PLAY, LEARN AND HAVE FUN!

Environmental Games and Activities for Rangers and Schools
This is a collection of dozens of tried and tested games with an environmental theme. Most of the games included can be played anywhere. You will just need to keep in mind the age and maturity of the group and adjust accordingly. All the games can be fun for any type of group, as long as they are presented appropriately.

Here’s some simple steps to making sure that they work and that everyone (including you) has fun-

1) Set-up the game first and then explain how it works.
2) Keep explanation and rules to a minimum.
3) Pay special attention to any safety considerations. Explain and stress safety rules.
4) Keep your goal in mind; what do you want the participants to get out of the game? (Many of these games focus on awareness of nature around us.)
5) Get kids to feel comfortable outside.
6) Spend time after games asking kids if they had fun?
7) What did they learn?

These and many more activities and resources are available to download on www.heritagewoodsonline.co.uk
1,2,3 Where are you?

Age Group: 5-11 years
Ideal Numbers: Any class size but be aware of limits with hiding places
Location: Outdoors in area to be used for rest of activities
Equipment Required: None
Amount of Time: 15 minutes or more, depending on engagement of children
Reasons for Playing: Great for establishing boundaries and familiarising young people and adults with a site
How to Play: After describing and demonstrating the boundaries of the working area to a group divide the group into two teams. One team are the hiders, the other are the seekers. Ensure there are sufficient adults in each team. The hiders go off in one big group to find one big hiding place. The seekers stay at the base and count to 100. After 100 the seekers shout all together '1,2,3 Where are you?' The hiders then reply '1,2,3 We're over here!'
It is important to stress that they must reply!
The seekers locate the hiders by repeating these calls and homing in on the hiding place- using their ears. Repeat the game by swapping teams and roles.
As the group get used to the game you can allow them to hide in smaller groups within the teams or even on their own as long as the boundaries are well defined and recognised.
This enables them to build up confidence and feel secure outside in the woodland/park etc while having fun and enjoying exploration.

Viking Runes

Age Group: 8-14 years
Ideal Numbers: Any class size
Location: Outdoors in area to be used for rest of activities
Equipment Required: Runic alphabet, Rune trail, Pencils, Card
Amount of Time: 30 minutes +
Reasons for Playing: Great for establishing boundaries and encouraging use of space. Also provides lots of ups and downs throughout activity allowing running around and bursts of energy as well as quieter reflective work.
How to Play: Set up the rune trail around the site before the group arrive. The cards should have a rune on one side and an English letter on the other. (NB: This activity can be delivered using any kind of code- morse, numbers, hieroglyphics! ) After describing and demonstrating the boundaries of the working area to the group divide them into smaller groups- pairs, fives etc. Each group must make their way around the site finding all of the cards and writing down the code on a special sheet (card/ notebook- as you decide). The cards must be left hanging so that all of the groups can find them.
While the groups are looking for the letters you can hang a number of messages around the base site, written in runes (or other code).
When the groups have found all of the letters they will return to the base and choose a message to translate using their new code. All of the messages should be instructions for an activity. It may be four separate things or four parts of the same instruction depending on age and ability of the groups.

Examples could be: 1. Use sticks to write your name in Viking runes. 2. Make a picture frame on the ground. 3. Find three leaves and four hazel nuts. 4. Create a Viking picture in the frame. (all of above written in runes)

You can choose whether all of the groups do all of the activities or whether they stay working on only one or two. This will depend on how engaged they are and how the time goes.
At the end of the activity try to review the children's experiences by asking questions or getting them to show you something they made. This will add value to the experience they have had and ensure that it stays with them for much longer, also allowing you to see how well it worked.
Meet A Tree

You will need:
- Blindfolds
- A carefully selected area with trees in it. Ensure there are no obvious hazards for blindfolded children such as water, nettles, brambles, holes, thorns.
- Also ensure that there are enough, reasonably sized trees fairly well spaced, and that the trunks, or part of them, are fairly accessible, i.e. not covered in scrub. A beech hanger is ideal.

The activity:
The original 'earth game'. Have the children in pairs or threes. If possible, or if the kids are younger, I recommend an adult per 'pair' for younger children. One blindfold per pair. It is easier to demonstrate this game than explain it. One child wears the blindfold, and the other leads them by a circuitous route to a tree. The blindfolded child feels, smells, even tastes the tree until they think they really know it, and all its shapes and features. They are then led away, the blindfold is removed, and they find 'their' tree. Then the next child has a go. Keep swapping and trying different trees. You could try this in different areas with different types of tree and see if it is easier or harder.

