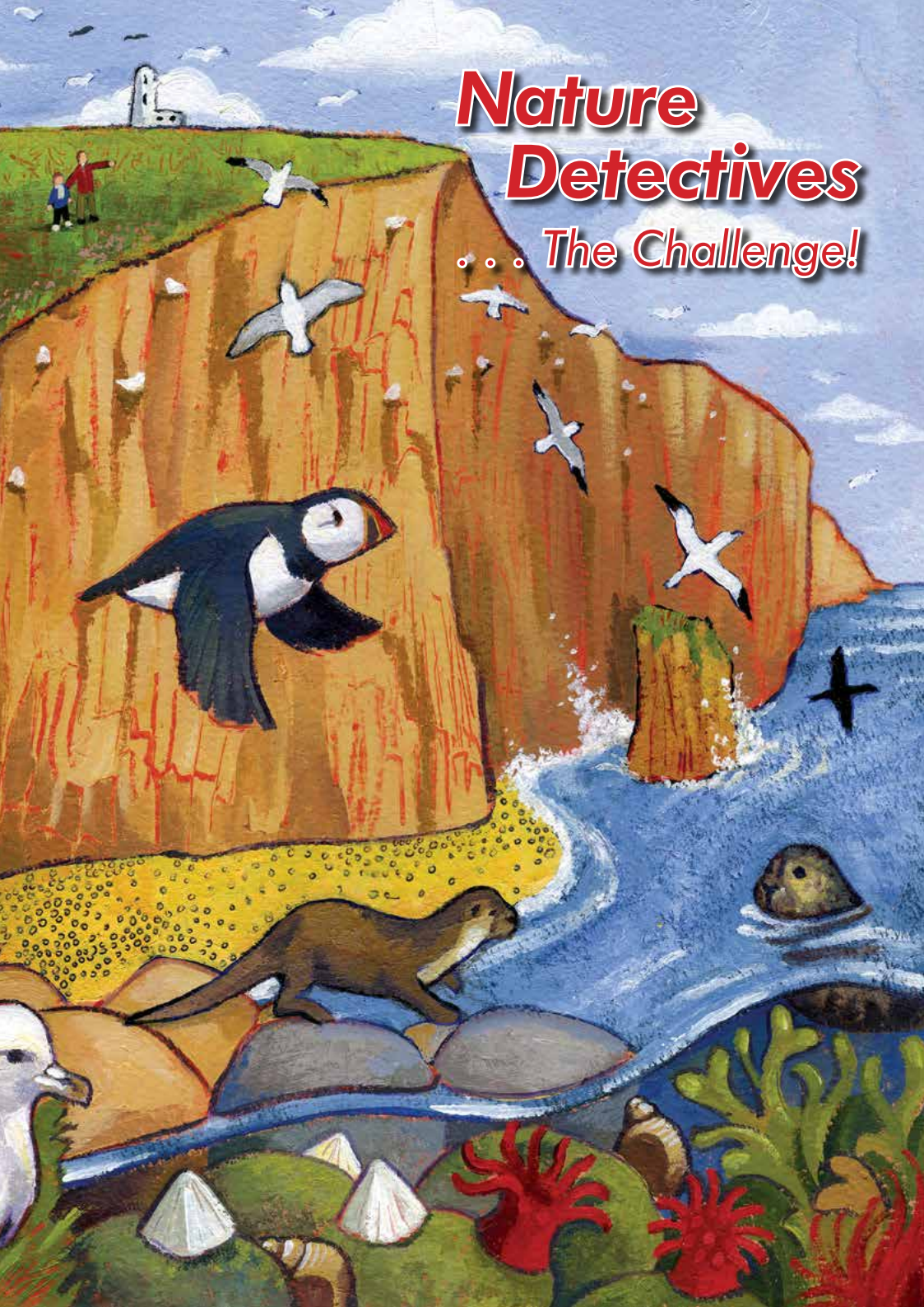


Nature Detectives

... The Challenge!



Calling all Nature Detectives



How to become a Nature Detective

Explore your garden, your local area or take a trip to the beach and you can become a nature detective.

This booklet is full of plants and animals you can see in Orkney. When you find one fill in the boxes to record:

- where you found it
- when you found it

For example: Mute Swan –

Place: Harray Loch...

Date: 6/06/2022...

Or just tick a box:

For example: Cockle –



In some sections there are extra questions for you to answer.

For example: Is a sponge a plant or an animal?

There are other activities for you to try such as making a collection of shells or grasses.

You can even make a study of your own special place.

Use this booklet to discover more about the wonderful wildlife around you or just have fun colouring it in!

