

Discovering the Wild Bogs of Ireland

1st & 2nd Class Worksheets



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Rathangan, Co. Kildare R51 V293. Charity No.: CHY6829. Website: www.ipcc.ie,
Telephone: 045-860133, E-mail: bogs@ipcc.ie





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Conservation Council
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Welcome

Dear Teacher

Thank you for introducing and exploring the wild bogs of Ireland with your students. These printable worksheets have been specially prepared by the Irish Peatland Conservation Council to raise awareness about boglands. We are the national charity in Ireland that aims to conserve a representative portion of Irish peatlands for future generations to enjoy. There are two types of bogland in Ireland: raised bogs found in the midlands and blanket bogs located in the mountains and along the western seaboard of Ireland. Boglands are 90% water and 10% dead plant material. Boglands once covered 1.3 million hectares of the landscape of Ireland. Due to the harvesting of turf as a domestic fuel, the burning of milled peat to make electricity and the use of moss peat in gardening and horticulture, less than 18% of the original area of boglands in Ireland remain.

Today our bogland habitats are not only valued for their economic benefits but also:

- For recreation
- As one of Ireland's last wildernesses
- For their diversity of plants and animals including insect eating sundews and frogs
- For providing food including cranberries and blueberries collected on bogs in Autumn
- For helping to regulate flooding in river catchments - *Sphagnum* moss can absorb and store 20 times its own weight in water
- By acting as a carbon store - bogs are made of dead plants that have not decomposed in the waterlogged conditions of the peatlands forming peat

The worksheets provided in this pack support the primary school curriculum studies with links to the SESE Science, Geography, Maths and English Curricula.

If you have any comments or thoughts you would like to share with the Irish Peatland Conservation Council please contact us at the Bog of Allen Nature Centre on 045-860133 or e-mail bogs@ipcc.ie. Why not consider visiting the Bog of Allen Nature Centre as part of your bogland studies. or as a fun outdoor school tour.

Kind Regards

Nuala Madigan, M. Ed.
Environmental Education Officer
The Irish Peatland Conservation Council



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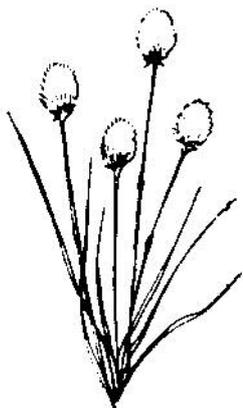


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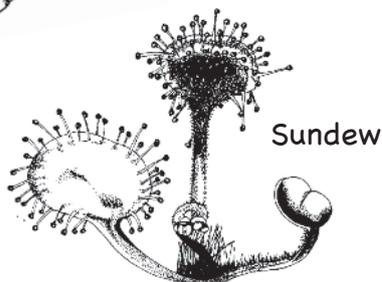
You can learn more about the wild bogs of Ireland by visiting 'Discovering the Wild Boglands 3rd & 4th Class Worksheets' where you can investigate why we don't grow vegetables in bogs and why bogs are so wet with your students



Bog Cotton



Butterfly



Sundew



Turf Stack



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Learning about Bogs

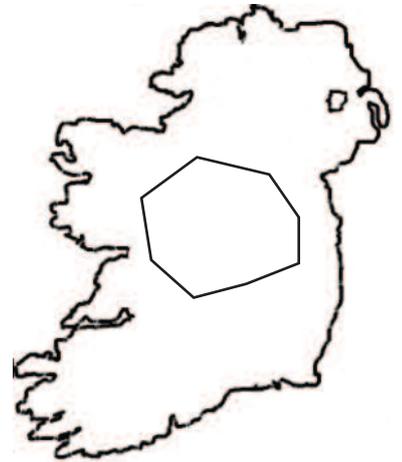
Fill in the missing words using the word bank to help you

Bogs are w _ _



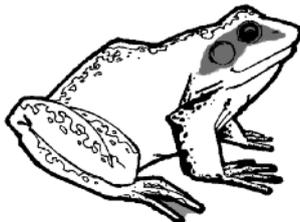
Visiting the bog I should wear
warm clothes and w _ _ _ _ _

Raised bogs are found in the
m _ _ _ _ _ of Ireland.



Sphagnum moss is the p _ _ _ _ that builds the bog

For 400 years families have harvested t _ _ _
from Ireland's bogs to heat their homes



Bogs are home to many wonderful plants and
a _ _ _ _ _ including f _ _ _ _

Word Bank

wellies

plant

midlands

turf

wet

animals

frogs



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Types of Bog in Ireland and Where to Find Them

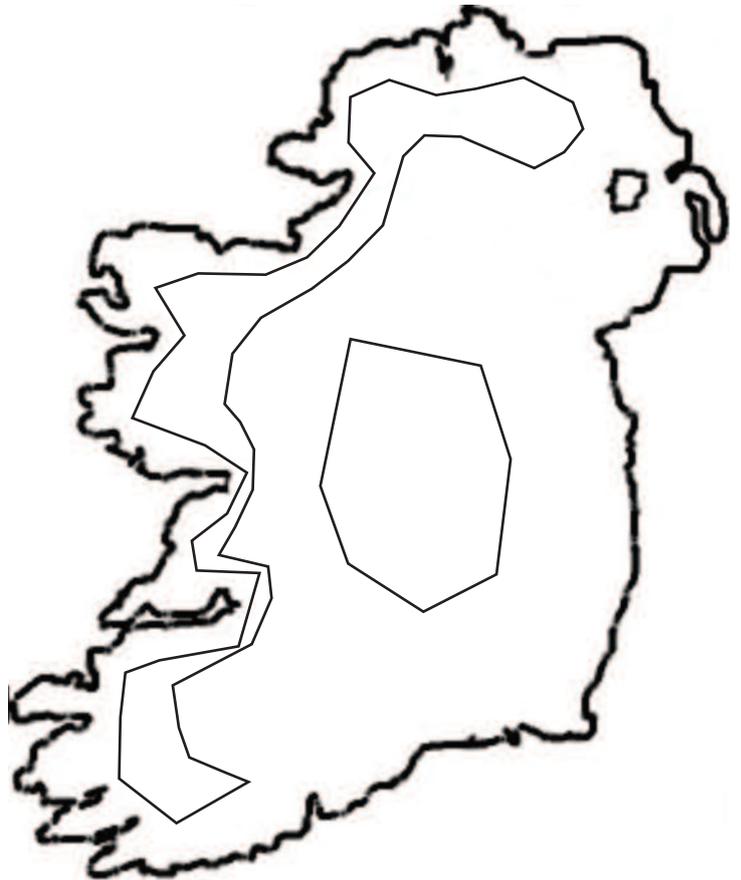
Boglands are wetlands

There are two types of bog in Ireland r _ _ _ _ _ bog and
b _ _ _ _ _ bog.