Be sure to mention blindfold safety, in leading partners carefully. If necessary set boundaries, keeping dangerous areas out of bounds. This is a good way to talk about different types of trees, who lives off them, what types of trees are not found here, etc.

Journey Sticks

You will need:
- Different coloured wool of about 1m in length

The activity:
1. Children to find for themselves a 50cm – 1m long stick
2. Tell them to collect objects around the wood as you lead them around. These objects will remind them about places in the woodland
3. Children then collect feathers, dried flower heads, grass bark, leaves etc. attaching them to their stick as they go by using the wool to wrap around them
At the end of the walk, the children use the objects to tell about their journey.
Alternatively, you could encourage them to remember where they found particular objects by getting individuals to lead the rest of the group to the spot.

Observation Space

You will need:
- Circles of string (about 2 ft diameter) or hoops

The activity:
1. Give a string circle or hoop to a small group of children and tell them to take it and place it in a special part of the wood. Look at what is growing in the circle, are there any special objects like feathers, pine cones etc?
2. The children report back to the rest of the group what they have seen in their circle
3. Next week, the children return to their circles and look for changes.
**Kim’s Game**

**You will need:**
Suitable objects for the game e.g. feather, acorn, pinecone, moss, leaf, stone (avoid wildflowers which children should not be encouraged to pick)

**Playing the game:**

**Variation 1**
1. Cover the objects with something natural, like large leaves
2. Remove the covering for about 30 seconds before replacing it
3. Ask the children to go off and find similar objects

**Variation 2**
1. Choose objects that the children can touch and therefore examine texture. Pick objects which are hard, soft, tickly, bendy etc.
2. and 3. as above

**Variation 3**
1. Show 6 or 7 pictures of birds or other animals that can be found in the woodland
2. Cover them up
3. Ask how many the children can remember

**Feely Bag**

**You will need:**
A large bag
A number of objects found in the woodland e.g. acorn, stick, pinecone, feather

**The activity:**
1. Once the children are familiar with objects they may find around the wood, get one child to choose an item from the bag without taking it out
2. They describe the object to the rest of the group which has to guess what it is
3. The correct guesser gets the next go.

**Nature Matchbox**

**You will need:**
A matchbox for each child

**Playing the game:**
Each child to fill their matchbox with as many different natural objects as possible (not living ones of course!) Who can get the most different objects?

**Identifying Trees**

**You will need:**
Leaf cards copied from the sheet at the end of the booklet and laminated showing leaves found in the particular locality.

**Playing the game:**
1. Go through the cards with the children, naming the leaves and drawing attention to their different shapes
2. Give a card to a pair of children and ask them to find the tree the leaf came from
3. Swap over cards so the children become familiar with each species.
   Do they notice any other distinguishing features of the trees?
   Once you have played this game a few times and the children are familiar with the names of the trees, without using the cards get pairs or small groups of children to lead the rest of the group to an example of one of the species they are familiar with. Get the group to decide if they have made a correct choice – this can always be checked with reference to the cards.
Mirror walk
You will need:
A small plastic mirror for each child
The activity:
1. Explain to the children how they are going to use a mirror to view the wood through the eyes of
different animals. They need to be careful they don’t bump into anything because they will be looking
through the mirror!
2. Get the children to suggest a bird’s name. A bird views the world from above while flying high so
hold your mirror high above you and look up into it as you walk around.
3. Do the children know what is special about a rabbit’s vision? They have a much larger range in order
to spot a predator creeping up on them. If the children hold their mirrors to the side of their nose
facing them and they will be able to see both forwards and backwards at the same time.
4. Get the children to make a journey across the woodland floor with their mirrors, pretending to be a
little wood mouse.
5. What view does a beetle get? Hold the mirror in front of your facing upwards and the children will
get an interesting viewpoint of the woodland canopy.

Woodland Sounds
You will need:
blank postcards or pieces of card for each child, pencils.
This activity is best in winter or spring.
Listen to the sounds of birds etc as you walk through the wood. In order to encourage the children to
listen carefully get them to draw the sounds they hear.
Eg, short jagged zigzags for a wren’s call, long swirling marks for a pigeon cooing and more complex up
and down marks for a robin’s song.
Discuss how best to record the sounds.
Try to interpret these ‘graphic scores’ using instruments in the classroom.
Perform your woodland symphony!

Leaf Slides
You will need:
Card slide mount for each child made from the template below. Fold down centre line.

Collect a favourite leaf of a tree or fern or grass from the ground and mount it in your slide holder.
- Have a slide show by holding them up one at a time in a circle.
- make them into a mobile
- hang them against a window
Sounds and Colours
no materials needed

Stop anywhere along the trail and have everyone stand very still (or sit) and close their eyes. The challenge is to see how many different sounds they hear and count them out on their hands.

