

Survival Skills Challenge

What would you need to survive in the wild? What are your basic needs and how would you meet them?

Imagine that the world beyond your local woodlands or park or garden has disappeared and you are left with what you're wearing, who you're with, and what you can find to survive. No Wifi, no shops, no electricity, and no family tent. You will be dependent upon your wits, your positive attitude, your ability to work as a team and your knowledge of what you can, and cannot, eat. Best of luck!

Challenge One—Finding Water

We can go weeks without eating food. But we can only survive 4 to 5 days at the most without any water, and even less time in hot climates.

So the first challenge for you is to find a source of freshwater. In Scotland we're never far from a stream or river so it's relatively easy for us to find fresh water. But is it clean to drink? If you're near the source in the hills, you could risk drinking river water, but not in the cities where many of us live.

Cleaning water is a two-stage process:

Stage One—Get Rid of the Dirt

Hold up a glass of river or stream water and it will have little or lots of particles of dirt floating around in it. Plus a lot of other yucky things. Find a couple of plastic cups and grab an old T-shirt or sock. Filter the dirty water through the fabric to get out the macroscopic dirt, the dirt you can see. (If you're doing this in your garden, mix up some earth with water and then filter.)

Stage Two—Making the Water Safe to Drink

The things in water that could make us really ill are mostly microscopic, so small that we can't see them with just our eyes. If we boil our filtered water for one minute that kills the bacteria and it's safe to drink. Great news, but how are we going to boil it? Get thinking!

Newsflash: Nature Cleans Water as Part of the Water Cycle

Water is taken up from the soil by the roots of plants. Some of this water is released by little pores under the leaves into the atmosphere as water vapour, a little bit like us sweating.

Try it out: tie a clean plastic bag around a leafy branch of a tree or even over a house plant in a window. Leave it for a few hours and when you come back the plastic bag will have droplets of water in it. The plant has released water which has condensed into droplets of water in the plastic bag. In a survival situation, you would be able to drink this water (assuming the plastic bag was clean) which would help to keep you hydrated. Every drop counts!



Did You Know?

60% of your body is made up of water. Plants are 90-95% water which is why they fall over when they don't have enough.

We need to drink about 2 litres of water every day.

97% of the world's water is saltwater which makes us ill if we drink it. Of the 3% of freshwater, half of that is ice, so we can only drink 1.5% of the water in the world.

Amazing water is the only natural substance in the whole world that exists as a solid (ice), a liquid (water) and as a gas (water vapour).

The water we have in the world is all the water we have ever had. Nature keeps on recycling it.

Challenge Two—Finding Food

Now you've found a source of clean water, your next job is to look for food to keep up your energy. The good news is that there's food all around us if we know where to look for it. The golden rule, however, of looking for wild food is this: ***if you don't know it's edible, then don't eat it.***

So, you're going to have to be really open-minded here. In Scotland, we don't eat bugs if we can avoid it, but did you know that they have a high energy yield and they are really rich in amino acid and proteins? The United Nations estimates that two billion people, more than 1/4 of the world's population, eat bugs as part of their diet and there are at least 2,100 edible insect species world wide.

Activity: Get out in the garden or park and see what you can find. Pick up stones, look under flower-pots. What would make a good meal? Don't actually eat what you find though, as remember, *if you don't know it's edible, don't eat it.* Also we need these wonderful invertebrates in gardens and parks for biodiversity.



Plants are also a really good source of food and in the past people were really knowledgeable about plants that they could use for food, medicine and other practical uses. You don't have to go far to find them.

Activity: See how many of these you can find on your daily walk.



The leaves and flowers of Garlic Mustard can be used in salads,



Stinging Nettles can be used in stews and teas and for making nettle string.



Ivy can also be used for making rope and as a clothes dye



Dandelion leaves can be used in salad, you can roast the roots to make a coffee substitute and the flowers can be made into an oil to keep your skin healthy.



We all love eating juicy brambles. The new shoots are a delicious sweet snack in early spring and the mature leaves can be used to make tea.

Keeping Yourself Safe

If you do decide to eat any of these plants, make sure you check with an adult that you have accurately identified them. Pick plants a little bit away from the path so there is less chance of a dog having peed on them and wash them really well before eating.

Making Nettle String

People have used nettle stems for hundreds of years to make string. Give it a try!

- 1) Cut a metre high nettle close to the ground using gloves. Nettles reach this height during May time.
- 2) Run your gloved hand up the nettle removing the leaves and the stinging hairs. Repeat using a cloth.
- 3) Now you can handle the stem without gloves. Gently crush the stem and pull out the woody inside. You may need a knife to help you open it. The outer fibres will become your string. Let them dry out for a few hours.
- 4) Tear off a strand and find the midway point. Fold in half and roll backwards and forward until it starts to braid.
- 5) Now you can plait this to other strands to make rope. Add more strands to make it thicker. If you want longer string then add in another rolled strand but give yourself about 10 cms of overlap.

Challenge Three—Part One, Making a Shelter

Having found a good source of water and made a delectable dandelion leaf salad, now it's time to think about keeping yourself warm and sheltered as night falls and the temperatures begin to drop. Keeping warm is an *essential* part of survival.

If you're outside in cold temperatures for a long time you run the risk of hypothermia which is when your body temperature gets dangerously low. Your breathing gets shallow, your speech is slurred, you stop shivering, you stumble, and eventually you lose consciousness.

How can we keep warm?