Below is a map of I _ _ _ _ _ .

On the map colour the
Raised bogs in green
Blanket bogs in brown

Raised bogs are found in the
m _ _ _ _ _ of Ireland and
blanket bogs are found in the
m _ _ _ _ _ and along
the west coast. Raised bogs
are t _ _ thousand years old
and blanket bogs are f _ _ _
thousand years old.



Curlew

Word Bank

raised ten midlands blanket

Ireland four mountains



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Why are Bogs so Special?

The different values of Irish Bogs

For many years we have used our bogs for:

- 1 . T _ _ _ for heating our homes
2. Making e _ _ _ _ _ _ _ _ _ _
3. C _ _ _ _ _ _ for growing flowers

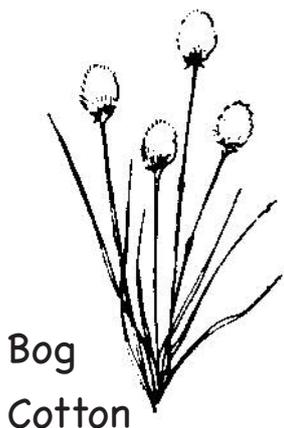


Today we know more about bogs than we did in the past and they are important for many reasons

1. A h _ _ _ _ _ _ for plants and animals
2. For storing w _ _ _ _ _
3. For days out w _ _ _ _ _ _ _
4. For collecting b _ _ _ _ _ _ _
5. A living h _ _ _ _ _ _ book of our past
6. For helping to keep our environment c _ _ _ _ _



By p _ _ _ _ _ _ _ _ _ _ a sample of bogs
we can all enjoy the bogs of Ireland
for many years to come.



Bog
Cotton

Word Bank

- | | | | | |
|------------|---------|-------------|---------|---------|
| walking | history | electricity | berries | water |
| protecting | clean | habitat | turf | compost |



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Teachers Guide

Bog in a Bottle - Exploring Raised Bog Formation

Opening Discussion - Has anyone seen the movie Ice Age?

Did you know that 10,000 years ago Ireland was in the grips of an Ice Age?

Can you describe what the land in Ireland would have looked like during the Ice Age?

Does it still look the same today? What happened the ice?

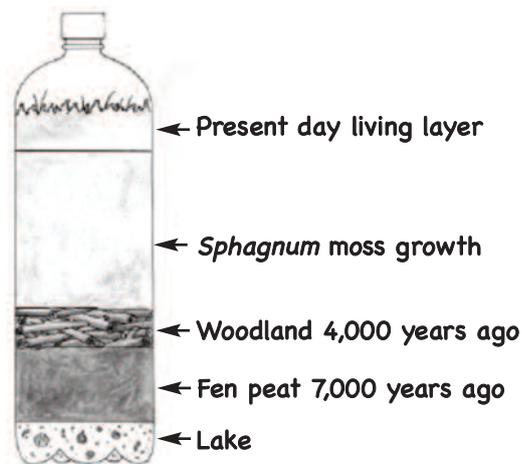
Take an ice cube out of the freezer and ask students to predict what will happen to the ice.

Did they predict that the ice would change to water? What would cause the ice to melt?

This is where our raised bog story begins.....

Equipment: As this is a model we will just use items that we can find around our school. You will need:

- * 1 x empty 2 litre clear plastic bottle
- * White tissue paper
- * Compost
- * Bark chips
- * Plants such as moss and heathers



Stage 1: Shallow Lakes 10,000 years ago



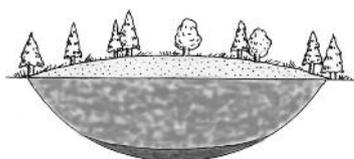
At the end of the last Ice Age 10,000 years ago a weather change caused the ice to melt forming shallow lakes in the midlands of Ireland. Put the white tissue in the bottom of the bottle to represent this stage.

Stage 2: Fen 7,000 years ago



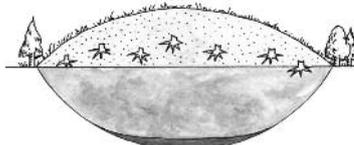
Slowly plants began to grow in these lakes. Over 3,000 years they grew bigger and bigger to fill up the lakes to create a fen. A fen is a lake filled with dead plants. Put two cups of compost into the bottle.

Stage 3: Woodland 4,000 years ago



4,000 years ago almost all of Ireland was covered in trees a weather change bringing wind and rain was to cause these trees to fall over. Fill a cup of bark chips into the bottle to represent the fallen woodland.

Stage 4: *Sphagnum* Moss growth



Once the trees fell it opened up the surface of the fen and allowed *Sphagnum* moss to grow. *Sphagnum* moss is the bog builder growing 1mm a year upwards storing 20 times its own weight in water. Fill the remainder of the bottle with compost and add your plants to the surface. You have now made your own classroom 'Bog in a Bottle'.



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Teachers Guide

Bog in a Bottle - Exploring Blanket Bog Formation

Opening Discussion - A woodland is a collection of trees. Did you know that 4,000 years ago most of Ireland was covered in trees?

Is most of Ireland covered in trees today?

What does the land in Ireland look like today?

Can you guess what happened all these trees?

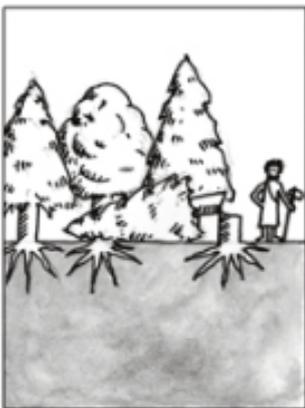
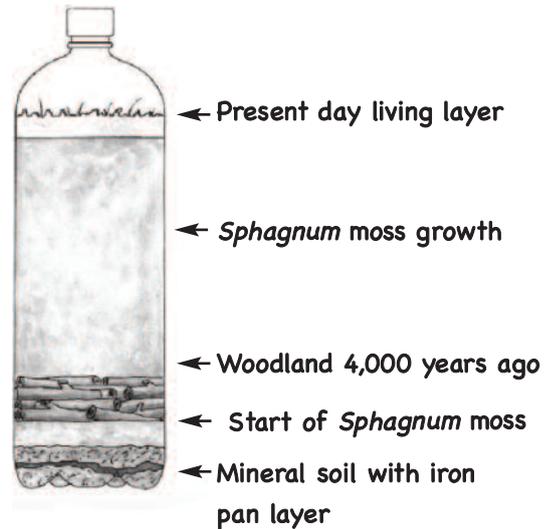
Did your students guess that early farmers removed trees in the mountains to create fields?

