

Nature Live

Getting ready

My name

My age



The ANAGRAM challenge

- In each episode you will find one hidden letter. Use the boxes below to record each of the letters. When you have all 5 letters, rearrange them so that they spell a word.

Answer

1

Hidden objects

- In each episode there are going to be hidden objects for you to try and spot. Use the table below to make a note of what it was or where you spotted it.

	What to do on a walk	Brilliant birds	A peep into ponds	Wild skills	More things to do on a walk
Cuddly toy					
FSC logo					

1. What to do on a walk

An interesting fact I learnt in today's episode	
Where I went on my nature walk	
When I was on my walk I really enjoyed...	
When I sat down to do my silent sit spot I could hear...	
On my walk I collected these things...	

2

2. Brilliant birds

An interesting fact I learnt in today's episode	
What makes a blue tit different from a bullfinch?	
Where are you going to hang your bird feeder?	
To encourage more birds into my garden or local park I am going to....	

3. A peep into ponds

An interesting fact I learnt in today's episode	
What equipment do you need in order to go pond dipping?	
Name 3 animals you might find living in a wildlife pond	
Have you made a wildlife pond in your garden? If so what it is like?	

3

4. Wild skills

An interesting fact I learnt in today's episode	
What materials did you need to make a shelter?	
What style of shelter did you choose to make?	
What animals did you find in your pit fall trap?	
<i>You may like to draw your animal</i>	

5. More things to do on a walk

An interesting fact I learnt in today's episode	
Has anything on your walk changed from when you went before? (For example, are all the leaves the same colour?)	
When I was on my walk I really enjoyed...	
What did you put in your smelly potion?	
When you played the woolly worm game did you see any patterns? Were any or the worms harder to find than others? Why might that be?	
Climate change is affecting everyone. What changes could you make in your own home help combat climate change?	

Out of all the activities I have done as part of #PrimaryNatureLive, the activity I enjoyed the most was...

I enjoyed this the most because:

1. Tree identification

You will need

- Leaf spotting guide (page 3)
- Crayon
- Paper
- Tree identification guide
- Calculator
- Tape measure

➤ What **shape** are the leaves?

Draw a picture of the leaves

➤ Can you describe the **bark**?

Use some good adjectives!

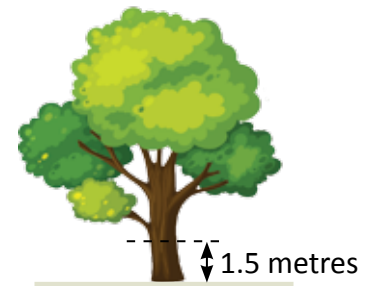
➤ Do your bark rubbing here

➤ What **type** of tree is it?

Tree age

- Measure up the trunk 1.5m from the ground. Then wrap a tape measure around, to find out the **circumference**.

Tree circumference =
Circumference is the distance
around the outside of a circle



- What **type** of tree is it?
Use your Tree identification guide

- Divide the tree's circumference by the right growth rate to find its rough **age**

Circumference ÷ Growth rate =

Type of tree	Growth rate
Oak	1.88
Hazel	2.50
Ash	2.50
Beech	2.50
Sycamore	2.75
Pine/Spruce	3.13
ANY OTHER TREE	2.50

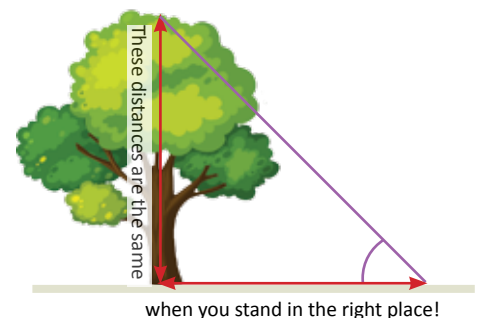
- What was going on in the world when your tree was sprouting?

2

Estimating tree height

If the tree were to fall over, where would the top be?