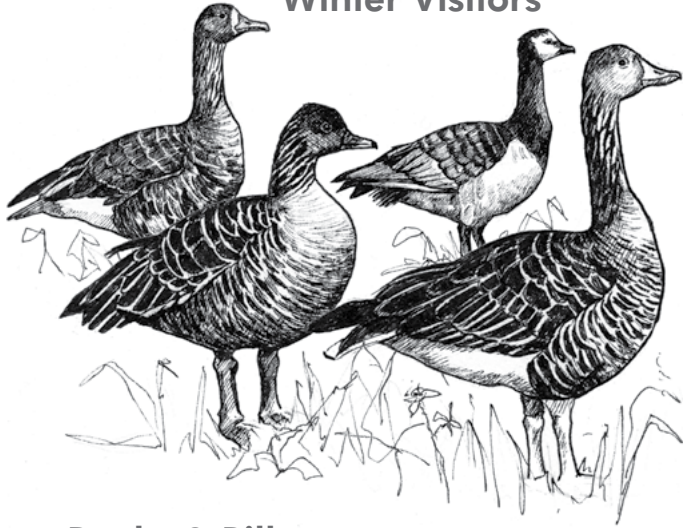
... Explore Orkney and find the animals and plants in this booklet

... Answer questions about Orkney's wildlife and heritage

If you get stuck, don't worry, at the end of the booklet there's a useful list of places and people that can help you!

Orkney Birds

Winter Visitors



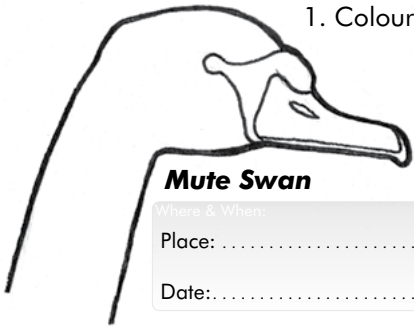
Can you name 4 types of Geese that visit Orkney during the winter?

- 1
- 2
- 3
- 4

Beaks & Bills

Birds' beaks come in all shapes, sizes and colours.

1. Colour in the swans' beaks



Mute Swan

Where & When:

Place:

Date:



Whooper Swan

Where & When:

Place:

Date:

2. Complete the pictures by drawing in the birds' bills



Oystercatcher

Where & When:

Place:

Date:



Curlew

Where & When:

Place:

Date:

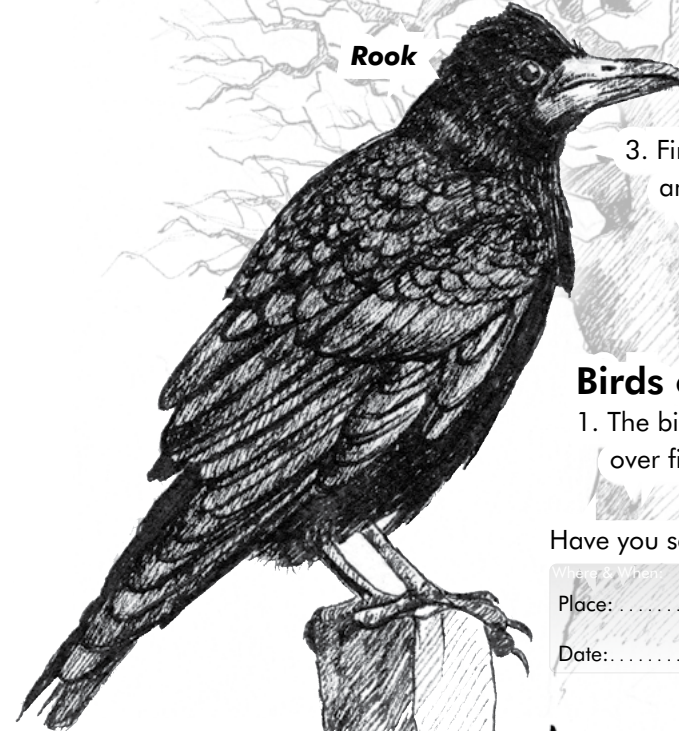
Rooks

1. Where in Orkney can you see Rooks nesting?

Give an exact location

2. What do Rooks mainly use to build their nests?

.....



Rook

3. Find a Rook's feather and attach to this page.

Birds of Prey

1. The bird of prey below can be seen hunting over fields and hills in Orkney.

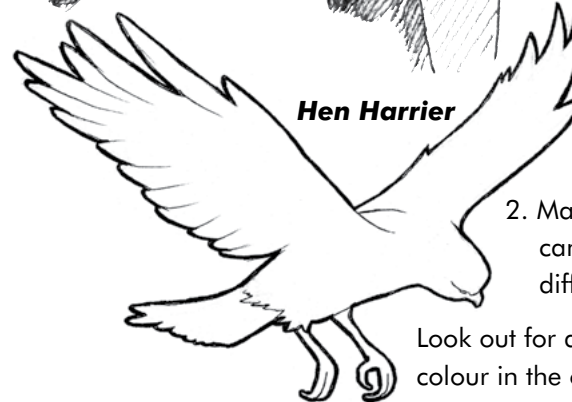
Can you name it?