But Ireland's weather was to change to the rain and wind we get a lot of today.

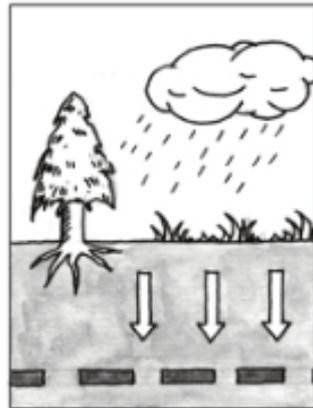
This is the beginning of our blanket bog story.....

Equipment: As this is a model we will just use items that we can find around our school. You will need:

- * 1 x empty 2 litre clear plastic bottle
- * Sand or gravel
- * Compost and Garden soil
- * Bark chips
- * Plants such as moss and heathers



5,000 years ago Ireland was covered in woodlands. As farmers came to Ireland they cleared these woodlands to create farmland. Add two cups of garden soil to the bottle.



A weather change was to bring rainfall greater than 1200mm per year and caused leaching of iron through the soil. Add a layer of sand or gravel to represent the forming of an iron pan layer.



This iron pan, impermeable to water was to cause water logging of the land allowing *Sphagnum* moss to grow. Add two cups of soil and one cup of bark chips to show the end of the woodland.



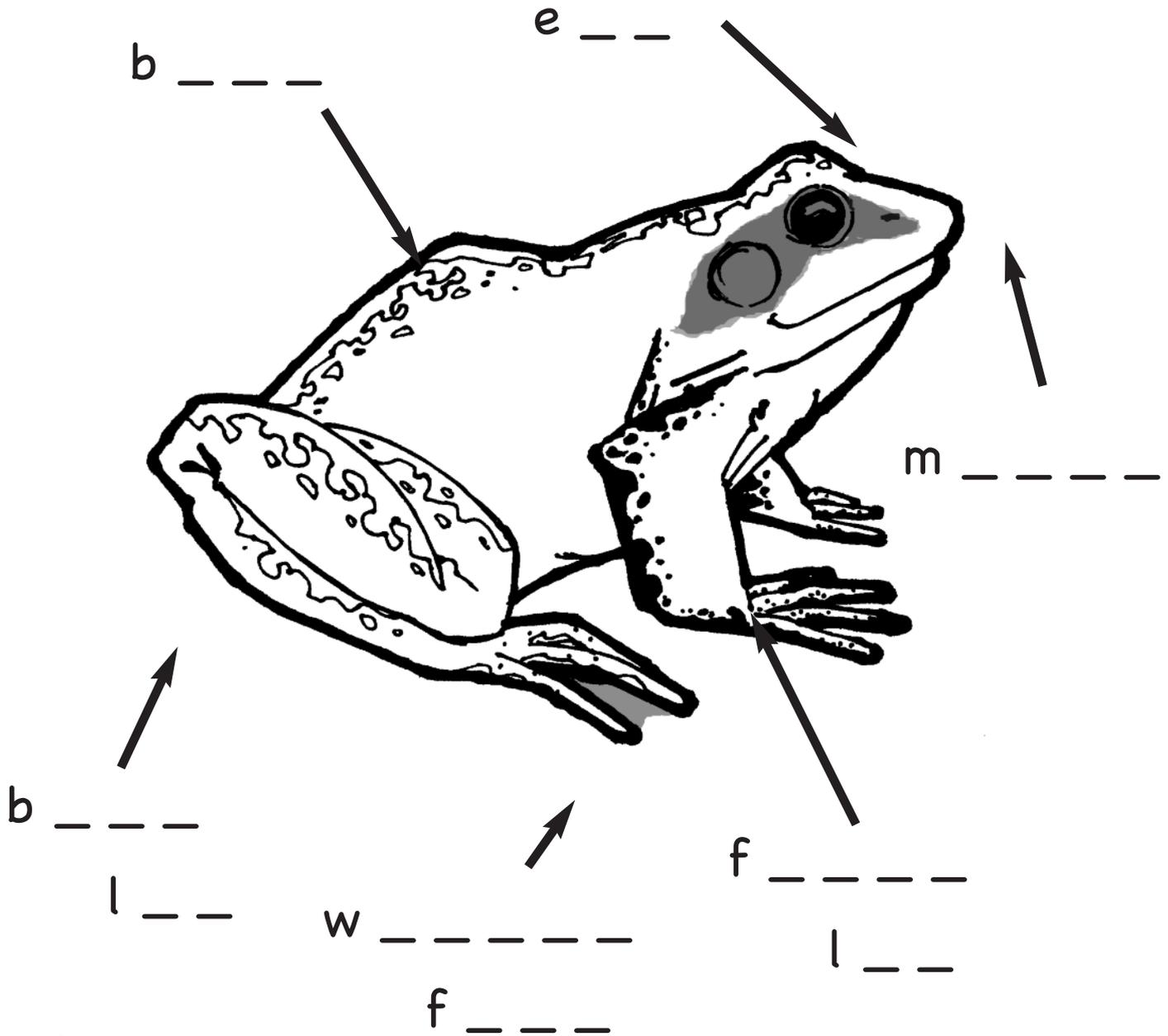
As the *Sphagnum* moss continued to grow it covered the mountains. Fill the bottle with compost and add some plants such as moss and heather to the top of the bottle to show the present day.



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Body Parts of the Frog

Frogs are one of only three amphibians in Ireland. They are called amphibians as they can live both in water and on land. Ireland's three amphibians are the Common Frog, Smooth Newt and Natterjack Toad.