- Stand at that point with your back to the tree.
- Bend over and look back through your legs to the top of the tree.
- Shuffle forwards and backwards until you can only just see the top of the tree.
- The distance between your feet and the bottom of the tree is now the same as its height.
(You will look daft, but it does work!)



How tall is your tree?

Leaf spotting

How many can you find?



✓ Oak



✓ Sycamore



✓ Ash



✓ Birch



✓ Beech



✓ Rowan



✓ Willow



✓ Hawthorn



✓ Pine

Signs of winter

How many can you find?



✓ Bare branches



✓ Dead leaves



✓ Hoar frost



✓ Holly



✓ Yew



✓ Pine trees



✓ Ivy fruit

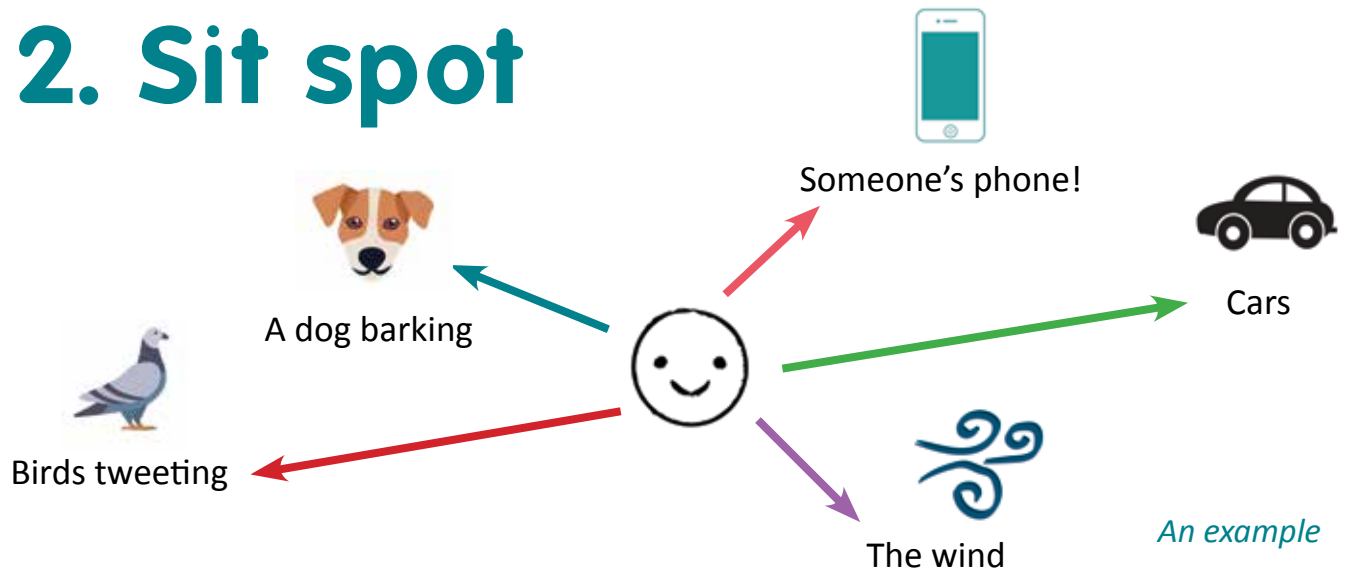


✓ Squirrel dreys



✓ Snowdrops

2. Sit spot



Draw your own Sit spot here – get creative or arty!

3. Wild art

You will need

- Natural materials
- A space to work (inside or outside)

Get ready

When you are out on your walk make sure you **take a small bag or container with you** to collect small natural objects such as pine cones, twigs, fallen leaves, coloured petals, feathers etc.



Get set

You can make your art on the ground in the garden, or inside on a tray or sheet of paper.

Make sure you get permission, and put newspaper down first to help keep things tidy!

Alternatively you can make your art while out on your walk and leave it for others to find and enjoy.

GO

Now it's time to get arty...

Are you going to make a repeating pattern? Or a picture of something? Think about colours, size, 2D or 3D... and get creative!