Have you seen one?

Where & When:

Place:

Date:



Hen Harrier

2. Male and female birds can sometimes be different colours.

Look out for a Hen harrier and colour in the one you saw.

Where & When:

Place: Date:



Garden Birds

Lots of different birds will come to your garden if you put food out to them.

Why not try feeding the birds where you live? Can you think of four different foods that are good to give them?

- 1
- 2
- 3
- 4

Tick the box and write the date when you saw each bird in your garden.



Collared Dove

Date:



Robin

Date:

Greenfinch

Date:

Starling

Date:

House Sparrow

Date:

Goldfinch

Date:

Waxwing

Date:

Blackbird

Date:

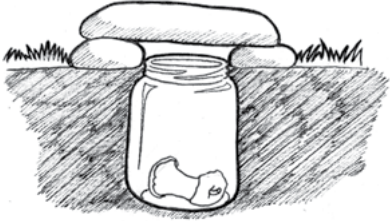
Wren

Date:

Shade in the different birds with their correct colours.

Minibeasts

Small beasties of many kinds are everywhere - under rocks, on walls, underground, on leaves and flowers, in corners - indoors and out, in puddles and burns. Your garden is a good place to start searching.

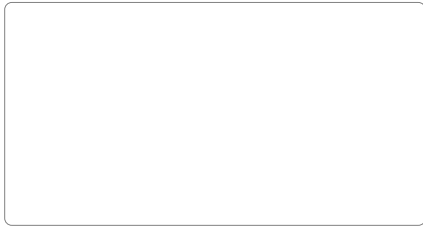


Pitfall trap - this is a good way to attract minibeasts.

- Construct your trap as in the diagram.
- Try different baits e.g. fruit, raw meat, jam.
- Check the jar regularly and release the creatures that have fallen into the jar.

Insects have 6 jointed legs, 3 parts to their bodies and sometimes wings e.g. bees, butterflies, flies and ants.

Find one kind of insect and draw it in the box



Where & When:
 Place:
 Date:
 Can you name it?:

Bumble Bee

Where & When:
 Place: Date:
 What colour was its rear end?
 How many pairs of wings did it have?

Insects without wings

- Find an insect without wings e.g. earwig, ant
 Draw it in the box.

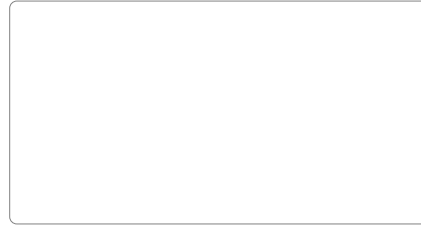
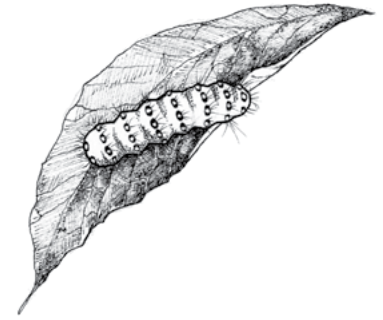
What, Where & When:
 Name:
 Place:
 Date:



Larvae

Many insects have larvae, a young stage which is different from the adult e.g. caterpillar.

Draw a caterpillar you have seen.



Where & When:
 Place:
 Date:

Do you know what type of moth or butterfly it will turn into?

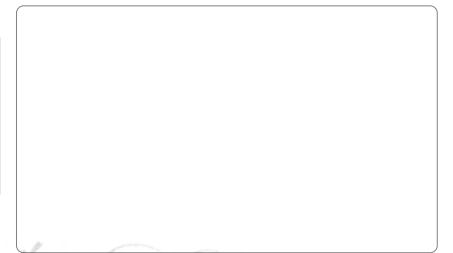
Cuckoo Spit

- foamy bubbles on plants are made by an insect living inside the foam. Can you name it?

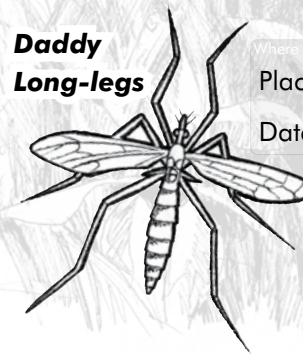
Some minibeasts are not insects e.g. spiders, slugs and snails, woodlice (slaters), centipedes, millipedes and worms.

Find one of these and draw it

Where & When:
 Place:
 Date:
 Can you name it?:



Which one of the creatures below is an insect and why?



