What's so amazing about Peatlands?

FENS
EAST PEAT
PARTNERSHIP

The **soil superpower** helping to fight the climate crisis

PEAT a carbon capture superpower!

What is Peat?

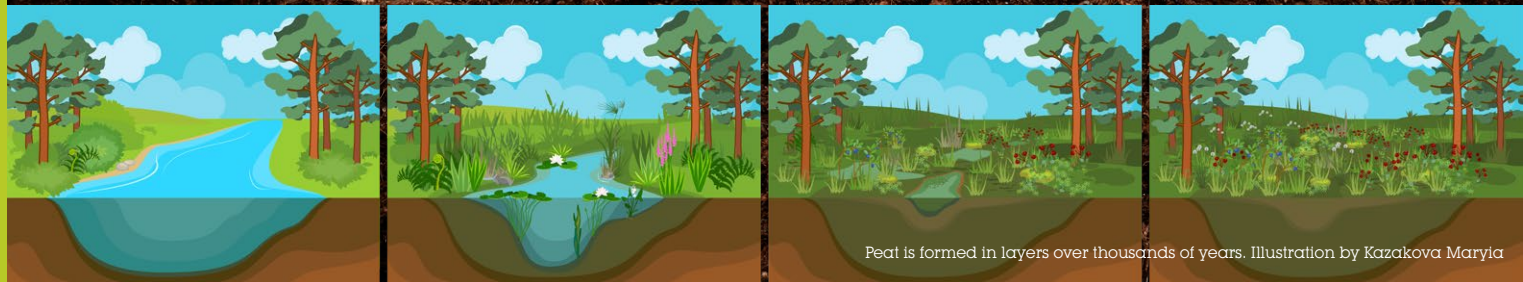
Peat is a special type of soil formed in waterlogged areas of land and made of partially decomposed plants. The lack of oxygen in the wet conditions slows down the decay of the dead plants which pile up over thousands of years, gradually turning into layers of peat. Peat is found on boggy upland sites, and in marshy lowland like the Fens of eastern England.

Because the decay is so slow, on average it takes one year for peat to grow by one millimetre. That means peat a metre thick has taken 1000 years to grow!

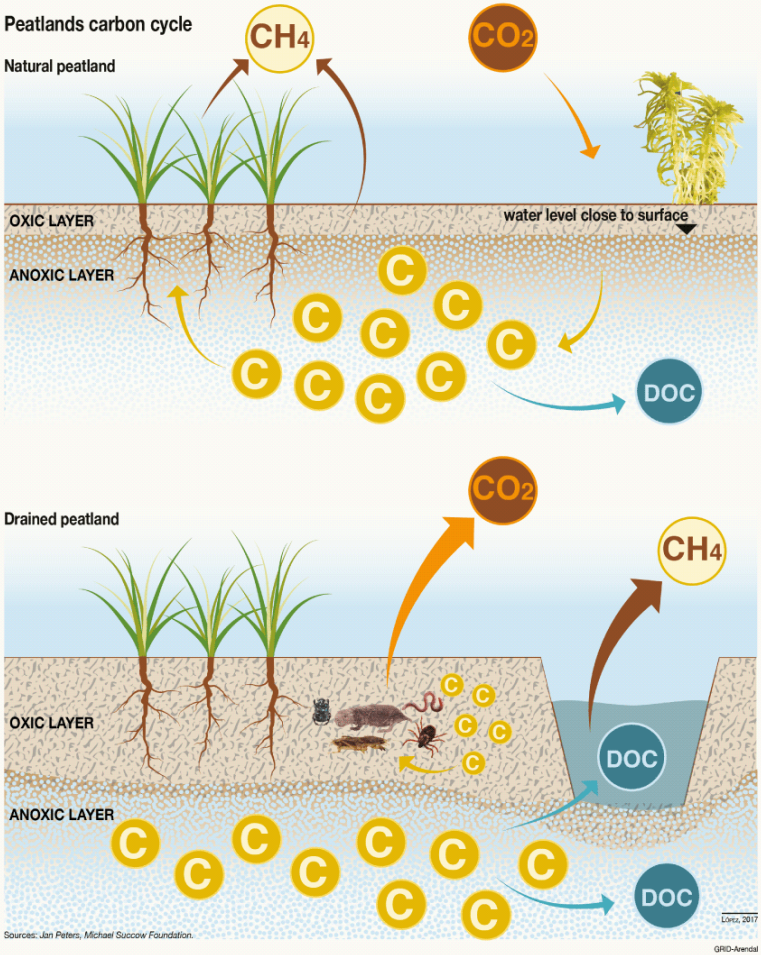
Why is peat important for the planet?