We would love to see any art you've created! Don't forget to take a photo of yours and post it on Twitter with **#PrimaryNatureLive** (ask an adult to help) for a chance of having it shown in next week's episode!



1. What birds do you know?

The pictures show birds that are commonly found in gardens

➤ Match the picture with the correct name.

Blue Tit



Goldfinch



Robin



Blackbird



Collared Dove



Chaffinch



Each of these birds are very different from one another and they all have individual characteristics which help to make them unique.

➤ Using the space on the right hand side label one characteristic onto each of the birds which makes it different from the others.

2. Making a bird feeder

A step by step guide

You will need

- One small pine cone
- Half a block of lard
- Bird seed
- Dried meal worms
- Large plate or tray
- Scissors
- String



Collect all the equipment together that you will need



1. Tie a piece of string onto your pine cone



2. Place the lard in the tray and cut into small pieces. Squash it flat into a paté



5. Once the pine cone is fully covered in lard and bird feed, it is ready to hang up outside



4. Roll the lard paté around your pine cone until it is fully covered



3. Press the bird seed and dried meal worms into the lard

We would love to see any bird feeders you make at home. Don't forget to take a photo of your feeder and post it on twitter for a chance of having it shown in our next episode. Ask an adult for help and don't forget to tag us using **#PrimaryNatureLive**. Good luck!

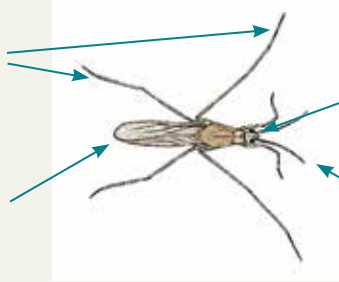
1. Pond dipping

Adaptations

Example:
**Pond
skaters**

Long legs: so it can reach high speeds to chase down its prey

Body is covered in dense hairs to trap air for it to breathe when it goes underwater



Large eyes (with good 3D vision) to help locate and chase its prey

Proboscis (mouth parts) to impale its prey and suck out the contents

➤ My pond invertebrate is called

Space for you to draw your pond invertebrate

1

➤ Where does it live?

➤ How is it adapted to living in the pond?

.....

.....

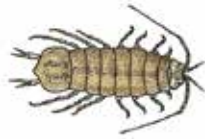
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Cased Caddisfly larva



How many
did you find?

Freshwater Hoglouse



How many
did you find?

Water Scorpion



How many
did you find?

Rat-tailed Maggot



How many
did you find?

Caseless Caddisfly larva



How many
did you find?

Water Boatman



How many
did you find?

Pond Skater



How many
did you find?

Midge larva



How many
did you find?

Alderfly larva



How many
did you find?

Water Beetle



How many
did you find?

Water Spider



How many
did you find?

Leech



How many
did you find?

Dragonfly nymph



How many
did you find?

Beetle larvae



How many
did you find?

Freshwater Shrimp



How many
did you find?

Flatworm



How many
did you find?

Damselfly nymph



How many
did you find?

Mayfly nymph



How many
did you find?

Snail



How many
did you find?

Other worms



How many
did you find?

Pond health score

The invertebrates (animals with no backbone) that live in a pond can tell us a lot about how clean and healthy it is. Some need very clean, food quality water, while others are less fussy and can be found where the water is polluted. Use the table below to work out how healthy your pond is.

1. Look at the invertebrates you found in pond and tick which you found.
2. If you tick a box then write down the score. Some invertebrates have been grouped together, so even if you find several types, or lots of one type, it only gets one score.
3. Work out your pond health score and compare it to the scores below.