Daddy Long-legs

Where & When:
 Place:
 Date:

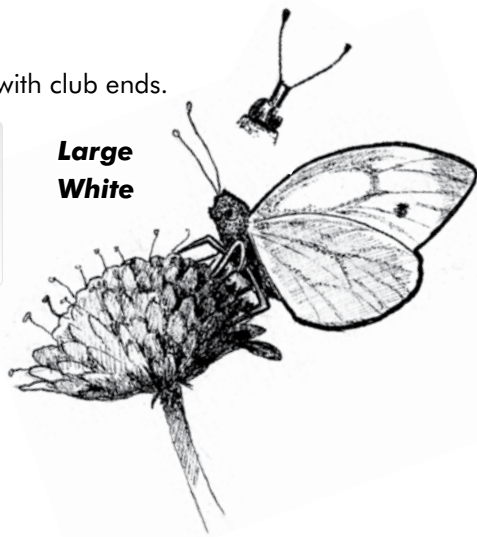


Harvestman

Where & When:
 Place:
 Date:

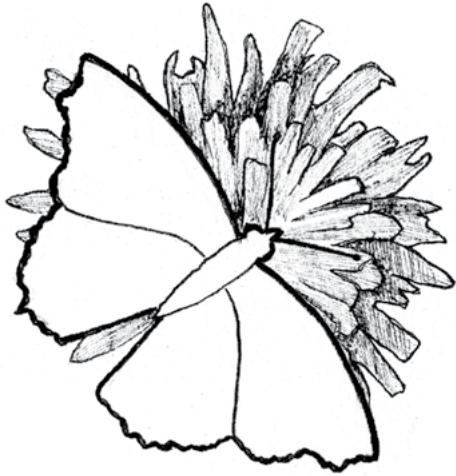
Butterflies - have antennae (feelers) with club ends.

Where & When:
 Place:.....
 Date:.....
 What does its caterpillar eat?:



Large White

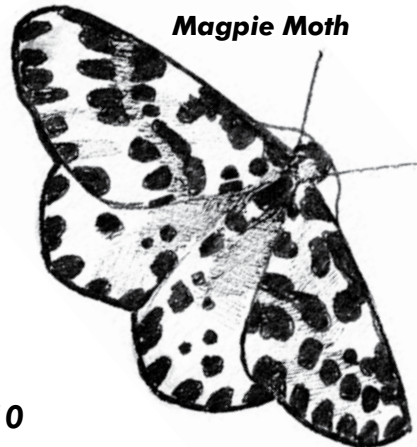
Small Tortoiseshell



Look at the pattern on its wings.
 Draw and colour them in.

Where & When:
 Place:.....
 Date:.....
 What colour is it underneath?:

Moths - Moth antennae do not have clubs and they often look feathery.



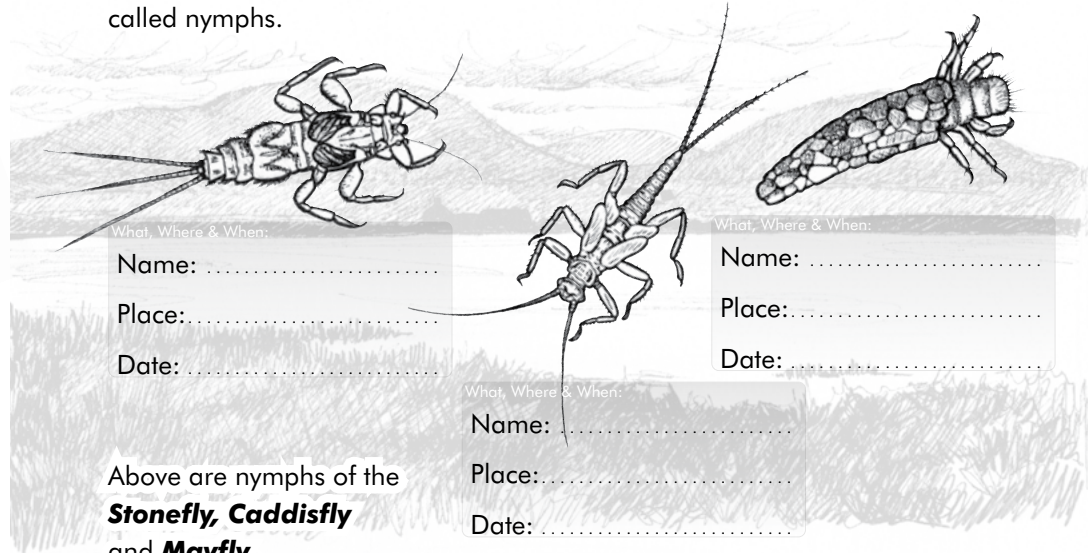
Magpie Moth

The Magpie Moth used to live further south but has recently started to appear regularly in Orkney. Can you think of a reason why it has moved north?:

 Place:.....
 Date:.....

Freshwater Minibeasts

The young of many insects live in puddles, burns or lochs. They are often called nymphs.



What, Where & When:
 Name:.....
 Place:.....
 Date:.....

What, Where & When:
 Name:.....
 Place:.....
 Date:.....

What, Where & When:
 Name:.....
 Place:.....
 Date:.....