Peatland plants like sphagnum moss act as sponges absorbing carbon dioxide produced by fossil fuels such as coal and gas, and lock it away underground in carbon 'sinks' helping to maintain the Earth's temperature. But peatlands can only do this if they are not damaged.

sphagnum moss



Peat is formed in layers over thousands of years. Illustration by Kazakova Maryia



Key: C - carbon Oxic layer – peat containing oxygen | Anoxic layer – oxygen is absent from peat DOC – dissolved organic carbon | CH4 – Methane gas | CO2 – Carbon dioxide

Source: Nieves Lopez Izquierdo www.grida.no/resources/12532

Our peatlands are in trouble

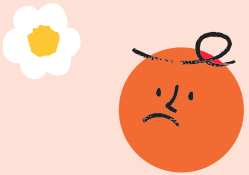
Around 80% of our peatlands have been damaged through drainage and extraction. Damaged peat not only stops absorbing carbon, it releases stored carbon back into the environment as carbon dioxide, one of the biggest sources of greenhouse gas, making things worse.

Drained peat in a peat extraction field. Mati Kose

Carbon is locked away underground in the healthy peat of wetlands at RSPB Lakenheath Fen. RSPB

Reversing the damage

It's vital that we restore peatlands to a healthy state to absorb more carbon and keep it locked up in the ground. By blocking the channels that drain peatlands, the water table rises and peat-forming plants will return.



What else is amazing about PEATLANDS?

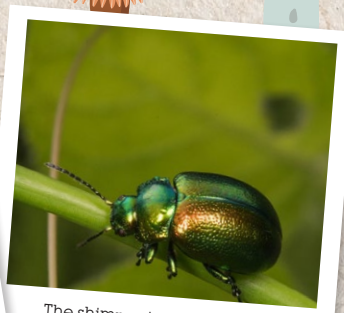
Wildlife Habitats

Peatlands are wonderful wild places bursting with rare and unusual species of plants, dragonflies and damselflies, butterflies and beetles. They provide important nesting and feeding grounds for many wading birds such as dunlin, curlew and greenshank. The bizarre sundew plant lives in wet peatlands. Its leaves are covered in sticky hairs that trap unlucky insects landing or crawling onto it. The hairs curl around the stuck prey, and eventually the whole leaf wraps around the insect which is digested.

The carnivorous sundew

Common cranes.Nick Upton 2020VISION

Common blue damselfly. Birute Vijeikiene



The shimmering tansy beetle. Brian Eversham

Improving water quality

Peatlands are natural water filters. They help to make water cleaner meaning less energy and cost is required to treat it when it come to our water processing plants – and eventually into our taps.

Natural flood management

Peat holds up to 20 times its own weight in water. During heavy rain peatlands act like giant sponges – helping reduce flood risk by soaking up rainwater.

Baston Fen Nature Reserve, Lincolnshire. Lincolnshire Wildlife Trust

Archaeology

Because peat contains very little oxygen, organic matter like wood, leather and textiles can be preserved in peatlands for thousands of years. Archaeologists have discovered weapons, axes, clothing and leather shoes used by people who lived thousands of years ago, and even amazingly well-preserved prehistoric human 'bog' bodies in peaty wetlands.

The peatlands of the East Fens are home to internationally famous finds and sites such as the Bronze Age sites of Flag Fen and Must Farm.

Reconstruction of a pre-historic roundhouse at Flag Fen, Peterborough. Hillora Lang

Can you find all TEN words?

Hint – some words are spelt backwards and across!

A	C	W	U	L	Z	B	G	M	E	V	J	Q	A	X
S	R	B	I	O	D	I	V	E	R	S	I	T	Y	O
O	E	K	V	A	T	H	W	Q	P	L	C	E	G	W
Z	L	I	M	L	O	Z	D	T	C	Q	G	T	S	A
B	C	L	I	M	A	T	E	C	H	A	N	G	E	T
E	S	Y	Z	K	R	J	L	S	R	V	X	W	R	E
Q	G	O	P	W	U	F	R	O	P	I	B	V	T	R
A	L	H	I	V	W	J	T	G	K	T	A	E	P	Q
D	X	D	J	L	P	S	I	A	R	M	W	L	M	U
S	E	I	F	E	N	L	A	N	D	K	I	C	E	A
Z	R	X	K	O	S	J	E	F	W	Q	A	L	D	L
I	U	T	B	W	H	L	V	O	I	B	K	U	R	I
W	T	R	E	C	Y	F	H	I	S	T	O	R	Y	T
H	A	L	P	S	V	K	I	J	H	R	Z	E	J	Y
C	N	B	O	E	F	I	L	D	L	I	W	D	V	N

- Biodiversity
- Carbon Storage
- Climate Change
- History
- Fenland
- Nature
- Peat
- Soil
- Water Quality
- Wildlife

Find all the answers on the back cover

Did you know?

Deep peat soil in a healthy condition holds eight times as much carbon as the equivalent area of tropical rainforest

Peatlands cover just **3%** of the world's surface...