Word Bank



Dragonfly

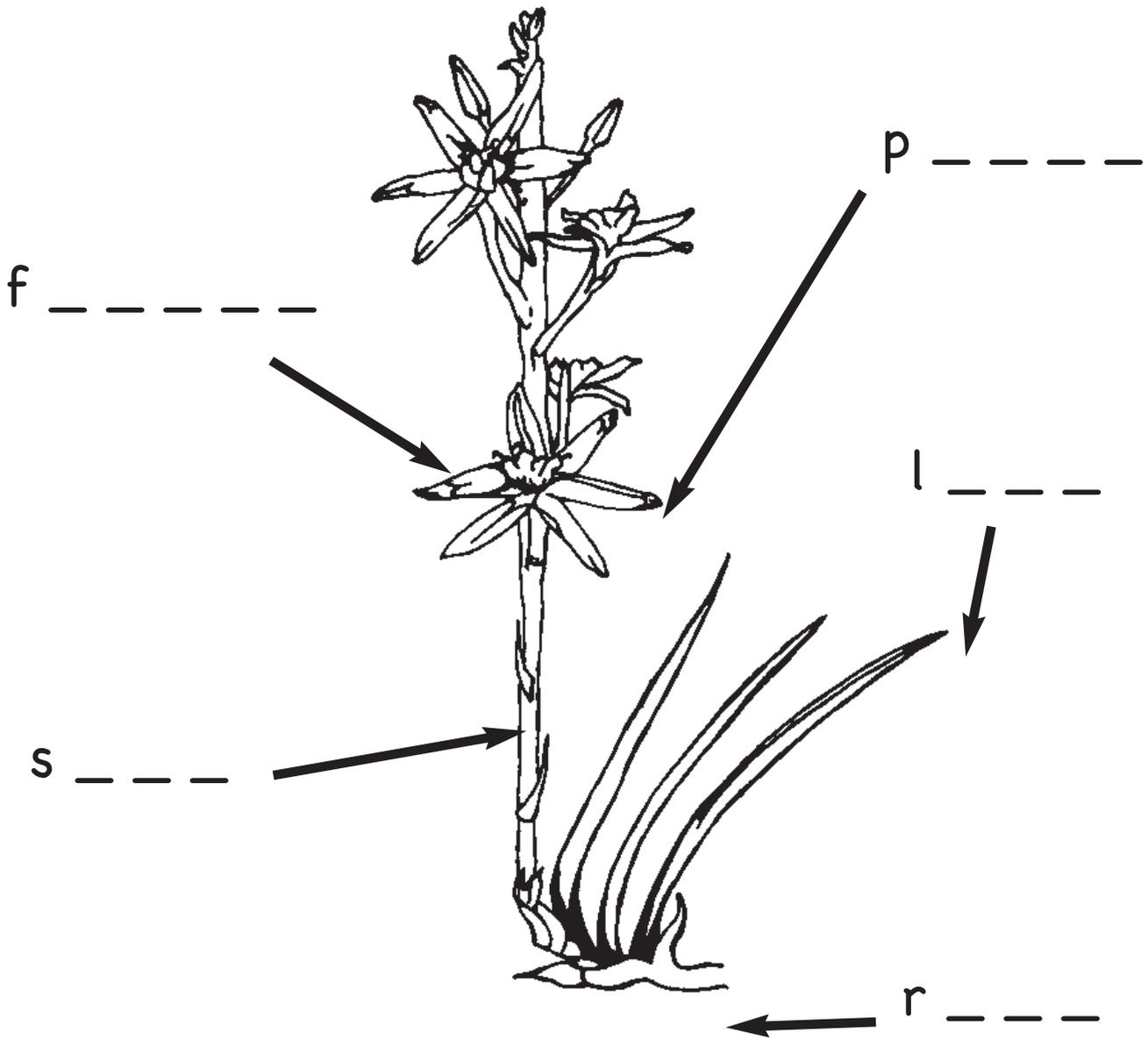
- | | | |
|-------------|----------|-----------|
| eye | back leg | mouth |
| webbed foot | body | front leg |



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Parts of a Bog Plant

Bog Asphodel has bright yellow star shaped flowers and green leaves. Colour this bog flower and use the word bank to label the parts of the plant



Butterfly

Word Bank

leaf

flower

root

petal

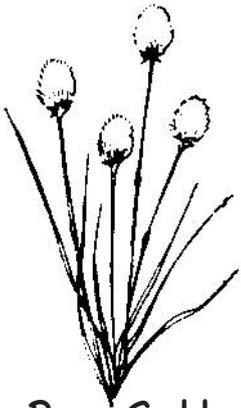
stem



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Bogland Plants and Animals

Bogs are a home to many plants and animals. Can you find 6 bogland plants and animals hidden in the word search



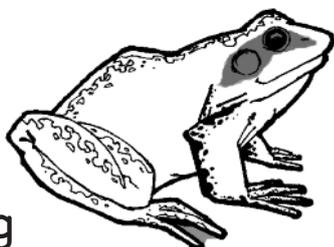
Bog Cotton



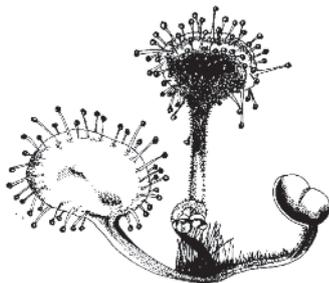
Heather



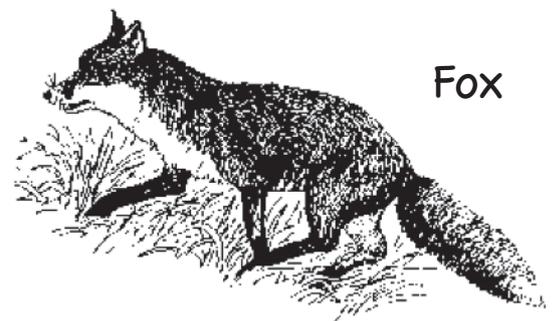
Dragonfly



Frog



Sundew



Fox

s	u	n	d	e	w	x	v	y
n	m	v	c	z	q	w	y	t
d	r	a	g	o	n	f	l	y
b	o	g	c	o	t	t	o	n
t	y	i	o	p	l	k	h	j
f	f	r	o	g	h	t	w	f
y	v	q	w	s	d	r	y	o
p	o	i	u	v	c	x	z	x
h	h	e	a	t	h	e	r	r

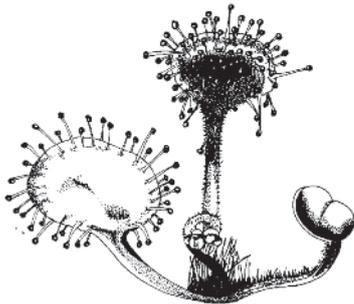
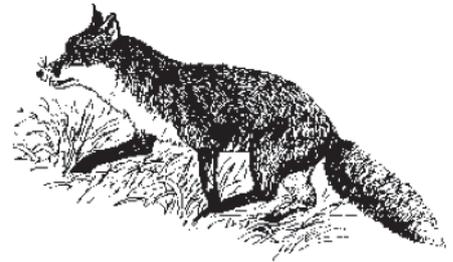


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Bogland Carnivores

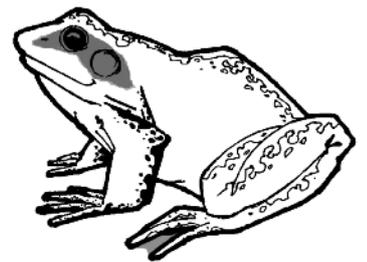
Boglands are home to many different animals and plants. But what do they eat?

