



Wild About...



Grasslands

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Nature notes

Grasslands are great for a wildlife study because plants don't have legs and can't run away. Plants have pretty colours, pleasant scents, and brighten your day. Summer is a great time for studying grasslands and wildflowers.

Your work on grasslands and wildflowers could include studies of meadows, lawns, playing fields and individual plants. You could study one of these areas for a long time, or just record what you see when out for a walk, or on route to school.



Surveys can include the number of species, and abundance of plants, in a grassland area (using your quadrat from the field kit section), or studies of which plants grow in sun or shade, in cracks or on walls, and in wet or dry soils.

Meadows and grasslands have been around since 3500 BC, when farmers first arrived in Britain and cleared away forests. Since then, most flower rich grasslands have been ploughed up and used to grow arable crops, or are no longer looked after in the same way. Some areas of grassland have been improved by sowing seeds of other types of grass, or by adding fertilisers.

97% of flower-rich grasslands have been lost between 1900 and 2000

Natural, unimproved grasslands have lots of different plant species. They are an important habitat for many animals, including insects, small mammals and birds. Unimproved grasslands are generally grazed by cattle or sheep, or are managed for hay cropping. Hay meadows are traditionally cut once or twice a year, often in June or July. After this, livestock are let on to the meadow to graze what is left.

Meadows and grasslands are buzzing with wildlife and many wildflowers can be seen growing there. Wildlife ranges from the busy bees collecting pollen to the hungry fox looking for its next meal!

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A key to some common grasses

1	Is the plant tall and growing in large clumps?	Yes - go to 2
		No - go to 3
2	Is the plant growing on sand?	Yes - marram grass
		No - rush
3	Does the plant have a triangular stem?	Yes - sedge
		No - go to 4
4	Are the flowers arranged in tight spikes?	Yes - go to 5
		No - go to 6
5	Is a single flower more than 6 mm long and does the flower head have a pleasant scent?	Yes - sweet vernal grass
		No - timothy grass
6	Are the flowers in stalkless clusters?	Yes - go to 7
		No - go to 8
7	Does the leaf have hairs on it? (look very carefully)	Yes - couch grass
		No - rye grass
8	Do the flowers have awns (hairs extending beyond the end of the flower)?	Yes - go to 9
		No - go to 11a
9	Is a single flower more than 10 mm long?	Yes - brome
		No - go to 10
10	Is a single flower less than 6 mm long?	Yes - tufted hair grass
		No - oat grass
11	Is the leaf hairy? (look very carefully)	Yes - go to 12
		No - go to 13
12	Hold a piece of white paper behind the flower. Does it look pinkish?	Yes - yorkshire fog
		No - creeping soft grass
13	Is a single flower less than 10 mm long?	Yes - go to 14
		No - fescue
14	Look at a leaf near the bottom of the stem. Where it joins the stem you should see a ligule. Does the ligule have a pointed top?	Yes - creeping bent
		No - meadow-grass



How to watch grasslands

Grasslands are at their best in late spring and summer, when plants are flowering and animals, like insects, are easy to find.

Only pick a specimen if you need one for identification, and there are a lot of plants left. Never dig up the whole plant. You can always take a photo, or sketch a specimen you can't identify in your nature diary.

You can also make your own identification guide, by collecting a specimen, pressing it and then labelling it with where and when you collected it (see the section on collecting plants).

Keep safe

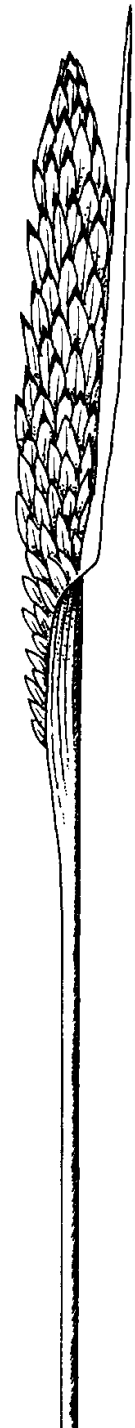
Watch out for bumpy ground that might make you trip, and for insects or plants that might bite or sting. Move quietly and carefully. Remember to look where you are walking so you don't damage the plants you want to see.