After about a minute, discuss what sounds people noticed. What sounds were heard that you would not hear in the city? What sounds were the same? Would we have been able to hear these sounds if we had not been perfectly still? This helps focus on things happening in nature.

You can do a similar activity focusing on colours. Start by asking everyone to call out the first two colours that they see. Then, have each person look at one section of the forest, and without moving their heads, count how many different colours they see. Remember that different shades count as different colours. How many people lost count because there are so many colours? What was the one colour that they were surprised to find?

Rainbow Chips
You will need:
coloured pieces of paper
(cut up paint samples work well)
The activity:
Give each child several chips of the “rainbow.” The object is simply to find the colours somewhere in nature. This is a good game for younger children. For older groups, have them find the colour of their shirt, pants, someone else’s eyes, etc. in the forest.

Scavenger Hunt
You will need:
scavenger hunt list
The activity:
Give everybody a scavenger hunt list – put the lists on index cards and laminate with contact paper to protect and reuse them. Ideas for hunt: a feather, three seeds, something smooth, something that smells, something beautiful, something round, a sign that an animal lives here, five signs that man has been here (litter), etc. Remind everyone to collect only things that can be put back (except for the litter – emphasize putting litter in the garbage at the end).

Modelling Hedgehogs
You will need:
Water to create mud if the ground is hard and wash hands afterwards.
Playing the game:
Children to create their own hedgehog using materials found in the woodland. Clay soil is especially good for modelling and the hedgehogs can have spines made from twigs. You could also model other things, for example funny faces stuck to a tree trunk. Create the features with all sorts of natural objects. These can be left for others to discover since they are only made of found materials and will soon weather.
Animal Consequences

Age Group: 10 or over  
Ideal Numbers: 10-20  
Location; indoors  
Equipment Required: Paper and pencils  
Amount of Time: 15 mins  
Reason for playing; reinforcing discussion around adaptation  
How to Play:  
Everybody sits in a circle, and has a piece of paper and a pencil.  
Players fold their paper into four, so that the folds run widthways.  
On the top panel they draw an animals head - a bird, a lion, a crocodile, etc.  
Make the two lines of the neck just over onto the second panel.  
Players fold over their handiwork so that it cannot be seen, and pass to the person on their left.  
Players then draw the top part of an animals' body, and again pass on the piece of paper.  
The legs of the body and then the feet are also added in this way. Then pass on the completed animal to the player on the left.  
Players open out the 'mystery animal' and decide where they think it lives (has it got webbed feet? A tail suitable for helping to climb trees?). What it eats (has it a slender beak or a long tongue for drinking nectar? Sharp teeth for meat eating?). What it might get eaten by? (Try linking all the creations in an imaginary food web!). Give each animal a suitable name.

Fox-Rabbit-Leaf

Age Group: 6 and over  
Ideal Numbers: 15 - 50  
Equipment Required: Scarves or pieces of cloth; pencil and paper, watch  
Amount of Time: 15 mins+  
Reason for playing: starting point to discuss 'balances' in nature  
How to Play:  
Players are divided into 3 roughly even groups - one group are foxes, one rabbits, and one are the leaves.  
The foxes stand to form a circle. The rabbits each have a scarf or piece of cloth to tuck in their belt or waistband for their 'tail' - they stand inside the circle.  
The leaves stand outside the circle - they cannot move.  
Decide in advance on a length of time for each 'round' and how many rounds you will play (perhaps 6 rounds of 2-3 minutes each).  
At a given signal, the round commences. The rabbits must try to get past the foxes to 'tag' the leaves - they can catch as many leaves as they are able.  
The foxes try to catch the rabbits by pulling their tails; the rabbits are safe when they are in a crouching position, but they cannot move or tig a leaf when they are in a crouching position, but they cannot move or tig a leaf when they are crouching. The foxes can only catch one rabbit in any round.  
When their time is up, call the end of that round.  
Any rabbit caught by the foxes become foxes as well.  
If the fox fails to catch a rabbit within any round it 'dies' and becomes a leaf.  
If the rabbit fails to get food, it also becomes a leaf.  
When the rabbit gets food, the food joins them as a rabbit.  
Special Notes;  
At the end of each round, note how many there are in each group. When the game is over, discuss how the numbers varied - if there are too many rabbits there isn't enough food, so some of the rabbits die; it is also easier for the foxes to get rabbits, so the number of foxes temporarily increases. However, if there are too many foxes, they can't all get rabbits, so some die - therefore it becomes easier for the rabbits to get food, and their numbers increase!
**Mouse Hunt**

**Age Group:** 8-12  
**Ideal Numbers:** 8-20  
**Equipment Required:** Small bells/wind chime. Outdoor play area with trees and bushes  
**Amount of Time:** 15 mins  
**Reason for playing:** discussion of how animals hunt  
**How to Play:**  
One person is needed to be the mouse - this is the least active role in the game, and requires somebody who will be observant.