A Fox is a mammal and it eats other
a _ _ _ _ _ on the bog



A Sundew is a plant that lives on the bog.
It has sticky tentacles to trap and eat
b _ _ _

A Frog can live in water and on land. It is called
an amphibian. Frogs eat s _ _ _ _ on the bog



A Curlew is a bird that builds its nest on the
bog surface. It has a long curled beak for
eating i _ _ _ _ _

All of these bogland animals and plants are
c _ _ _ _ _ as they eat other animals

Word Bank



Dragonfly

bugs

insects

animals

carnivores

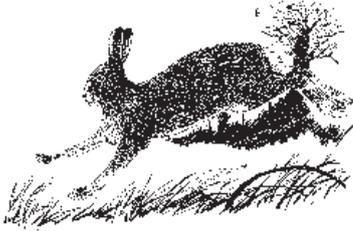
slugs



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Bogland Herbivores

Boglands are home to many different animals. But what do they eat?



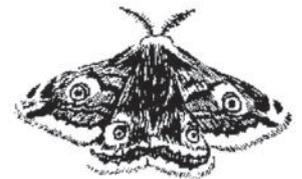
A Hare is a mammal. It does not burrow like a rabbit as bogs are too wet. It lives under the heather plant and it eats the leaves of b _ _ c _ _ _ _ _ on the bog

A Red Grouse is a bird that builds its nests on the surface of the bog. It is also called the heather hen as it eats the h _ _ _ _ _ plant on the bog



The Black Slug loves the wet surface of the bog. It eats dead p _ _ _ _ _ on the bog

The pattern of colours on an emperor moths wings look like two scary eyes. They feed on n _ _ _ _ _ of bogland flowers on the bog



All of these bogland animals are h _ _ _ _ _ _ _ _ _ _ as they all eat plants



Word Bank

bog
cotton

plant

herbivores

bog cotton

nectar

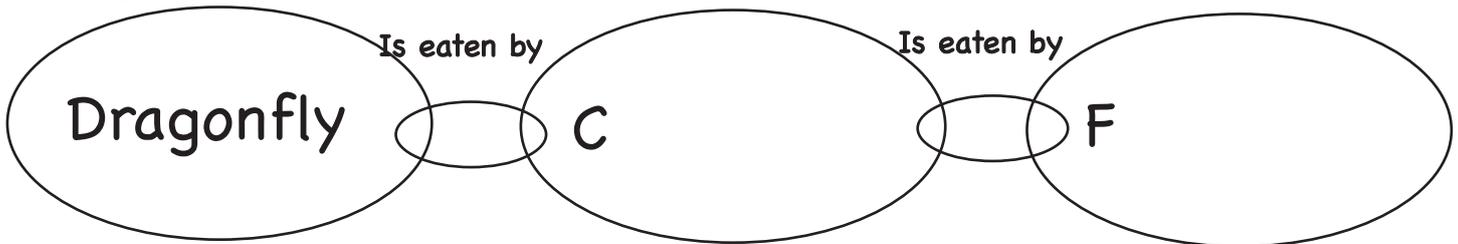
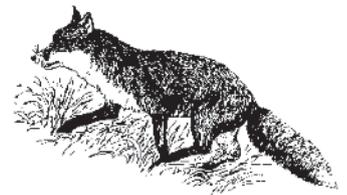
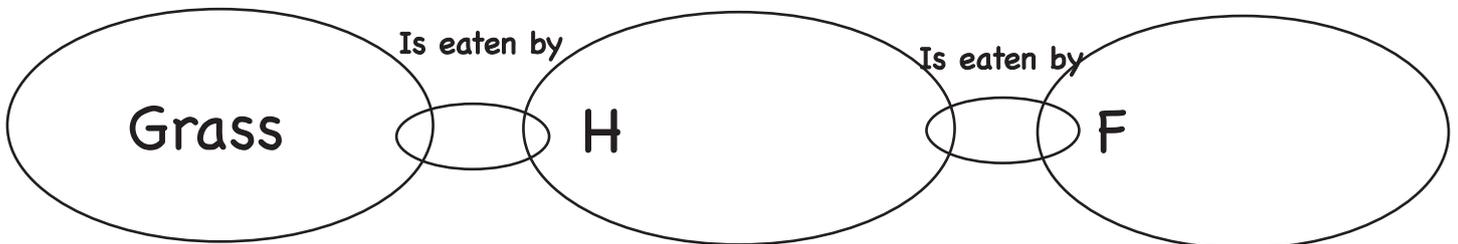
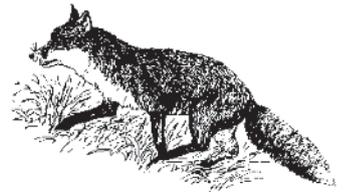
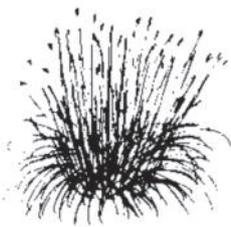
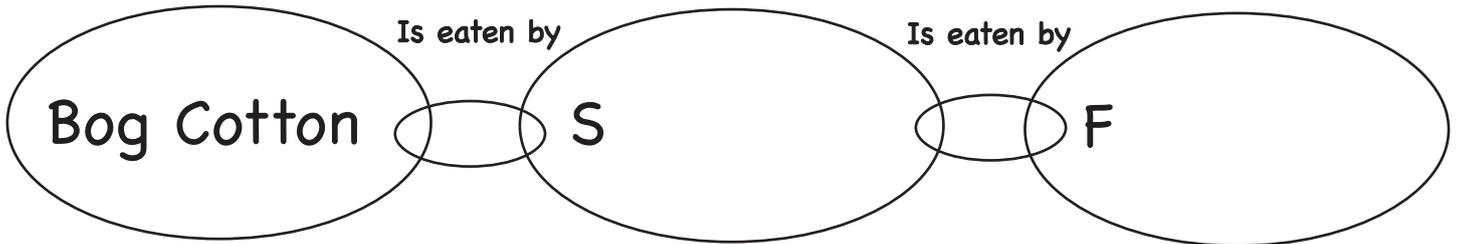
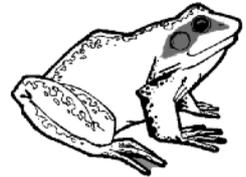
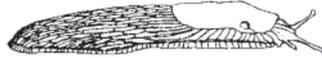
heather