Equipment

When you study grasslands, you can just use a notebook to record your observations, but this equipment may help:

- Quadrat
- Identification books
- Magnifying glass
- Sweep net



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In your nature diary

Here are some ideas of things do in your nature diary:



Use pressed flowers and grasses to make a collage image of the habitat you visited.

You can record the animals that visit flowers. This can tell you more about wildflowers. Draw a table, like the one below, in your nature diary. Move through the grassland slowly and quietly, and write down what you see. You may have to sit and wait a while for the insects to arrive, and you may get better results on a sunny day. Which flower had the most visitors? What colour was it and did it have a scent?

Colour of flower	Does it have a scent?	Shape	How many insects?	Flower name (make one up)

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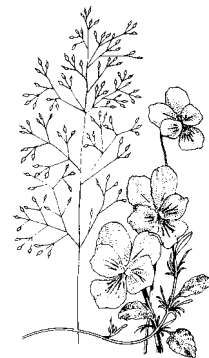
Survey grasslands

Why not take a closer look at what lives in an area of grassland, such as your garden lawn. Typical plants that you can find are daisies and dandelions. Animals such as ants, beetles, or worms, may be seen travelling through the grass. Take a look under stones, or wood to see what lurks there.

You can use your home-made quadrat to survey, and compare the character of, vegetation in different areas of grassland.

You will need:

- a quadrat
- paper and pencils
- plant identification guide
- hand lens or magnifying glass



Choose two or three different areas of grassland to compare. In each area, put the quadrat on the ground by throwing it over your shoulder, or closing your eyes. This way you can't cheat and choose the best bit!

Count the numbers of each type of plant inside the quadrat, or estimate the percentage of the quadrat that is covered by each species. For example, 5 daisies, or daisies cover 20%. Throw the quadrat again, in the same area, and repeat the count.

Try to identify and name the plants you see. Taking photos, or drawing sketches, will help you check them in an identification guide when you get home. If you can't identify something, make up names like big yellow, or spikey, but be consistent.

Repeat the process in different areas of grassland. Are certain species found in both places? Does one area have more diversity? Think about reasons for the differences you see. These could be to do with where the grassland is, how sunny or wet it is, how it is managed now, and even how it has been managed historically.

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What to do

Who lives in the grass?

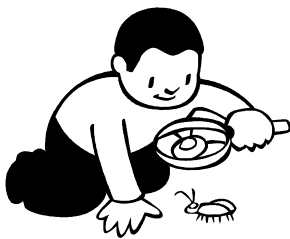
Many different kinds of insects live in long grass.

You will need :

- a sweep net from your recycled field kit
- empty bug jars or viewing pots



Choose an area of long grass. Walk slowly through the area, sweeping the net gently back and forth in an S-shape movement through the grass. Only do a small area at a time as you will then know where the animals came from and it will be easier to return them later. (It is worth listening for wasps/bees and letting them escape.)



Gently shake the animals down into one corner of the net until you're ready to turn them out. Turn the net inside out and carefully empty into a bug jar. Remove the net and quickly put the lid on the jar. Examine the catch. Alternatively empty the net onto a white sheet and use a pooter to catch individual insects. When you have finished, release the animals in the same area you caught them.

Make a home for wildlife

To attract more butterflies and insects to your garden, you can grow wildflowers. You can buy seed mixes for butterflies and bees at garden centres, which will help make your garden better for wildlife. Follow the instructions on the seed packet.



What to do

Insect colour codes

Insects are attracted by the colour of plants. You can do an experiment to find out more.

You will need:

- jam jar lids
- coloured card (red, yellow, blue, green)
- jam
- tape or glue



It is best to do this experiment on a warm, sunny day.

Make your own model flowers by cutting petal shapes out of the card and sticking them around the jam jar lid. Make sure there is only one colour per lid.

Place the lids so that they have the flat side down and the "cupped" side up, and place a small amount of jam in each lid.

Put your models in the sun, near some flowers, where insects will find them.

Watch the lids for 30 minutes and see which ones the insects go to. Is there a favourite colour? Do different insects prefer different colours?

Use the results to make a flower to stick in your nature diary. For every visit an insect made to a particular coloured flower, cut out a petal in that colour. Stick the petals round a circle to make a flower. If you have a lot of data, you could make different flowers for wasps, bees, hoverflies and butterflies. This will be a good visual summary of the insects' preferences and you will have your own flower rich grassland record in your diary!