The mouse has a 'home' somewhere central to the play area, and which should be clearly defined (a fallen tree, small clearing, area staked out with string to show the boundaries, etc). The mouse cannot move outside it's home.

The remaining players are all foxes. Their task will be to try and catch the mouse - however, please note that only one fox will be able to 'eat' the mouse - there is not enough for everyone.

Small bells or/and wind chimes are placed or hung in various locations around the mouses home, where they are not easily visible to the mouse.

Explain that before a fox can catch a mouse, one of these bells must be rung. This explanation should be suitably ambiguous; some foxes will attempt to sneak up to bell, ring it and then rush in and tig the mouse - others may realise that it is to their advantage to move in as close as possible without being seen, then wait for someone else to ring the bell for them!

The mouse closes its eyes and counts up to 100, while the foxes run and hide.

Once the mouse reaches 100 it should call 'ready', and the foxes may begin creeping up on their prey.

Any fox who is spotted by the mouse must give up the hunt and sit out the rest of the game as an observer.

Foxes should try to be the first to reach and tig the mouse.

Play several times, with different mice - then discuss what varied techniques can players think of?

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**The Web of Life Game**

**Age group:** 6 upwards  
**Location:** Inside or outside.  
**Ideal numbers:** 15-20  
**Equipment required:** ball of string  
**Amount of time:** 10 mins  
**Reason for playing:** to show how the natural world is interlinked, discussion of food-webs.  
**How to Play:**  
All stand in a circle.

One person start of with the ball of string - they choose to be an animal or plant (in the wild or on a farm etc) for example a greenfly.

Somebody across the circle is asked to think of something which the greenfly is connected to/eats or is eaten by - for example a ladybird.

The greenfly keeps hold of the end of the string, and throws the ball across the circle to the ladybird.  
The ladybird has to find someone else in the circle who can make a connection to them - possibly a blue tit.  
They keep hold of the string, and throw the ball - so that gradually a 'web' is created linking everybody in the circle. Keep the string taut, people may have to pull back slightly on it

Then explain that something has happened to affect one of the players in the circle - it may be that somebody has decided to chop down a particular tree, spray the greenfly or take some other 'action'.  
The player affected is asked to 'die' sitting down or falling and pulling one the string.

Ask the players if any of them felt that 'tug' on the string - two other players should have done. See how they will be affected by what has happened - these players 'die', and so more feel the tug.

Continue until all the circle has felt the string 'tug'.

Some living things on a farm - apple tree, strawberries, bee, clover, cow, farmer, sheep, kale, greenfly, ladybird, wheat, oats.

Another way of doing this - go to a natural area and choose species from there.

You can use things such as sunshine, air, soil and water - these will be linked to almost everything else.
**Millipede**

Time: 1-5 mins+
Numbers: up to 40
Equipment: none
Location: Any space, ideal on a path or ride

Very good for travelling from one place to another. Get the children to line up in front of you in single file. Ensure a fairly sensible one is in front. Get another adult, if available, to keep an eye on the lads at the back. Ask them to raise their hands in the air, and then put them down on the shoulders of the person in front. Then take the hands of the leader, and ask them all to close their eyes (and mouths!) whilst you lead off, walking backwards and leading the 'millipede' along. Sometimes this breaks down after a few seconds, sometimes they get very good at it. If so you can lead them over more and more challenging terrain - over logs, around trees, through puddles or whatever. Eventually you get to wherever you are going, or they fall over.

Try to stop before it gets at all rowdy!
Emphasise how hard it is to do it right, and how important it is to co-operate and not push or pull, using the senses other than eyes to feel your way. If they do peek (and little ones always will) then it doesn’t really matter. A big round of applause for everyone if they do well - as of course they always do. You can also talk about a real millipede or caterpillar or whatever, and how it feels its way along.

**Bat & Moth**

Time: 30 mins
Numbers: 15-20
Equipment: at least one blindfold
Location: Anywhere

Stand the children in a circle. Talk about how bats see their food (echolocation). What do bats eat? Often moths. Choose someone to be a bat (I usually choose the one who knew that bats use echolocation) and another child to be the moth. The first two should be sensible children so that the others get an idea of how it works. Blindfold the bat, but not the moth. The bat goes around saying 'bat!'. Every time the bats says this the moth must reply 'moth!'. Thus a sort of echolocation can be done. The bat must tag the moth, to eat it. The others in the circle must gently guide the players back into the circle if they hit the edges, and not let them run out. This is both a very good model of the process and an enjoyable game. However, it will take a little effort to make sure it works safely.