Type of pond invertebrate	Score	Tick if you found any	Write the score here
Cased Caddisfly larva	10		
Caseless Caddisfly larva	10		
Alderfly larva	10		
Dragonfly nymph	10		
Damselfly nymph	10		
Water Scorpion, Water Boatman	5		
Mayfly nymph	5		
Water Beetle (adult and larva)	5		
Pond Skates	5		
Water Shrimps	5		
Freshwater Hoglouse	1		
Water Snail	1		
Midge larva, Rat-tailed Maggot, Leech, Flatworm, Worm	1		
Add up the numbers in the last column to find the pond health score		Pond health score is	

- Health score 0-5 The pond is not very healthy and could be improved
- Health score 6-30 The pond is quite healthy
- Health score 31 or more The pond is very healthy. It is a good quality pond.

Pond invertebrate fact file

Many different types of invertebrates (animals with no backbone) live in ponds. Some need very clean, good quality water, while others are less fussy and can be found where the water is polluted. Some feed on detritus (dead plant and animal material), others eat algae and plants, and some are carnivores that eat other small animals.

Caddisfly larva

Cased caddisflies build a case out of sand grains and plant material. They graze on algae. Caseless caddisflies may be carnivores. Often a sign of good quality ponds.

Worm-like animals

Worms and midge larvae feed on detritus. Flatworms, leeches and rat-tailed maggots are carnivores. Can happily live in polluted ponds but will also be found in good quality ones.

Alderfly larva

Carnivores that live in the mud at the bottom of the pond. Only 3 kinds live in Britain. Often a sign of good quality ponds.

Water Snail

Carnivores that live in the mud at the bottom. Graze on algae. Can reach 4 cm long, but others are tiny (just 2-3 mm). Can survive in polluted ponds but also be found in good quality ones.

Water Beetle

Carnivores. Over 300 kinds in Britain. The adult beetles are good fliers and fly between ponds. There should be lots of different kinds in good quality ponds.

Dragonfly nymph

Ferocious carnivores that will eat tadpoles and small fish. Adults can be seen flying around the pond. Indicators of good quality ponds.

Pond Skater

Carnivores that run across the water surface. There are 8 kinds found in Britain. Can live in both good and bad quality ponds.

Damselfly nymph

Carnivores. The adults can be seen flying around the pond. Indicators of good quality ponds.

Freshwater Shrimp

Feed on detritus. They are fast swimmers. Can live in both good and bad quality ponds.

Mayfly nymph

Most graze on algae but some feed on detritus. Some kinds of mayfly can tolerate some pollution so are found in both high quality ponds and ones that are not as good.

Freshwater Hoglouse

Also called Water Slaters. Feed on detritus. Crawl around at the bottom of the pond. Only 2 kinds in Britain. Can tolerate pollution. Can live in bad quality ponds.

Water Scorpion and Water Boatman

Water Scorpions and Water Boatmen are carnivores. All have piercing mouthparts. Found in medium to good quality ponds.

2. Make your own pond

A step by step guide

You will need

- An old washing up bowl/plastic container
- Gravel
- Stones of different sizes and/or a brick
- Rainwater
- Small Pond plants e.g. Miniature waterlily, Starwort

1. Find a suitable place for your pond to go – ideally in the garden, somewhere that gets some sun is best (but not all day!). Make sure you get permission first!
2. You can either dig a hole to sink your container into the ground (so the top is at ground level) or just put it on the ground, and build some steps/slopes up to it with stones or bricks. If you're digging, get some help from a grown up, or better yet get them to do it for you!
3. Put a layer of gravel in the bottom of the container.
4. Add different sized rocks or brick, to give a range of depths and spaces in the pond. You also need a ramp up to the top of the container (on the inside).

1. Shelter building

You will need

- String
- Rope
- Guide to knots (page 3)
- A tarpaulin
- Fallen branches

Where to build

- Find the **driest spot** you can. Wet ground will sap your body heat faster.
- To avoid cold winds, build in a **sheltered spot** surrounded by trees.
- Choose an area of **high ground** so the breeze will blow the bugs away.
- **Stay away** from steep cliffs. You don't want to fall, or have anything fall on you.