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Bogland Food Chains

A food chain can show us what animal eats other animals and plants on the bog. Using the pictures can you complete the food chains below. Remember all food chains start with a plant



Word Bank

Curlew

Frog

Slug

Fox

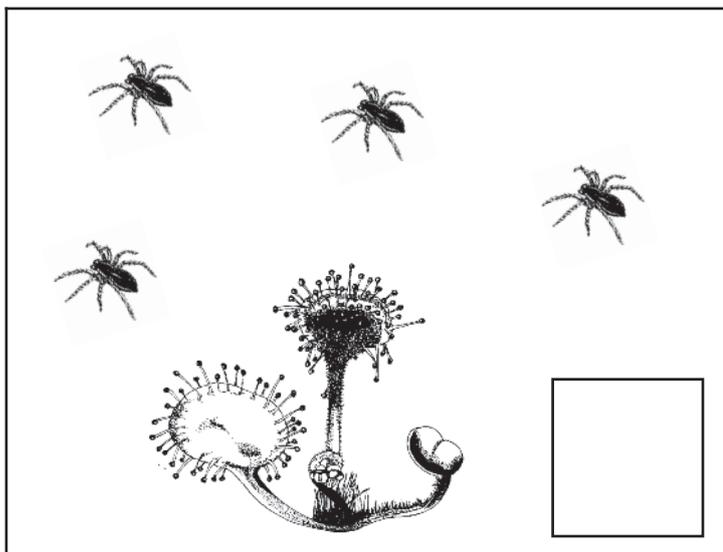
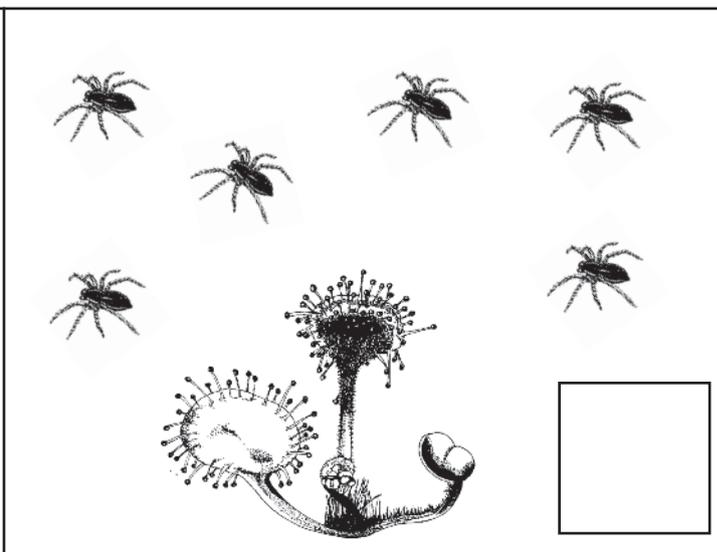
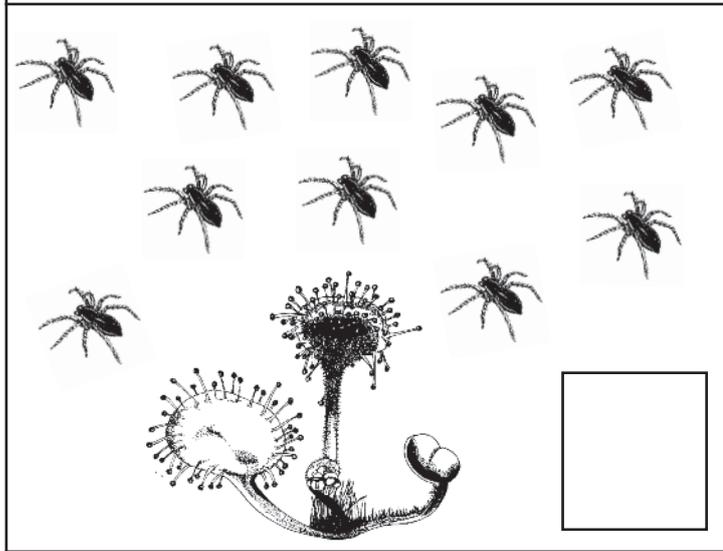
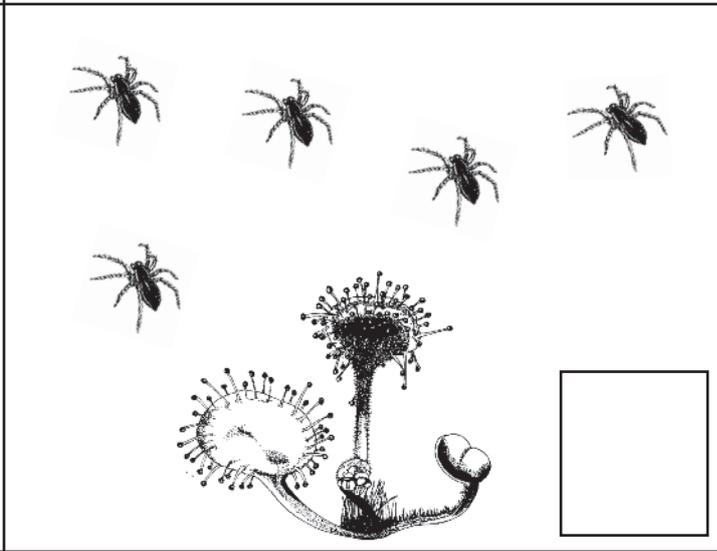
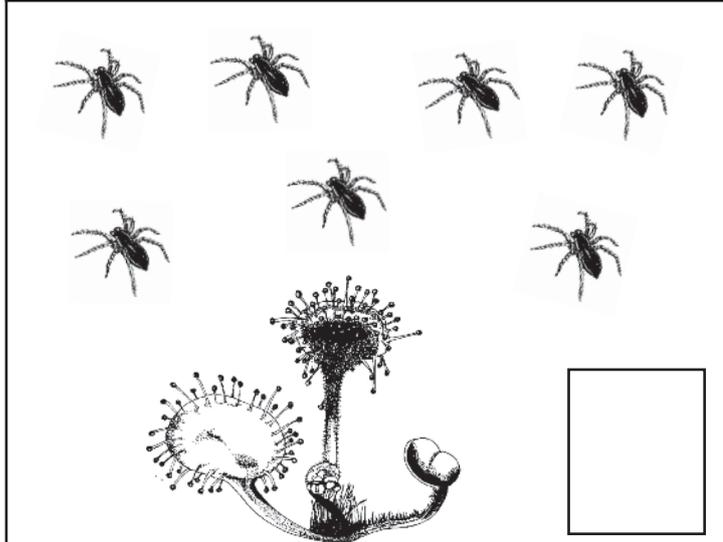
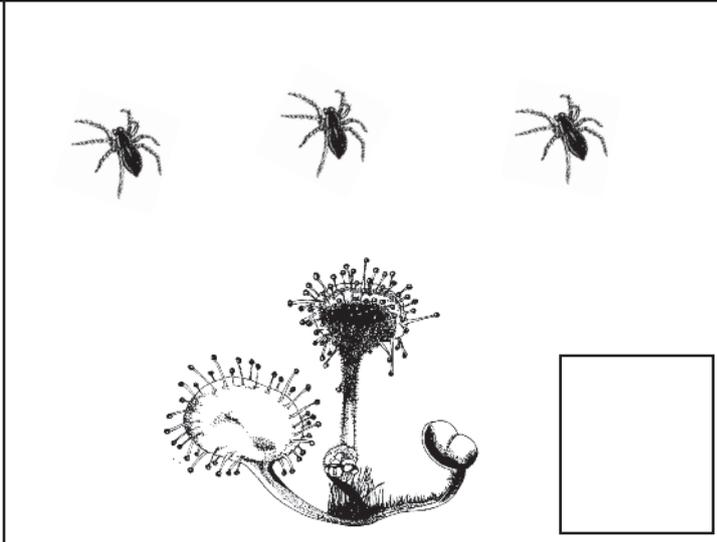
Hare