Possible problems:
The bat must keep saying 'bat' or it becomes blind man's buff. Some children can't cope with saying 'bat' at the same time as hunting in the dark. Might be worth practicing without the blindfold.
The moth must always reply immediately, and loudly. Cheats get eaten!
If it drags on and the bat is obviously not going to get the moth, everyone takes a step in to restrict the area.
If the circle is too big or too widely spaced, the bat can escape, and the players can get up enough speed to do some damage! Best to keep the circle small and very closely spaced.
To make sure everyone has a go in the time allotted, you can have more than one moth or more than one bat, or both. Choose your 'opponents' carefully to make sure that one will not squash the other!

**The Great Circle**

Time: 30 mins
Numbers: any
Equipment: none
Location: a diverse countryside environment where picking flowers and leaves etc is not going to do any harm. A clear area is also needed. A meadow ready to be mown, or which has just been cut but not cleared, adjacent to an already mown area, is ideal. This is best done in an area you know well and are confident will not be harmed, e.g. at the back of the school field. Note also that it is not a good...
idea to play this game too often in the same place because of the potential to cause damage. This game can be done in a much more relaxed and spontaneous manner than described here. It will very much depend on the group you have, and how much license you have to rampage around the surrounding area!

Choose a thing which everyone can find, such as a certain leaf or a flower. Start with an easy one. Make sure everyone gets as close a match to the thing you chose as possible. This improves identification skills. When everyone has one, stand in a circle on a reasonably flat, clear area. Kneel down and place the item on the ground in front of you. Everyone else does the same, and places their thing there too, so they are all in a circle. The first circle should be tight, so make the things touch each other. It can be more effective if the things point along the radii of the circle, but there is no reason why they should not be at right angles to them. Then chose another thing, and do the same, creating another circle just outside the last one, and so on until you run out of ideas, things or time. Then admire your work and leave it for passers by to wonder at.

Make sure the children understand why it is permitted to pick wild things here, and that it might not be permitted elsewhere. Make sure that it *is* permitted. If you are not the land manager you should ask permission before you do this. Also make sure that what you do will not leave a mess behind you. You can, of course, do this with non-natural things. If you include man-made things, such as litter or things you have brought with you (contents of pencil cases, items of clothing) make sure that you clear it all up afterwards. Can be a good way to collect litter!

If you give the children a bit more license to choose their own things, make sure there is nothing dangerous which they might find.

Choose things which provide a contrast, e.g. a bright green bracken leaf and then a dry stick. Only use flowers sparingly. You could even use individual petals. Stones, sand, and earth are also good.

**Food Chain**

Duration: 20 mins+
Numbers: up to 30
Equipment: a ball of string
Location: Any, preferably an identifiable habitat such as a woodland or beach

This game is a kind of dramatised story which the leader tells and the group acts out. It's good when the group is a bit tired and needs to stay still for a while - don't try it first when they want to run about.

Talk about the place where you are, and the sort of animals and plants which are there. (Also possible to talk about a pond or other specific ecosystem with older kids.) Stand in a circle. Ask, where does all the energy come from? (A: the sun) Get the bright spark who knows that one to hold one end of the string and stand in the middle. Explain that the string represents energy. Then attach a chain of plants and animals to the chain in a spiral around the sun, bringing children in from the outside circle as they give an answer. If you only allow those outside the web to give answers this ensures that everyone gets a turn. Often talk through the chain as you build it. Use examples of animals which are right there where you are, to try to limit those who like to list off loads of higher carnivores from tropical habitats. When everyone is in the chain you can try eliminating a few key members to see what happens. I do this by keeping one person back, the little shy one usually, to be the 'Alien' from outside the ecosystem. The alien doesn't understand about ecosystems. They want to do an experiment and take one bit away. The alien chooses a person to fire his/her magic gun at, and that person dies horribly. Make sure the alien chooses someone near the bottom of the chain - they get another shot if not. All those who depend upon the person 'zapped' then die in turn, until everyone - or most of them - is on the floor! The consequences are so dire that the alien quickly fires the magic gun at the original victim again and the balance of things is restored as each one gets up and 'comes back to life' in turn.