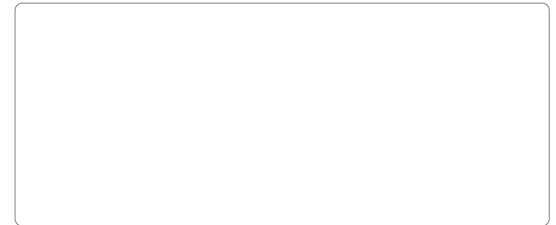
Above are nymphs of the **Stonefly, Caddisfly** and **Mayfly**.

Can you name and match them to the correct picture?

Some insects can walk and live on the surface of the water.

Pondskater - Draw this insect in the box and write when and where you found it.

Where & When:
 Place:.....
 Date:.....



Whirligig Beetle - these whiz and whirl around on the surface of the water.



Where & When:
 Place:.....
 Date:.....
 What colour is it?:

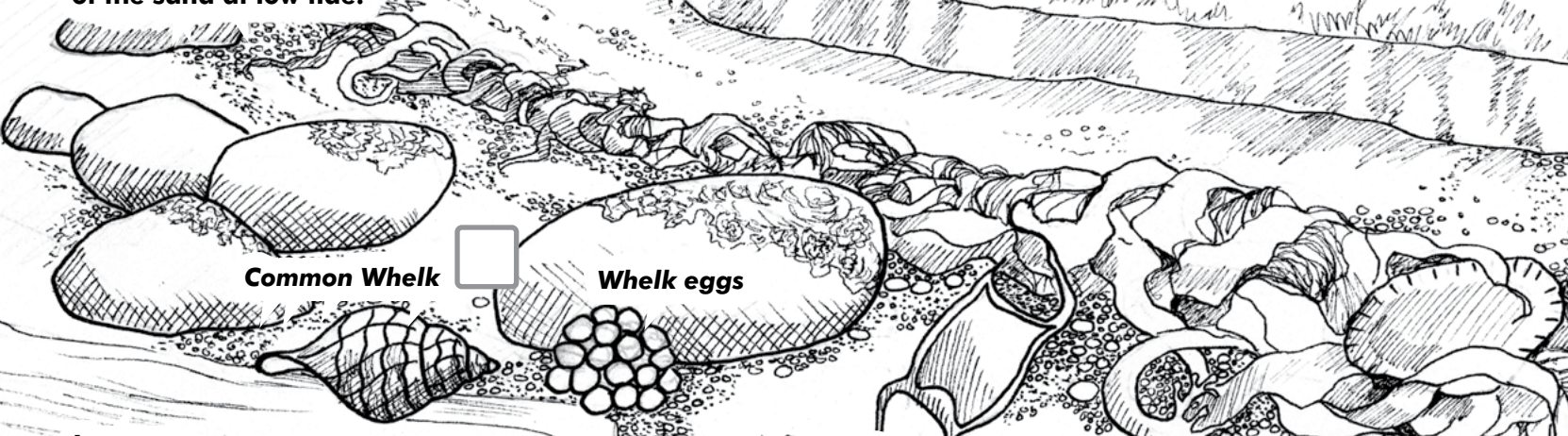
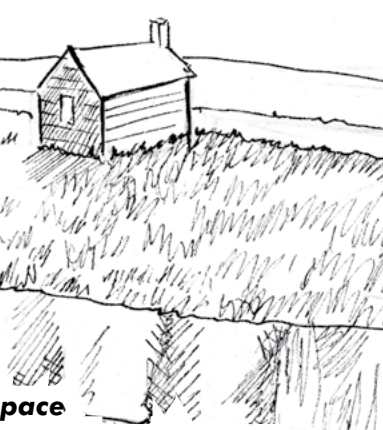
Sea and Shore

Sandy Shore

Most animals on a sandy shore live buried in the sand, but you can discover what lives here by looking at the tide line or on the surface of the sand at low tide.

Tideline

The tidelines or 'strandlines' are the parts of the beach that the sea reaches at high tide. Marine debris gets left at these points when the tide goes back out.



Common Whelk

Whelk eggs

Mermaid's Purse

Who lives inside it?:

.....

.....

.....

Crab carapace

Try to find some other crab parts on the beach. Write down which parts you found:

.....

.....

.....

Lugworm

These worms leave worm casts on the surface of the sand. They look like thin, coiled shoelaces made of sand. Draw one in the box.

Striped Venus

Cowries or 'Groatie Buckies' as they are known in Orkney.

Razor Shell or 'Spoots' as they are known in Orkney.

Shells

Empty shells can be found in the tide line or on the sand. Look on the beach for some of the ones in the picture. Tick the box next to each shell you find.

Scallop

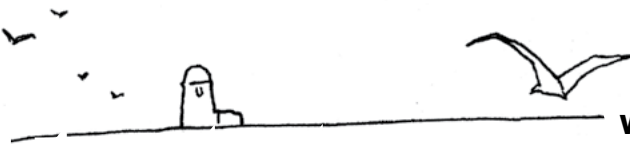
Flat Periwinkles

Use the ones you find to correctly colour in the picture.