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Bogland Addition

The Sundew is a bogland plant that traps and eats insects. It is called a carnivorous plant as it eats animals. Each leaf has over 200 sticky tentacles to trap insects. Count how many spiders each Sundew going to eat and write your answer in the box?

 <input data-bbox="620 891 774 1048" type="text"/>	 <input data-bbox="1348 891 1501 1048" type="text"/>
 <input data-bbox="630 1435 778 1592" type="text"/>	 <input data-bbox="1348 1435 1501 1592" type="text"/>
 <input data-bbox="635 1982 778 2139" type="text"/>	 <input data-bbox="1348 1971 1508 2139" type="text"/>

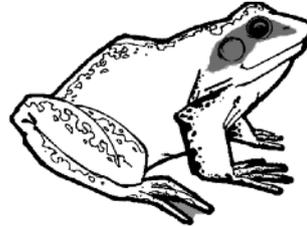


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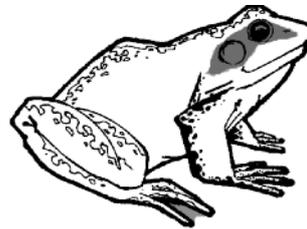
Bogland Maths

Do your bogland addition to find out how each of the
Frogs should be coloured

$5 + 1 =$



$3 + 4 =$



5 = green

6 = blue

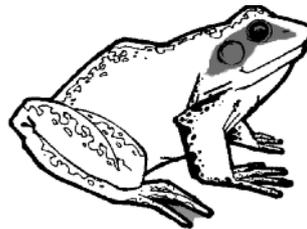
7 = purple

8 = orange

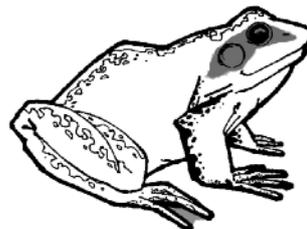
9 = brown

10 = red

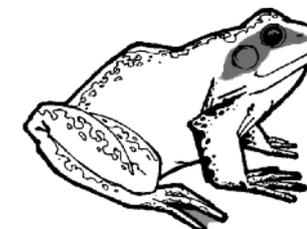
$5 + 5 =$



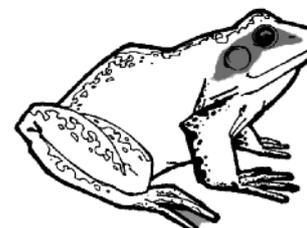
$3 + 6 =$



$1 + 4 =$



$5 + 3 =$



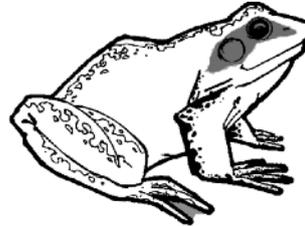


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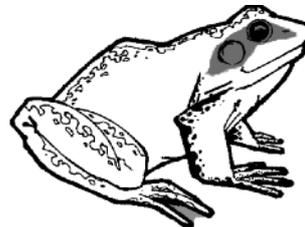
Bogland Maths