It is also possible to do this without string but just holding hands, or just standing in a line. But the string is a lot easier, and kids might be embarrassed at having to hold hands for so long.
**Animal Movement**

Duration: 15-20 mins  
Numbers: 15  
Equipment: Pond-dipping or minibeast stuff.  
Requires captured creatures in a container easily examined, e.g. a white tray or a plastic tank.  
Location: Anywhere where pond-dipping or minibeast hunting is appropriate.  
A game to play after you have done some pond-dipping or minibeast hunting, and when you are discussing the various animals you have caught. Particularly suited for younger children, or pre-school.  
Sit around in a circle and have a look and talk about the creatures you have captured. Look at the different ways they move. This is particularly good for pond creatures. Make sure they have enough water to show their movements clearly. Take turns to do an impression of the creature, imitating the way it moves. Everyone else has to guess 'who you are'.

**Who am I?**  
You will need; pictures of animals or plants, tape or safety pins

Tape or safety pins a picture on each person’s back (best to have animals of a certain group). The object is to find out what you are by asking yes or no questions. This is a good game to encourage mingling, so everybody is allowed to ask each other person only one question at a time, then they have to move on to someone else.  
Try using animals found in the area and then challenge everyone to try to find their animal sometime during the day, or talk about why it might be hard to find their creature. Or use exotic animals and discuss why those animals are not found in this sort of habitat.

**Animal Parts/Charades**

Animal parts is for groups of four or five. Tell each group the name of an animal they will portray, or have them choose their own creature. The object is to act out the animal with each person in the group portraying a different body part, i.e., a wing, the head, the beak. The other groups get a chance to guess what the animal is.

Charades is another fun way to learn about animals. This can have many variations. Each person can act out an animal by himself or herself, or stay in groups. They can come up with their own, or you can give them cards with the name of an animal. To make it more challenging, write something that animal would do on the card, i.e., a squirrel gathering acorns, birds making a nest, coyotes howling at the moon, etc.

**Blind Eagle**

You will need; blindfold  
The eagle is blindfolded and sits cross-legged with the “treasure” (a rock or piece of wood) placed in front of him/her. The starting line for everyone else is about 20 feet away from the eagle, and their object is to steal the treasure without being heard by the eagle. If the eagle hears someone, he/she points to them and they are out for that round. It’s best if you stand next to the eagle to judge if the eagle really hears someone. The eagle is not allowed to wave his hands around; the pointing has to be specific and the stealers are not allowed to run.

This game can lead to a discussion on animal adaptations. Who is best suited for stealing the treasure? Why? Who was not suited? What would have made stealing easier?
**Sparrowhawk**

You will need; beanbags or similar

Choose a person to be the sparrowhawk.

All the rest of the group space out and stand still as trees. On the shout of ‘go’ bird (beanbag) is thrown at random from one tree to another. The sparrowhawk tries to catch it.

If the sparrowhawk catches the bird it replaces the tree.

Try using more than one ‘bird’.

**Noah’s Ark**

You will need; index cards, writing utensil

Find your mate amid the herd of cavorting beasts and birds on Noah’s Ark.

Count no. of players in group, then make list of animals half as long as no. of players

Write the name of each animal on two cards, adjusting for an odd no. with third mate in 1 group if necessary.

Shuffle the cards, pass them out.

Each child reads card and becomes the animal on it, keeping it secret.

Collect cards.

On signal, all players act out sounds, shapes, movements of animals with intention of attracting mates; it’s pretty hilarious. They can make all the noise they want, but talking is prohibited – each animal must attract mate just be authenticity of behavior.

End in laughter, good icebreaker.

**Apple World**

See apple as the world. Useful assembly on sustainability.

You will need; an apple, knife

Cut apple into quarters

¾ earth’s surface is water; ¼ is land

Cut land into ½ -- only ½ land (1/8 total earth) is habitable; the rest is desert, mountains, frozen icecaps, and other region that can’t be inhabited by humans.

Take piece of habitable land and cut into four – only ¼ habitable land (or 1/32 of whole earth) is where all the food comes from.

While asking “What would happen if this arable land were damaged or destroyed?”, eat that part of the apple.

Take a small shaving off 1 of the water quarters.

Less than 1% of the earth’s water is fresh and drinkable; most of this is in the atmosphere, clouds, and underground.

While asking what would happen if water were polluted or wasted, eat the sliver.

Leads to discussion about taking care of resources.