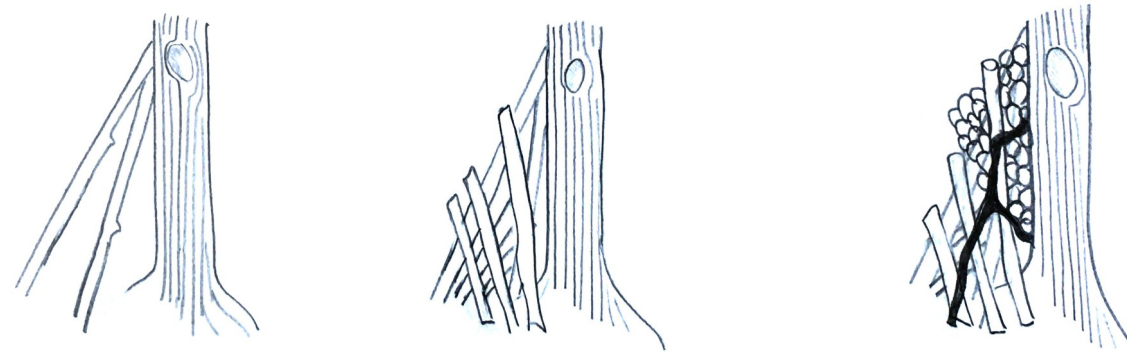
Do not let yourself get wet. Your body temperature drops much quicker if you are wet. So keep your body and your clothes dry.

90% of heat loss occurs through your skin. So make sure that you are wearing as many layers as possible. You lose most of your heat through your head and your feet so wear a hat or find some way to create a hat.

Activity: Build a Shelter

If you're in a woodlands then you can make a shelter which is big enough for you and a couple of other people, but if you are in a garden or green with no big trees then you can make an excellent miniature shelter for your soft toys following these same instructions and using little twigs.

Before you begin building, check the direction of the wind. If possible, build your shelter so the door faces away from the wind. This will keep you warmer at night.



Step One

Find a tree (or plant pot or side of a shed) and use it as one side of your shelter. Lean the biggest sticks you have up against this to create the basic structure.

Step Two Once you have your basic structure, start to place smaller branches on the bigger branches to fill in the gaps. Remember to leave room for a door so you can come in and out.

Step Three

Fill the gaps with leaves from the woodland floor or grass clippings to keep out the rain and the wind. Line the inside with leaves to make the floor warmer, drier and softer. If you had to make a toilet nearby, where would you put it? (Remember, water travels downhill!)

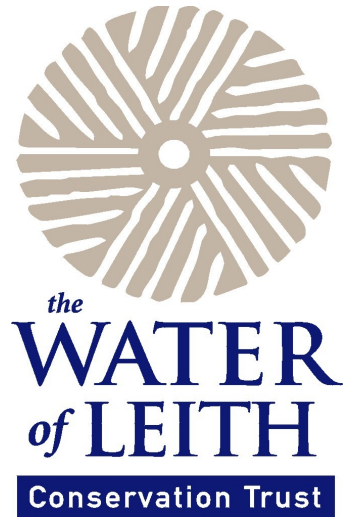
Keeping Yourself Safe

Building a shelter is great fun but follow these simple guidelines to avoid a nasty accident.

Never run with a stick in your hand and hold the stick down by your hips at all times

Never use a branch above your head which would hurt if it fell on your head

If a branch or tree trunk is heavy, get help to move it to avoid injuring your back.



Challenge Three—Part Two, Making Fire

Keeping yourself warm and dry is an important part of survival and what better way to do that than to light a fire. Fire helps you to boil water to make it safe to drink, cooks your food and it could send a smoke signal so people know where you are and can come rescue you (particularly if you add damp leaves to make it extra super smokey). In the past, it would also have kept wild animals away but, really, we're the big predators now and there are no longer wild bears or wolves in Scotland that might attack us.

In Edinburgh, there are no bylaws preventing you from lighting a fire, so it's actually perfectly legal to light a small and controlled fire in your garden. However, the smell of smoke can make people very anxious and if your neighbours are drying clothes on a line, they might also get very cross. No one needs grumpy neighbours, so let them know what you're doing well in advance.

Living in the country, you also need to make sure that you are following the Scottish Access Code for fire lighting and make sure that when you leave the fire is completely put out and that you have left no trace of a fire behind you.



What You Need to Do

Collect together a *very* responsible adult, dry twigs, paper, matches or a flint and steel, and a large bottle of water to put out the fire.

Choose a location that is away from buildings.

Make a wide safety circle with a piece of rope. Place stones around the fire. No one should go within the fire circle and all objects should be passed around the outside.

Sit on your bottom with your legs to one side or cross-legged but never put your feet in front of you.

Light the paper or dry leaves to allow the small twigs catch light.

As the fire gets bigger add bigger sticks.

When you want to put the fire out, let it burn down to embers and then gently pour water over the embers until they are completely cool. Scatter any charred twigs once they are soaked with water.

Activity: Lay a Trail

If you're ready for even more fun, lay a trail to take you home from your survival location. You lay the trail and see if someone else can follow it. Arrows point to the right direction, a cross means don't go there. What could a stone and an arrow mean?



Congratulations! You have finished your three survival challenges.

The good news is this is part of the Curriculum for Excellence and so it also counts as part of your home learning. No kidding!

I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible (HWB 1-15a/2-15a)

Within and beyond my place of learning I am enjoying daily opportunities to participate in physical activities and sport, making use of available indoor and outdoor space. (HWB 1-25a)

I can describe and recreate the characteristics of my local environment by exploring the features of a landscape (SOC 1-07a)