Safety

- Before entering your shelter, get an adult to check it
- Be careful when carrying large materials – get someone to help you move large branches
- Drag (don't carry) large branches
- Watch out for twigs in your or other people's eyes

1

Different types of shelters that you can build

A Lean-to shelters

Find a tree, fallen tree, large rock, overhang or even a wall. Then simply lean fallen branches up against it at an angle. Leave enough space for you to crawl into.

Cover the limbs with leaves, pine needles, your tarpaulin or whatever else you find. The bigger the space you make the more work you'll have to do. To keep dry and warm make it as small as possible but still able to fit you in.

Find a place to prop a sturdy branch, you need at least one end off the ground. Then lean branches along the length of the main branch. You can do this on just *one side*, if you want and open shelter, or on *both sides* for more protection.



B Teepee-shaped shelters

Make a teepee lean-to around a tree.

Find yourself a good tree, one with a few branches low down you can lean smaller branches up against.

Build your shelter around the outside of the tree with the trunk in the middle.

Use a few long branches to wedge into a triangle as your basic teepee shape. Fill in the gaps with more branches, leaves and pine needles.



C Tarp tent

Tie a cord between 2 trees, place the tarp over the cord and anchor to the ground with rocks. It should look like an 'A' frame tent.



We would love to see any shelters you have built. Don't forget to take a photo of your shelter and post it on twitter with **#PrimaryNatureLive**, ask your adult to help, for a chance of having it shown in next week's episode!

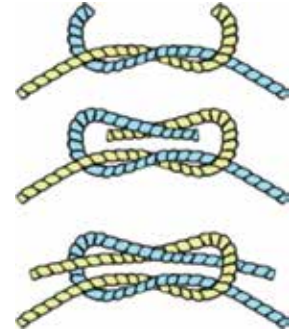
Knots

If you don't know how to tie knots tie lots!

A Reef knots

A **reef knot** is used to tie the two ends of a single rope

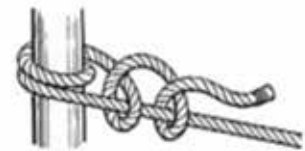
- Cross the blue and yellow ends, blue over yellow
- Cross them again, yellow over blue
- Pull ends tight



B Round turn and 2 half hitches

This knot fastens a rope to a fixed object such as a post, tree, ring or column. It is a strong knot and consists of two parts.

- Wrap one end of the rope around the object once or twice. Leave enough tail for the rest of the knot
- Cross the tail over the hanging rope. Poke the end through the hole you have created
- Pull tight
- Repeat



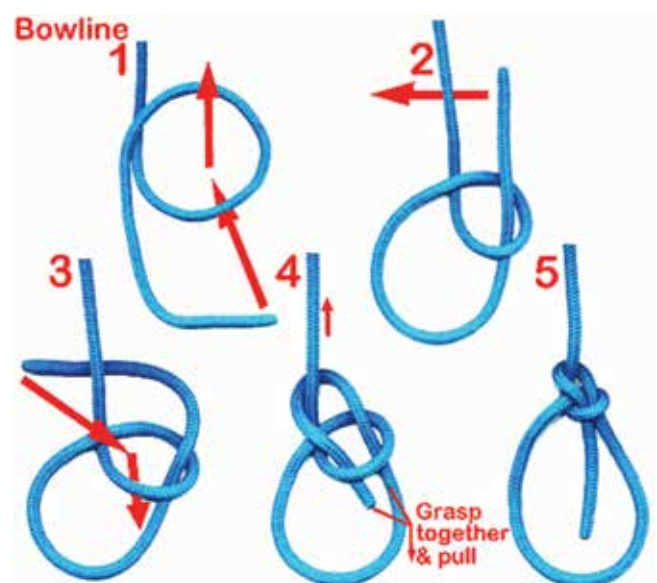
Round Turn With Two Half Hitches



C Bowline

This knot makes a fixed loop at the end of a line

- Make a loop
- Pass your short end up through the loop
- Then take it round the long end and back down the loop again
- Pull tight