Stats about water on earth:

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<thead>
<tr>
<th>Source</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceans</td>
<td>97.2%</td>
</tr>
<tr>
<td>All icecaps/glaciers</td>
<td>2%</td>
</tr>
<tr>
<td>Groundwater</td>
<td>.62%</td>
</tr>
<tr>
<td>Freshwater lakes</td>
<td>.009%</td>
</tr>
<tr>
<td>Inland seas/salt lakes</td>
<td>.008%</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>.001%</td>
</tr>
<tr>
<td>All rivers</td>
<td>.0001%</td>
</tr>
</tbody>
</table>

All the water available for human use:

<table>
<thead>
<tr>
<th>Source</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater</td>
<td>.62%</td>
</tr>
<tr>
<td>Freshwater lakes</td>
<td>.009%</td>
</tr>
<tr>
<td>Rivers</td>
<td>.0001%</td>
</tr>
<tr>
<td></td>
<td>.6291%</td>
</tr>
</tbody>
</table>
Treasure Hunt
Have each kid pick at least 3 pieces of trash from the ground.
Use the chart below to find out how long each piece of trash would take to decompose and explain why it is a good idea for them to place the trash in the garbage can.

<table>
<thead>
<tr>
<th>Trash Type</th>
<th>Decomposition Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarette butts</td>
<td>1-5 years</td>
</tr>
<tr>
<td>Paper Airplane</td>
<td>1-5 months</td>
</tr>
<tr>
<td>Aluminum cans and tabs</td>
<td>80-100 years</td>
</tr>
<tr>
<td>Plastic 6-pack holders</td>
<td>450 years</td>
</tr>
<tr>
<td>Orange and banana peels</td>
<td>up to 2 years</td>
</tr>
<tr>
<td>Plastic Bags</td>
<td>10-20 years</td>
</tr>
<tr>
<td>Nylon Fabric</td>
<td>30-40 years</td>
</tr>
<tr>
<td>Leather</td>
<td>up to 50 years</td>
</tr>
<tr>
<td>Tin Cans</td>
<td>100 years</td>
</tr>
<tr>
<td>Wool Socks</td>
<td>1-5 years</td>
</tr>
<tr>
<td>Glass Bottles</td>
<td>Unknown</td>
</tr>
<tr>
<td>Styrofoam</td>
<td>NEVER</td>
</tr>
</tbody>
</table>

Build a Tree
Location; indoor or outdoor
Group; Class
Age; 8-10

Aim; to create a 'model' of the parts of a tree to understand its workings.

No equipment required.
1. Everyone sit in a wide circle
2. Choose one person to be the heartwood. They stand in the middle to support the tree. The heartwood is actually dead and preserved by strong resins. When you call 'heartwood' they shout back 'standing straight and strong'.
3. Choose a second person as the main root. They lie at the base of the heartwood. This reaches deep into the earth to get water and anchor the tree. When you shout 'main root' they reply 'holding fast'.
4. 2-4 children lie with their backs with their feet towards the heartwood. These are the lateral roots. These draw up water through their tiny root hairs. They must 'slurp' when you shout 'lateral roots'.
5. Circle the heartwood and roots with 4 or 5 children holding hands and facing inwards. They are the sapwood. They draw water up from the roots and pump it up through tubes to the highest branches. They shout 'wheee' when you shout 'sapwood'.
6. Circle the sapwood with another ring. This is the phloem that carries the sugary foods made by the leaves to all parts of the tree. The children pretend to make food by stretching their arms and fluttering their fingers like the leaves. They shout 'Whoooo' when you shout 'phloem, bring the food down'.
7. Finally create another circle facing outwards to protect the tree. They are the bark. In response to you saying 'get tough bark' they put out their elbows and clench fists and snarl.
8. Call out each in turn, starting with the heartwood.
Build a Nest
You will need:
Tweezers
(Optional) an example of a nest

Playing the game:
1. Discuss why birds build nest during the Spring. Where do they usually locate their nests? Explain what type of materials they generally use – twigs to build up the outside (the structure), moss and animal fur to line the nest (to protect the eggs and help keep them warm)
2. Explain that the children are going to work in pairs to build a nest but, to make this task more difficult, they have the choice of either building their nest in a tree or using just tweezers (like a beak) to find and position materials. On regrouping, take a tour of the nests to decide which is most habitable.

Keeping Warm
You will need:
A thermometer
Hot water
Small containers e.g. film canisters (you could even cover these in fur and give them faces to look like dormice!).

The activity:
1. Explain how some animals e.g. dormice, hedgehogs avoid the winter when there is little food available and it is very cold by hibernating
2. In small group, the children will be given a ‘dormouse’ to build a nest for to keep them as warm as possible
3. Fill the film canisters with hot water and take a temperature reading
4. The children build a nest for their creature using woodland materials. About an hour later, get the children to find their dormice. Measure the temperature of each mouse to see whose nest kept theirs the warmest.

Minibeast Mime
You will need:
Cards with examples of minibeasts on them.