...yet hold nearly **30%** of the soil carbon

How you can help

Peat has been a major ingredient of the compost used in gardening and growing potted plants for many years. This peat is dug out of wild places, damaging some of the last remaining peatlands in both the UK and overseas. This process also releases carbon into the atmosphere, speeding up climate change. Ask your parents, carers and other adults you know to buy peat-free compost or make their own.

How to make simple compost

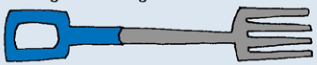
Wild About Gardens

You will need

- A compost bin, with a lid*
- A well-drained, easy to access area
- Green compostable ingredients

- Brown materials, like straw and scrunched-up paper

- A gardening fork



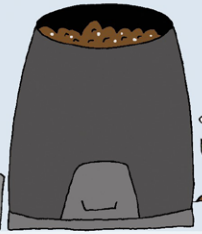
Compost worms are brilliant recyclers so put them to use on your green waste. The finished compost will enrich your garden soil, benefiting even more earthworms! This rich soil also boosts flowers, veggies and other plants.

1. Carefully make holes in the base of your bin if it doesn't have any. Then place it on or close to bare soil to let worms wiggle in.

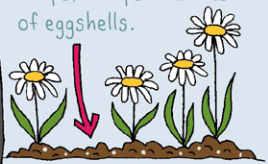
2. Start putting stuff in... mix brown materials, like straw and paper, with nitrogen-rich ones like veggies and tea bags.

3. Stick a fork in and turn over the contents of the bin (ideally once a month) to let more air in. The more you turn it, the quicker you make compost.

4. It can take from six months to two years, but when it's ready you'll find rich, dark, fabulous compost. Use it!



Don't worry if there are lumps, bumps and bits of eggshells.



✓


tea leaves


raw fruit and veg peelings


grass cuttings


straw


scrunched newspaper


soft prunings & dead plants


coffee grounds

✗


woody stems


cooked food scraps


cat or dog poo


meat or bones


weed seedheads


perennial weed roots


diseased plants

www.wildaboutgardens.org.uk *An old recycling tub or a smaller ready-made compost bin (recycled plastic ones are available) could save space.

Find out more about PEAT

Not only will peatlands help us in dealing with climate change if we look after them, they can be places to visit and enjoy the beautiful landscapes and wildlife. These wonderful nature reserves in the Fens of eastern England have special wild and wet activities at weekends and during school holidays.

The Great Fen, Cambridgeshire
www.greatfen.org.uk

Holme Fen, Cambridgeshire
www.greatfen.org.uk

Wicken Fen, National Trust, Cambridgeshire
www.nationaltrust.org.uk

Baston Fen, Lincolnshire
www.lincstrust.org.uk

Dersingham Bog and Fen, Norfolk
www.norfolkwildlifetrust.org.uk

Lakenheath Fen RSPB, Suffolk
www.rspb.org

Useful websites

Fens East Peat Partnership | www.lincstrust.org.uk/FEPP
Re-Peat | www.re-peat.earth
IUCN UK Peatland Programme | www.iucn-uk-peatlandprogramme.org

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The Fens East Peat Partnership - Working together to restore and preserve peatland in low-lying areas of Lincolnshire, Cambridgeshire, Norfolk and Suffolk

FENS EAST PEAT PARTNERSHIP | NATURAL ENGLAND | Lincolnshire Wildlife Trust | National Trust | Norfolk Wildlife Trust | RSPB | Wildlife Trust for Beds, Cambs & Northants

Answers to the wordsearch on page 6

A	C	W	U	L	Z	B	G	M	E	V	J	Q	A	X
S	R	B	I	O	D	I	V	E	R	S	I	T	Y	O
O	E	K	V	A	T	H	W	Q	P	L	C	E	G	W
Z	L	I	M	L	O	Z	D	T	C	Q	G	T	S	A
B	C	L	I	M	A	T	E	C	H	A	N	G	E	T
E	S	Y	Z	K	R	J	L	S	R	V	X	W	R	E
Q	G	O	P	W	U	F	R	O	P	I	B	V	T	R
A	L	H	I	V	W	J	T	G	K	T	A	E	P	Q
D	X	D	J	L	P	S	I	A	R	M	W	L	M	U
S	E	I	F	E	N	L	A	N	D	K	I	C	E	A
Z	R	X	K	O	S	J	E	F	W	Q	A	L	D	L
I	U	T	B	W	H	L	V	O	I	B	K	U	R	I
W	T	R	E	C	Y	F	H	I	S	T	O	R	Y	T
H	A	L	P	S	V	K	I	J	H	R	Z	E	J	Y
C	N	B	O	E	F	I	L	D	L	I	W	D	V	N

Wicken Fen National Nature Reserve. National Trust