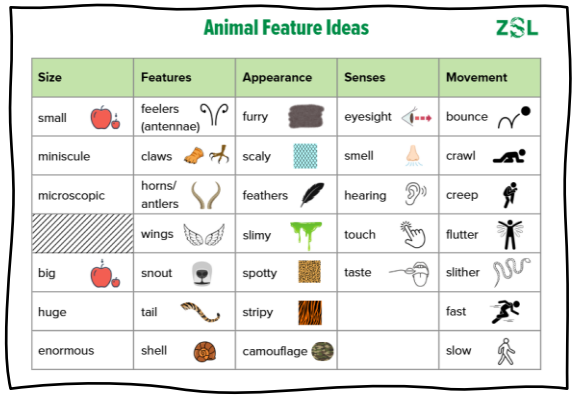
Animal features

Examine your outdoor area. Is it a habitat? Do creatures make their homes here? Then the answer is yes! Whereabouts in your outdoor area could different animals make their home?

Challenge your pupils to design a creature that could live in your surrounding habitat, considering which features it needs to be successful throughout the year. They can make their creatures out of air-dry clay and use natural resources to add specialised features.

At the end of the lesson, ask pupils to share to the class or in partners how their creature is suited to this habitat. Equally, ask them to consider what would happen to the creature if this habitat underwent any big changes (e.g. as a result of climate change)? It is important to protect our different environments so that all animals can survive and thrive.





Animal Features Word Mat available here

N.C. statement: identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other (Year 2)

Design a microhabitat

To assess pupils' understanding of how habitats meet the needs of living things, have them create their own model habitats. Give groups a focus animal to think about (e.g. hedgehog, bee, worm, bird) and ask them to use natural materials to create a microhabitat. They could use sticks, bark, leaves and pinecones, and you may also want to provide materials like bamboo cane and string.

Once pupils have created their models, ask groups to explain how the habitat meets the needs of their creature.

Does it have food and water sources nearby?

How does the structure provide safety and shelter?

Compare the different creations and discuss how they are different. Could one group's creature survive in another microhabitat model? Why or why not?

N.C. statement: identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other (Year 2)

Food chains

Take pupils outside so they have plenty of space to complete this activity.

Sort pupils into groups of 3 or 4 and provide each with a set of pictures including one producer and two or three consumers. Each pupil takes a picture, then the group has to organise themselves into the correct order to make a food chain.

Can they then explain to the other groups how they came to their decision, using scientific language such as producer, consumer, predator and prey?

N.C. statement: describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food (Year 2)

Food chains continued

Spend time observing all the different animals that come into your outdoor area, as well as looking for evidence of any nocturnal hunters that might try to find food in your school grounds once everyone has gone home.

Are pupils able to create examples of food chains from the animals that they spot?

rotting/decaying wood → **woodlice** → **thrush** → **squirrel**

N.C. statement: describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food (Year 2)