Cockle

Thin Tellin

Rocky Shore



Look in rock pools and under stones at low tide to find these animals alive.

Always replace stones carefully and do not take live animals home.

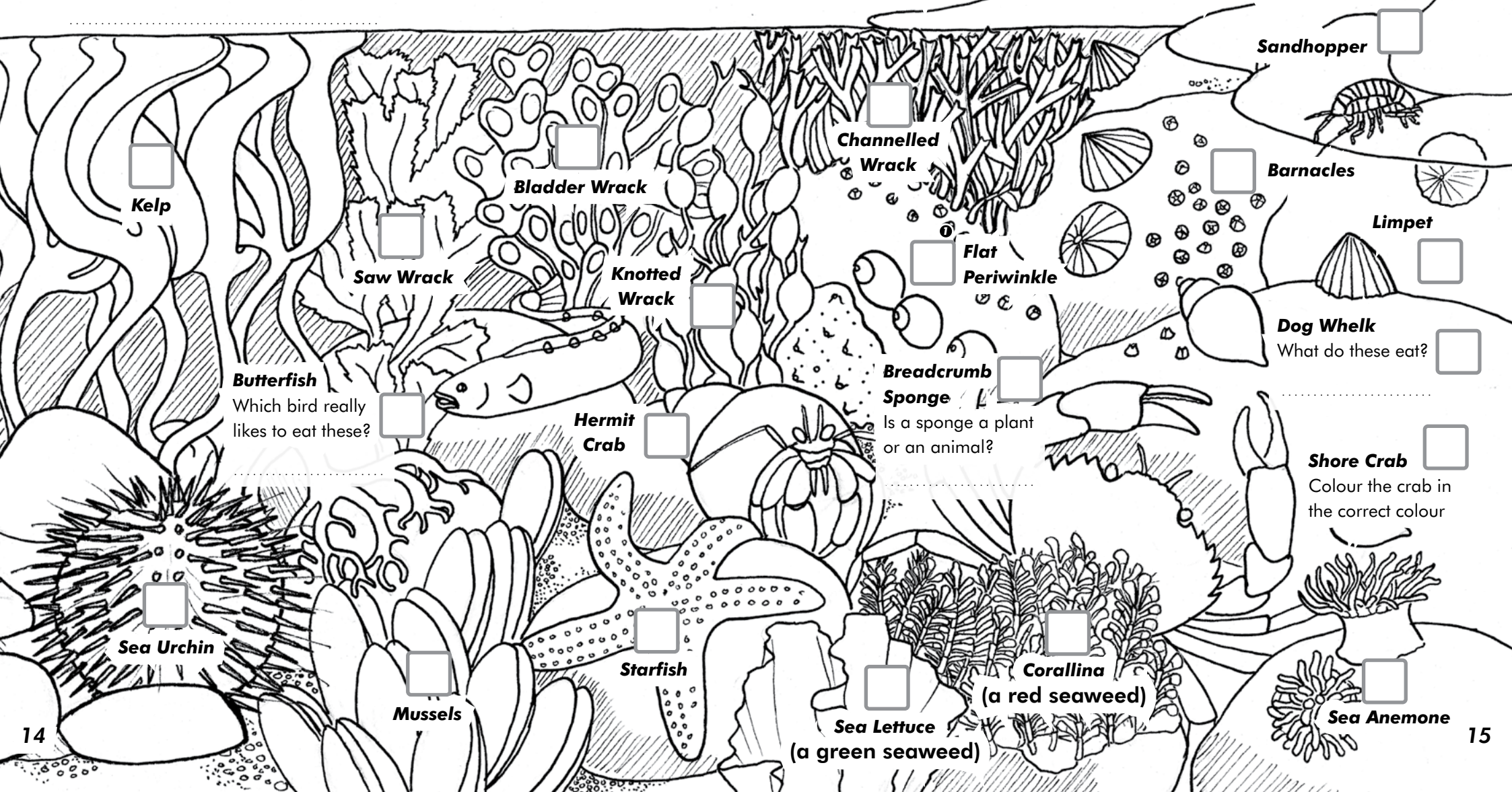
Where and when did you go rockpooling.

Place:

Date:

What is the Orcadian name for large kelp seaweeds?:
.....

Tick the boxes of each thing you find.



Kelp

Saw Wrack

Bladder Wrack

Knotted Wrack

Channelled Wrack

Flat Periwinkle

Sandhopper

Barnacles

Limpet

Butterfish
Which bird really likes to eat these?

Hermit Crab

Breadcrumb Sponge
Is a sponge a plant or an animal?

Dog Whelk
What do these eat?