2. Pitfall traps

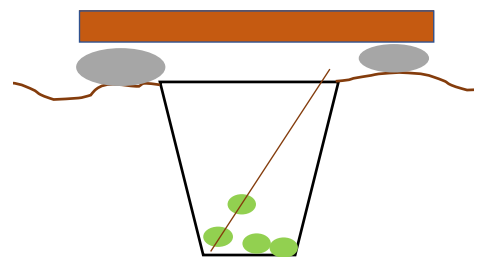
How to make a pitfall trap

You will need

- Trowel
- Empty yoghurt pot
- Tile or bit of wood
- Stones
- Tray
- ID guide (optional)

A pitfall trap is used to catch small animals. It works well for invertebrates. Choose a good location, one not likely to be disturbed by anyone else.

1. Dig a small hole using your trowel. The hole needs to be the same size as your yoghurt pot.
2. Place your clean yogurt pot into the hole. Then fill in any empty space around the pot with soil
3. Put a small amount of soil and a couple of leaves in the bottom of the pot for creatures to shelter under.
4. Place a stick at an angle in the pot so creatures can crawl out of they really want to.
5. To stop the trap filling with water, place a bit of wood or tile over the top. Make sure to raise it up a bit with some stones.
6. Leave your trap overnight, or just for a couple of hours during the day.
7. Check your trap, take out the pot and carefully empty into a tray. Use an ID guide to identify what you have found.
8. Write down your findings. You could even take some photos or draw what you have found.
9. Carefully release your creatures back into their habitat. They would like to be somewhere sheltered and safe. Finally fill the hole back in and return the area back to how you found it.



Recording what you have found

- Fill in the table with your findings

Creature	Tally	Total

- Now draw one of your creatures here

How many legs does it have?

How many body parts does it have?

What colour/s is it?



Ant



Earwig



Centipede



Millipede



Worm



Woodlouse



Spider

1. The woolly worm game

You will need

- Approximately 50 x 5cm lengths of different colour wool
- 1 x Piece of A4 card or paper
- 1 x Roll of double-sided sticky tape
- Scissors

Get ready

Before the game starts, you need to make your collection board.

Stick a strip of double-sided tape across your piece of paper and label on start and end of the game.



Get set

Next up – get an adult to hide the worms on your lawn or in a grassy area in a local park. The adult must remember not to go too far otherwise you will never find them again! Might be a good idea to set some boundaries!

GO

Set the clock. You will now pretend to be a bird and collect as many of the hidden worms that you can. Each time you find one, stick it on your board – starting at the left and moving across the page.



When the time up count how many worms you collected. Did you collect all of them?

Review

- Have a look at your page. Do the types of colours collected at the start of the game change as you got towards the end of the game?
- See if you can spot a pattern. Why might this be the case?

2. Ice mobiles

You will need

- Water
- String
- Scissors
- 1 x Freezer proof container (per mobile)
- A small bag or container for collecting small natural objects

Get ready

When you are out on your walk make sure you take a small bag or container with you to collect small natural objects such as pine cones, twigs, fallen leaves, coloured petals, feathers etc.

Get set

When you are at home fill a small bowl or plastic container with water. Make sure you don't fill it right to the top as water will expand when frozen. Then drop some of the items you collected into your container. You may notice that some items will sink and others will float.

For each container, cut a piece of string long enough to tie to a tree branch. Leave both ends of the string dangling out of the water, with the middle looped section remaining in the water.

GO

Your ice mobile is now ready to freeze. Carefully place it in the freezer ensuring that the string stays in place. Leave for several hours until all the water has frozen.

Your ice mobile is now ready. Pop it out of its container and use the string to hang your beautiful creation outside. When the ice catches the light you will see them sparkle.

We would love to see any ice mobiles you make at home. Don't forget to take a photo of your creation and post it on twitter with **#PrimaryNatureLive** for a chance of having it showcased on our social media pages. Get your adult to help you.



Before freezing



Frozen mobile



Bird seed mobile