Playing the game:
1. This game works best if the children have already had the opportunity to view the behaviour of different minibeasts found in the woodland setting.
2. Group the children in small groups of two, three or four and distribute the cards.
3. The children then work on pretending to be that creature using EVERYONE in their group.
4. They then show their mime to the rest of the group who have to guess what they are!
Woodland Web Game Cards

You can use these game cards to create any number of games indoors or out.

In order to get the idea across that there have to be considerably more producers than consumers in a balanced community you should ideally have three times as many cards of the level below.

In other words there should be three 🌿 for every 🌾, three 🦖 for every 🦊, and three 🦉 for every 🦃

You could photocopy the pictures onto different coloured cards, laminate them and put them onto ribbons. The children place these round their neck and try to complete as many food webs as possible. When you shout ‘change’ everyone has to find a different place in the food chain.
<table>
<thead>
<tr>
<th>Aphid</th>
<th>Blackbird</th>
<th>Rabbit</th>
<th>Caterpillar</th>
<th>Grey Squirrel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthworm</td>
<td>Bee</td>
<td>Hedge Sparrow</td>
<td>Chaffinch</td>
<td>Snail</td>
</tr>
<tr>
<td>Oak Gall Wasp</td>
<td>Jay</td>
<td>Longhorn Beetle</td>
<td>Bank Vole</td>
<td>Wood Mouse</td>
</tr>
<tr>
<td>Woodlouse</td>
<td>ELM Bark Beetle</td>
<td>Speckled Wood Butterfly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OAK ACORNS</td>
<td>BRAMBLE FLOWERS</td>
<td>ELDER BERRIES</td>
<td>BLACK BERRIES</td>
<td>TOADSTOOL</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td>--------------</td>
<td>---------------</td>
<td>-----------</td>
</tr>
<tr>
<td>HAWTHORN BERRIES</td>
<td>BRACKET FUNGUS</td>
<td>MOSS</td>
<td>GOAT WILLOW FLOWERS</td>
<td>ROSE HIPS</td>
</tr>
<tr>
<td>HAZEL NUTS</td>
<td>PINE CONE</td>
<td>BLUEBELL</td>
<td>HOLLY BERRIES</td>
<td>WILD CHERRIES</td>
</tr>
<tr>
<td>SWEET CHESTNUTS</td>
<td>ELM BARK</td>
<td>COW PARSLEY</td>
<td>BEECH TREE</td>
<td>SYCAMORE LEAVES</td>
</tr>
<tr>
<td>Image</td>
<td>Text</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="383x483" alt="Image" /></td>
<td>DEAD LEAVES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="473x603" alt="Image" /></td>
<td>DEAD WOOD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="48x284" alt="Image" /></td>
<td>ALDER CONES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="145x366" alt="Image" /></td>
<td>FOXGLOVE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="269x274" alt="Image" /></td>
<td>WOOD SORREL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="269x283" alt="Image" /></td>
<td>OAK LEAVES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="355x366" alt="Image" /></td>
<td>LARCH CONES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="400x292" alt="Image" /></td>
<td>WILLOW LEAVES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="463x368" alt="Image" /></td>
<td>BLUE TIT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="51x101" alt="Image" /></td>
<td>SPIDER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="173x102" alt="Image" /></td>
<td>TOAD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="242x165" alt="Image" /></td>
<td>THRUSH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="269x123" alt="Image" /></td>
<td>FROG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="366x171" alt="Image" /></td>
<td>GROUND BEETLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="406x258" alt="Image" /></td>
<td>SHREW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="491x120" alt="Image" /></td>
<td>HEDGEHOG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="463x176" alt="Image" /></td>
<td>LADYBIRD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="490x299" alt="Image" /></td>
<td>BAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="580x171" alt="Image" /></td>
<td>CENTIPEDE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="518x176" alt="Image" /></td>
<td>WREN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A Tree Trail through Your Wood

These broadleaved trees are all typical of the ones that you will spot in your local wood.

Put a tick in the box when you spot each sort of tree.

Which is the most common tree in your wood?

HAWTHORN
HAZEL
MOUNTAIN ASH OR ROWAN
ASH
WILDCERRY
FIELD MAPLE
BEECH
ALDER
SILVER BIRCH
LIME
SYCAMORE
ELDER
OAK
WILLOW

Two of these trees are not native to the woodlands in South Yorkshire. Which are they?

____________       _____________
<table>
<thead>
<tr>
<th>Ash</th>
<th>Beech</th>
<th>Holly</th>
<th>Sycamore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oak</td>
<td>Silver Birch</td>
<td>Hawthorn</td>
<td>Horse Chestnut</td>
</tr>
<tr>
<td>Elm</td>
<td>Lime</td>
<td>Rowan</td>
<td>Alder</td>
</tr>
</tbody>
</table>