

An aerial photograph of a bog landscape. A narrow, winding stream flows through the center of the frame, surrounded by dense, brownish-green vegetation. The stream is light blue-grey, contrasting with the darker, textured bog. The overall scene is a natural, undisturbed wetland environment.

A study of Bog of Mouds, Newbridge, Co. Kildare

The importance of bogs in the fight against climate change

Introduction

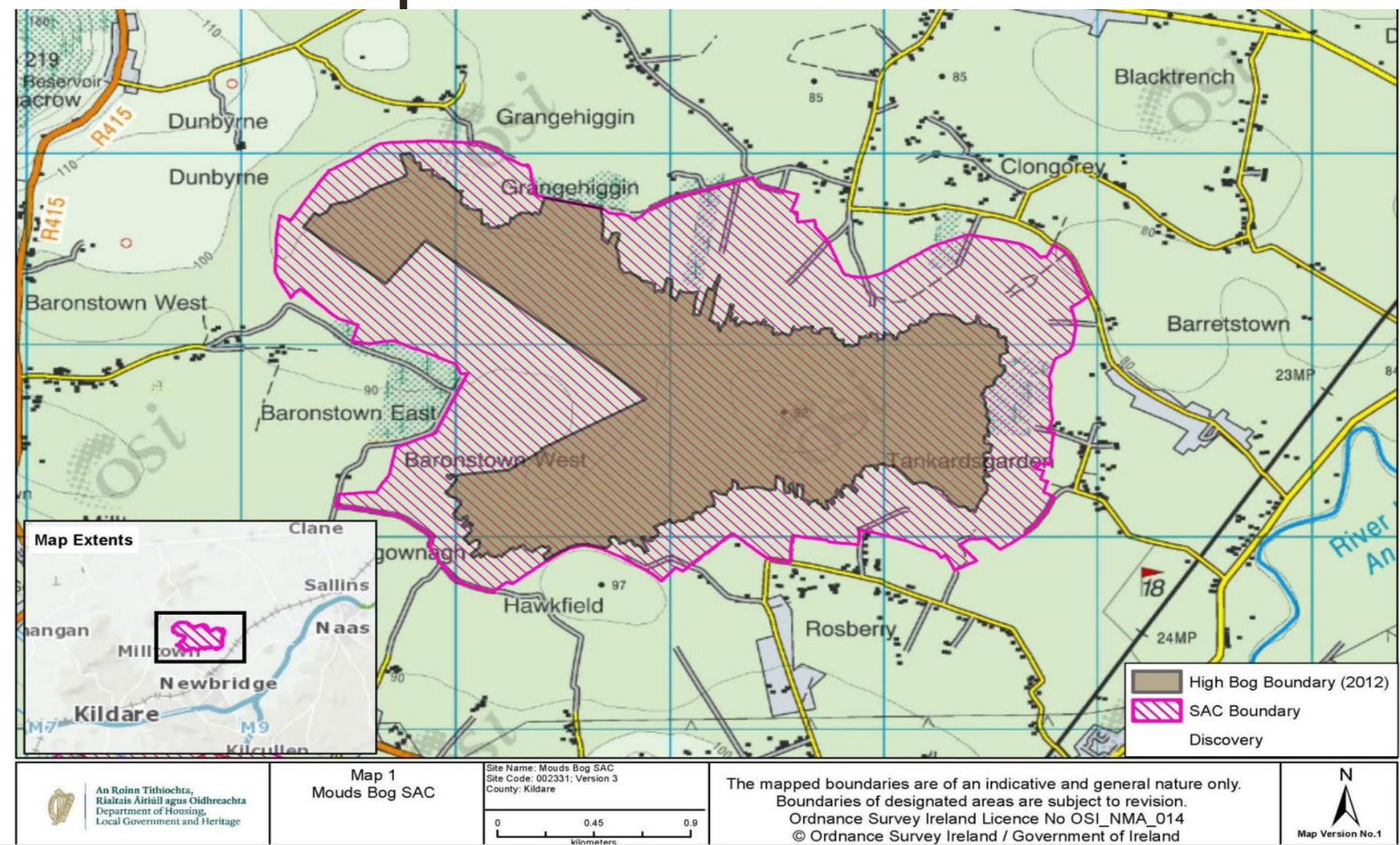
[10 Things to Know About - RTÉ Player](#)

1810 Map – Bog of Moulds



Activity # 1: Study the 2 maps on the worksheet.
Do you recognise anywhere?
What differences can you see between the 2?

2020 NPWS Map



My Raised Bog

- Raised Bogs are wetlands made of peat, plants and water combined together.
- They occur in the midland counties of Ireland.
- Peat is the result of the accumulation of partially decayed plants over thousands of years.
- The dead plants don't rot because they grow in waterlogged conditions where there is little oxygen.