Shore Crab
Colour the crab in the correct colour

Sea Urchin

Mussels

Starfish

Sea Lettuce (a green seaweed)

Corallina (a red seaweed)

Sea Anemone

Orkney Mammals

Mammals in Orkney can be found in the sea as well as on land.
Look out for the ones in the picture

Minke Whale



Whales & Dolphins

You might be lucky enough to spot a Whale, Dolphin or Porpoise.

If you see one write down what sort you think it is:

.....



Killer Whale



Harbour Porpoise

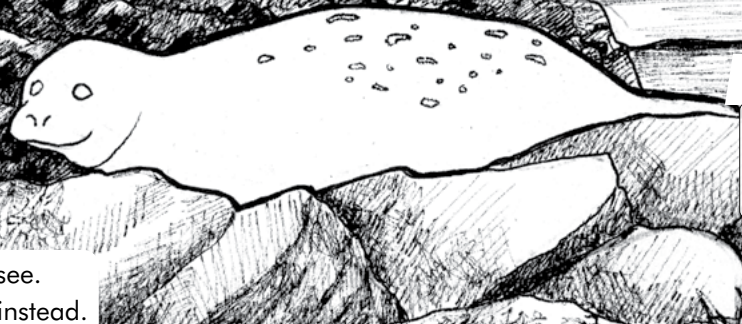
Place:
Date:

Grey Seal



Place:
Date:

Common Seal

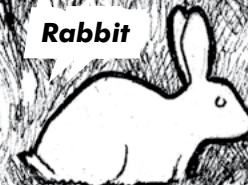


Brown Rat

Place:
Date:

Place:
Date:

Rabbit



Otters and Voles can be hard to see.
Why not look out for their tracks instead.



Wood Mouse

Place:
Date:



Otter

Place:
Date:



Orkney Vole

Place:
Date:



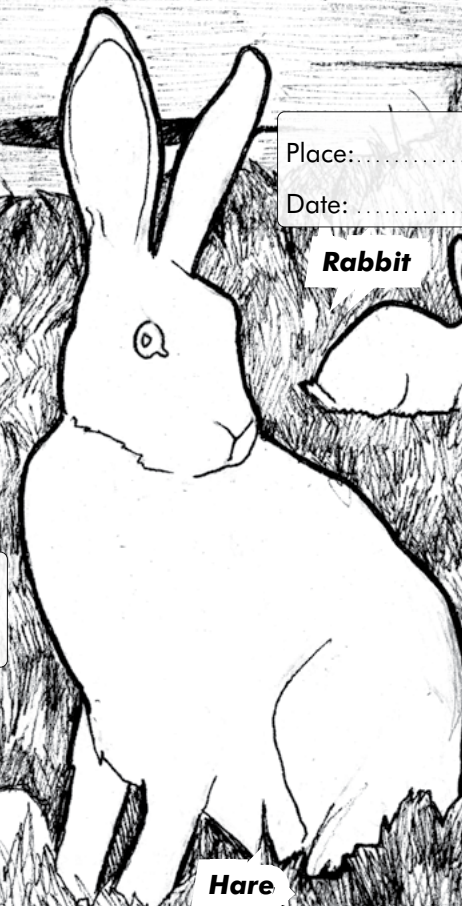
Hedgehog

Place:
Date:



Hare

Place:
Date:



Orkney Plants

Where do wild flowers live?

Some plants can grow in lots of different places (known as habitats), but others prefer to live only in one habitat e.g. in marshy areas or by the sea.

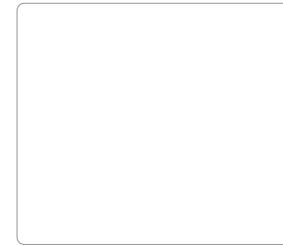
Look for the plants listed below when they are in flower. Then decide which of these habitats you found each one in.

- (A) Field
- (B) Wetland e.g. marsh, ditch, loch-side
- (C) Wood
- (D) Roadside
- (E) Seashore or Sea Cliff
- (F) Moorland

Plant name	Date	Place Seen	Flower Colour	Habitat
Bell Heather				
Water Mint				
Sea Pink				
Bluebell				
Tufted Vetch				
Cow Parsley				
Tormentil				
Sundew				
Scurvy Grass				
Dock				
Eyebright				
Birdsfoot Trefoil				
Red Campion				

Leaf Shapes

Draw the leaves of 3 different flowers.



Name

Name

Name

Seeds and Fruits

Find these plants when they have seeds or fruits.

Label each picture below to show how the seeds are dispersed.

Choose from **Wind**, **Animal** or **Explosive**

.....



Crowberry

Where & When:
Place:
Date:

Bird's-foot Trefoil

Where & When:
Place:
Date:

Dandelion

Where & When:
Place:
Date:

Blue Flowers

Name two blue flowers that you have found

Name..... Place..... Date.....

Name..... Place..... Date.....