Do your bogland addition to find out how each of the
Frogs should be coloured

$8 + 8 =$



$10 + 8 =$



15 = green

16 = blue

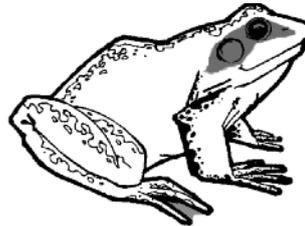
17 = purple

18 = orange

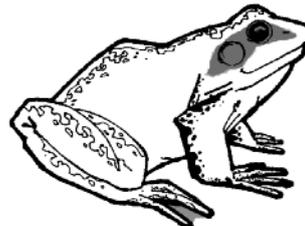
19 = brown

20 = red

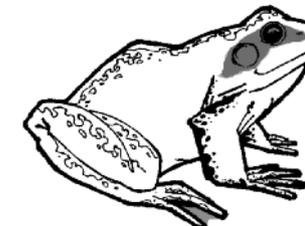
$10 + 10 =$



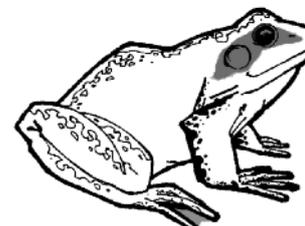
$9 + 6 =$



$9 + 7 =$



$10 + 9 =$



Colour in Your Own Bogland Picture



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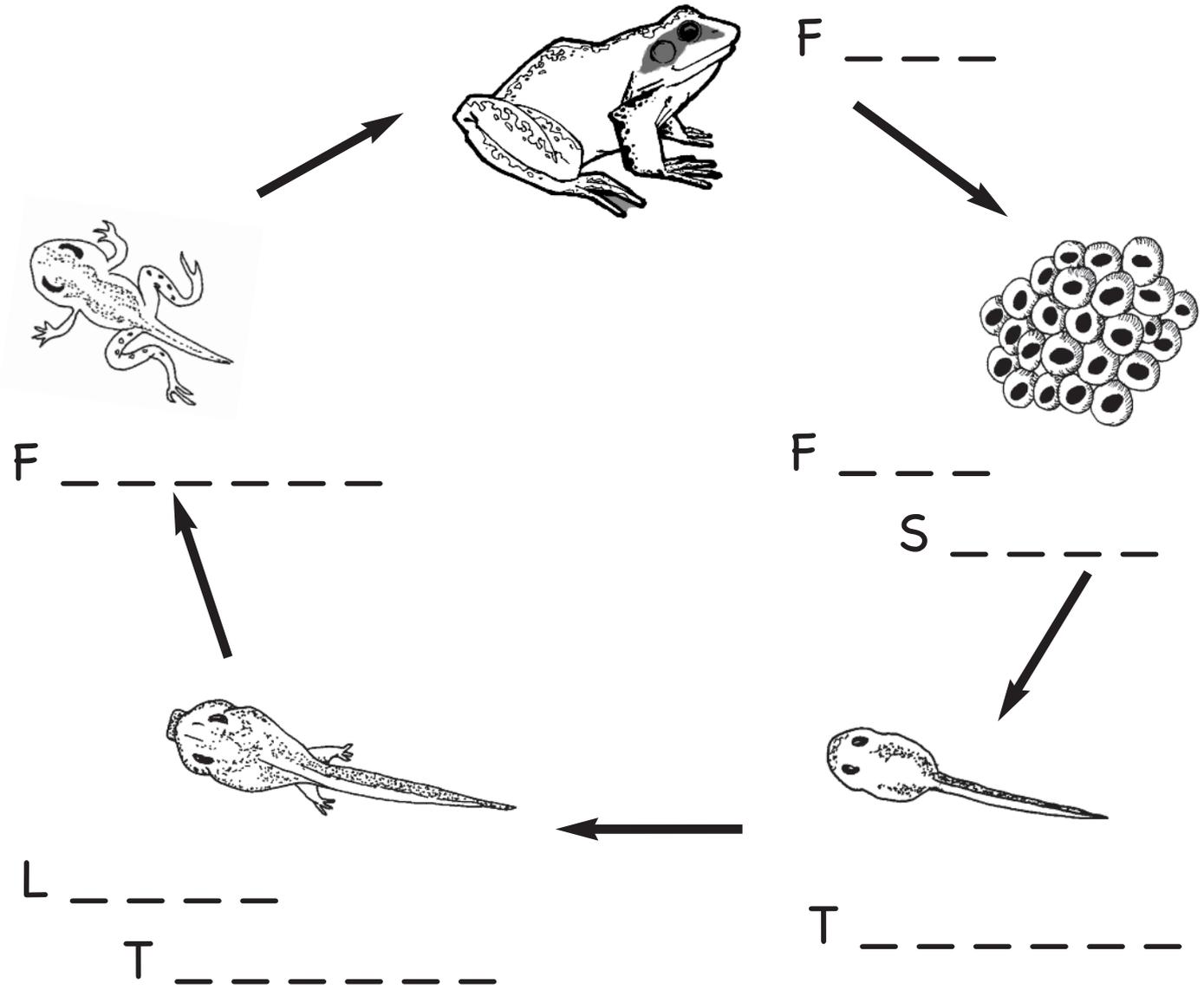




Irish Peatland Conservation Council
www.ipcc.ie

Frog Life Cycle

Frogs love the wet bogs of Ireland. Frogs are called amphibians as they can live both on land and in water. They lay their eggs in water making bogs a perfect home for Frogs.



Word Bank



Bog Cotton

Froglet

Leggy Tadpole

Frog

Tadpole

Frog Spawn



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Raised Bog Worksheet

Lets see what you know about bogs...



Bogs are w _ _ _ _ _

Sphagnum moss is call the b _ _ b _ _ _ _ _ and

It grows o _ _ mm per year

Raised bogs grow in the m _ _ _ _ _ and are 10,000 y _ _ _ _ old

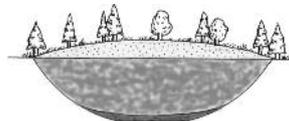
Can you name the stages of raised bog formation?



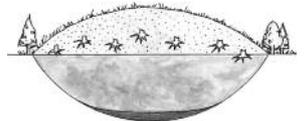
l _ _ _



f _ _



w _ _ _ _ _



b _ _

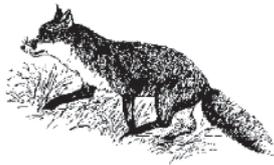
Can you name these bogland animals & animals?



S _ _ _ _ _



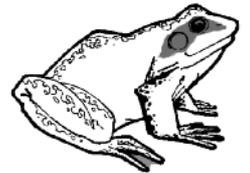
C _ _ _ _ _



F _ _



B _ _ C _ _ _ _ _



F _ _ _

A carnivore eats other a _ _ _ _ _ A herbivore eats p _ _ _ _

Draw a picture of three reasons why bogs are special

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Word Bank

fen Bog Cotton Curlew Sundew years bog builder midlands
bog woodland Fox wetlands animals plants Frog lake one



Irish Peatland Conservation Council
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Blanket Bog Worksheet

Lets see what you know about bogs....



Bogs are w _ _ _ _ _

Sphagnum moss is call the b _ _ b _ _ _ _ _ .

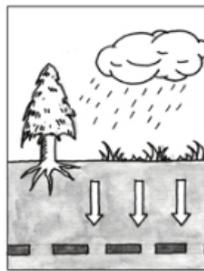
It grows o _ _ mm per year

Blanket bogs grow in the m _ _ _ _ _ and are _ _ _ _ years old

Can you name the stages of blanket bog formation?



f _ _ _ land



i _ _ _ pan



p _ _ _



b _ _ _ _ _ b _ _

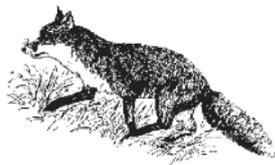
Can you name these bogland animals & animals?



S _ _ _ _ _



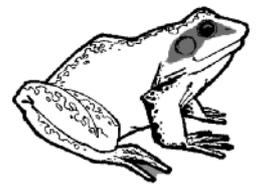
C _ _ _ _ _



F _ _



B _ _ C _ _ _ _ _



F _ _ _

A carnivore eats other a _ _ _ _ _ A herbivore eats p _ _ _ _ _

Draw a picture of three reasons why bogs are special

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Word Bank

fen Bog Cotton Curlew Sundew 4,000 bog builder farm mountains
blanket bog iron Fox wetlands animals plants Frog peat one