Peat is forming in a lake basin

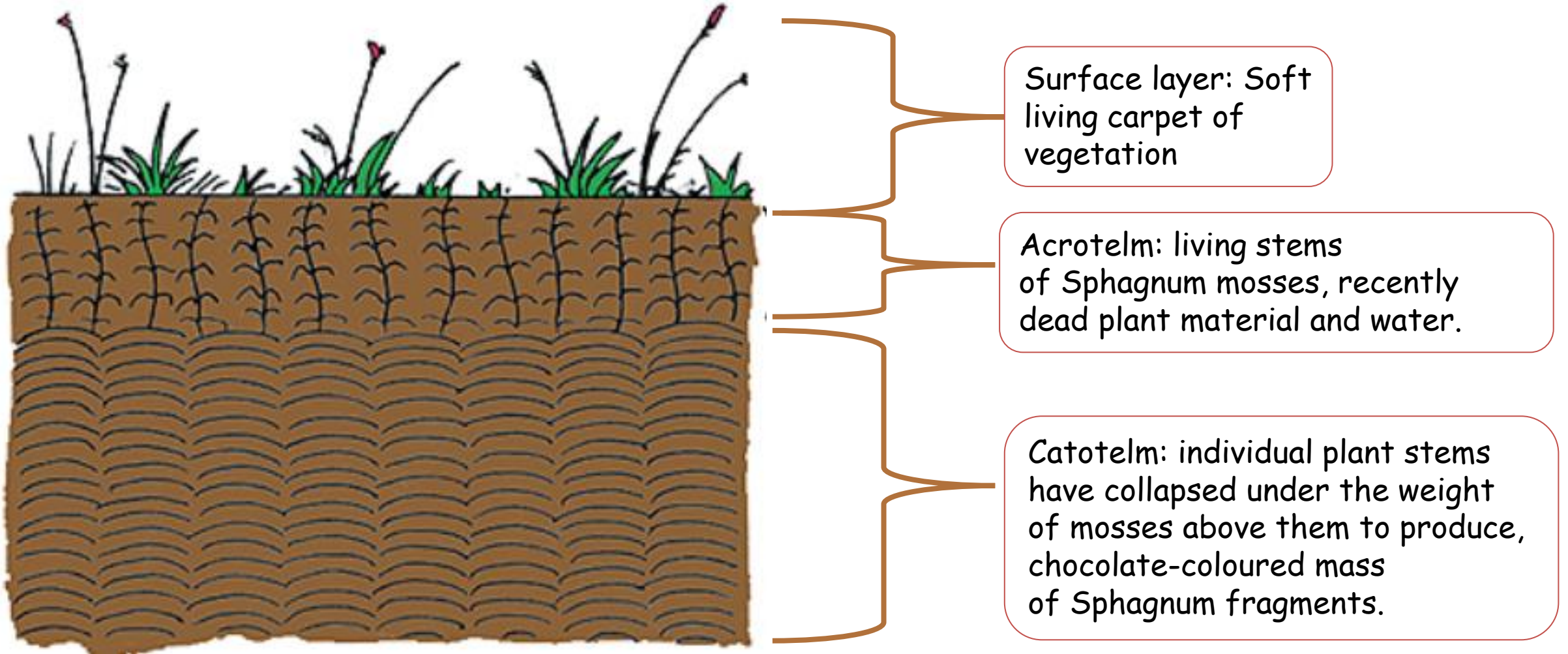


Lake basin filled with fen peat



Raised bog with 10m of peat

Structure of my raised bog



Activity #2 : My raised bog – Surface biodiversity

- From the samples provided can you identify the plants living in Mouds Bog?
- Use the Plant identification chart on IPCC.ie to help

[My raised bog booklet IPCC](#)

- Draw into worksheet

My raised bog – Living Layer

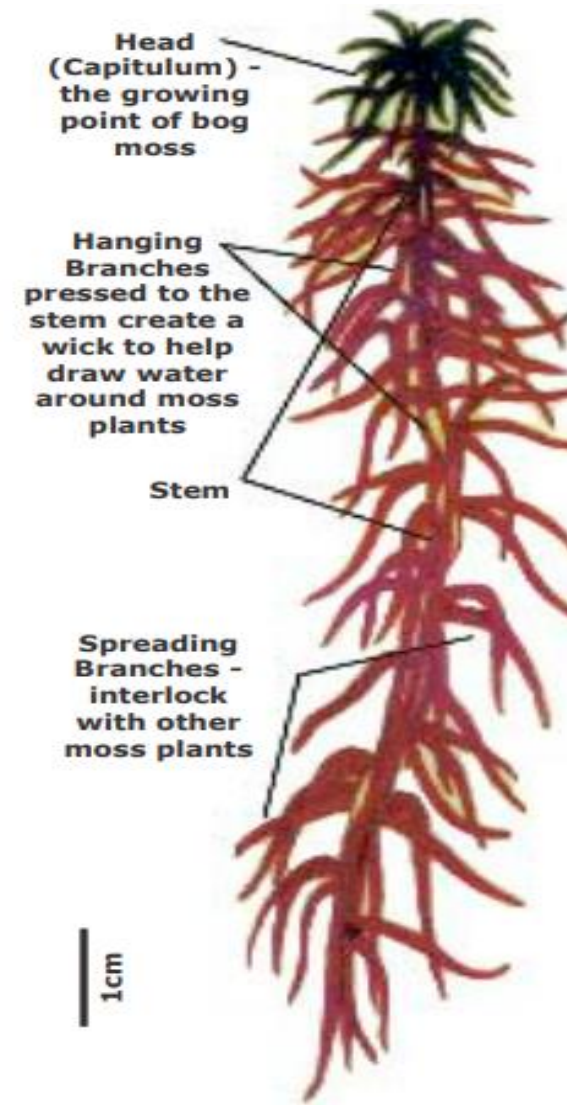
My Raised Bog - How Many Plants Do You Know?



Sphagnum Moss

Research the importance of Sphagnum moss in the fight against climate change.

Record 2 factors in your worksheet



Structure of a *Sphagnum* Moss

Activity #2: My raised bog – what's underneath

Investigation of Mouds Bog Sample

1. Measure and record length.
2. Calculate the age of the sample.
3. Record observations on texture and moisture at 10 cm intervals.
4. Take a sample from top/middle/bottom and make slides.
5. Observe under a microscope and draw/record what you see.



Activity #2: My raised bog – what's underneath

- How does the core sample help us in the fight against climate change?
- Read the Article/watch the video to help answer the questions

[Video: 10 Things S9 - Ep 4 - Fungi](#)

[Article: How to read the climate history of a bog](#)



Lesson 2: The Future of Mouds Bog

1810 Map – Draining the bog

Reference.						
	<i>N^o of Area.</i>		<i>Amount of Estimate</i>		<i>Above high water mark in Dublin Bay.</i>	
	<i>Irish</i>	<i>English</i>	<i>Irish Money</i>	<i>Highest part of Bog</i>	<i>Lowest part of Bog</i>	<i>Average Depth</i>
LULLYMORE BOG or N ^o 1.	10,630	16,347	2. 8. 10 36,839.7.2	256	214	20
TIMAHOF BOG or N ^o 2.	7,050	11,870	12,470.3.0	289	232	16
BOG OF MOURN. or N ^o 3.	3,130	5,070	7,665.1.6	296	254	30
CLANE BOG..... or N ^o 4.	1,360	2,255	4,419.8.7	298	255	30
Amount	22,490	36,492	70,814.7.3			

Note.—The surface water of the Linnane Level of the Grand Canal is 26.4 Feet above high water mark in Dublin Bay.

Explanations.
The Red Lines are proposed Main Drains. The Single Black Lines are proposed Minor Drains. The Arrows point out the fall of the bog and also the fall of the River.
Note — The cross and intermediate Drains have been omitted on the Map to prevent the confusion which their number must occasion.



Discussion point: Why did they drain the bogs in 1810?

2020 NPWS Map – Rewetting the Bog



Discussion Point: Why re-wet the bogs?

Activity #3: Research and walking debate

Carry out an SSI (Science in Society Investigation) into the argument that

'Bogs should be re-wet'

1. Research online 2 articles that support the argument and 2 articles against the argument.
2. Summarise the points made in the articles.
3. Record the sources of your information. Are these sources reliable or not? Give a reason why?
4. Consider your own opinion based on what you have learned.

Lesson 2: Peatlands tackling climate change

- Northern hemisphere peatlands count for 3 to 5% of total land area and contain approximately 33% of global soil carbon.
- When peatlands are drained, the preserved carbon is released as greenhouse gases to the atmosphere.
- The global annual greenhouse gas emissions from drained organic soils are twice that from aviation.
- We need to act now to prevent further degradation and encourage more recovery of our remaining peatlands.

Care-Peat - Restoring the carbon storage capacity of peatlands |
National Parks & Wildlife Service

2020 NPWS Project – Rewetting Moud's Bog

National Parks & Wildlife Service

Mouds Bog SAC

(Site code 002331)



Raised Bog Restoration Plan (Report)

[0402_RBSB13_Mouds_Bog_SAC_Restoration_Plan_A01-ME-Update.pdf](#)

Version 2

November 2022