Flower Names

Some wild flowers have names that tell you a lot about the plant.

Find these 2 plants and explain how they got their names.



Where & When:

Place:.....

Date:.....

It is called **Ragged Robin** because

.....
.....

Where & When:

Place:.....

Date:.....

It is called **Silverweed** because

.....
.....

Springtime Flowers

Different flowers appear at different times of the year. These plants all produce yellow flowers in spring. They are all common in Orkney along roadsides or in ditches.

Coltsfoot

Where & When:

Place:.....

Date:.....



Lesser Celandine

Where & When:

Place:.....

Date:.....



Marsh Marigold

Where & When:

Place:.....

Date:.....



Which of these plants produces leaves after it has flowered?

.....

Trees

Identify 6 different species of tree

1. Name.....

Place:.....

Date:.....

2. Name.....

Place:.....

Date:.....

3. Name.....

Place:.....

Date:.....

4. Name.....

Place:.....

Date:.....

5. Name.....

Place:.....

Date:.....

6. Name.....

Place:.....

Date:.....

Make a drawing of a leaf in the box

Name.....

Place:.....

Date:.....



Draw a twig with leaf buds in the box

Name.....

Place:.....

Date:.....

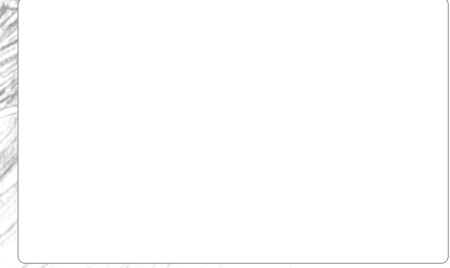


Draw the fruit of the tree in the box

Name.....

Place:.....

Date:.....



Archaeology

In the past there were never enough trees to build things out of wood here in Orkney, so many things were built out of stone.

All around Orkney's countryside you will find evidence of how people used this natural material in ancient times.

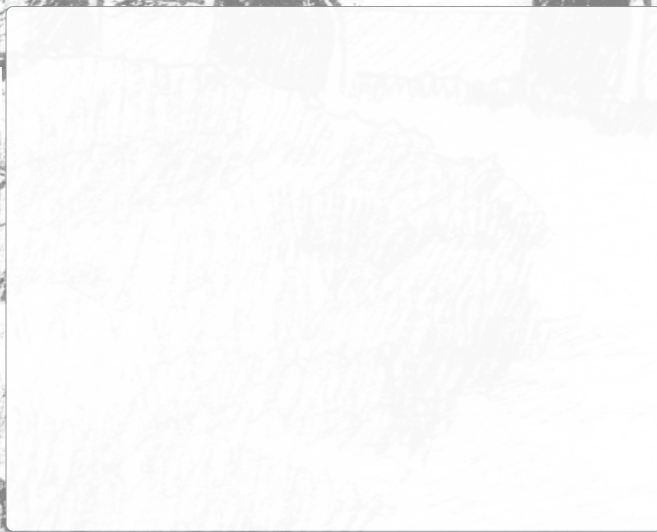
What kind of stone is found here in Orkney?:

How old is it?:

Can you name the four famous ancient sites that make up Orkney's "World Heritage Site - The Heart of Neolithic Orkney".

- | | |
|---------|---------|
| 1. | 2. |
| 3. | 4. |

Draw a house at Skara Brae, label the drawing to identify all the different things in the house.



Why not visit the St Magnus Cathedral and see how Orkney stone has been used in this impressive building.

What 2 places did the stones for the Cathedral come from?

- | |
|---------|
| 1. |
| 2. |

In the Cathedral there is a memorial with a ship's bell. What was the name of the ship and what date did it sink ?

- | |
|---------|
| 1. |
| 2. |

In Kirkwall there are two Palaces. What are they called ?

- | |
|---------|
| 1. |
| 2. |



Which Bishop built the "Moosie Tower"?

Draw the Moosie Tower.



Make a Collection . . .

It can be fun to collect different sea shells and grasses but please only take empty shells from the beach and only small amounts of grass, don't pull up the whole plant.

Grasses

Grass is probably the most important crop in Orkney. There are also many different types of wild grasses.

Why not make a collection of 6 different grasses and mount them on a sheet of paper. For each grass:

- find out its name
- record where you found it
- record the date that you found it

You could also draw or photograph the grasses.

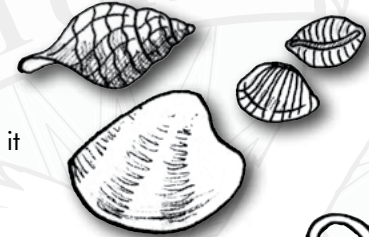


Shells

Shells come in many shapes, sizes and colours. To create your own collection, see if you can find up to 10 different shells and mount them in a shallow box. You could also draw the shells or take photographs of them.

For each shell:

- find out its name
- record where you found it
- record the date that you found it



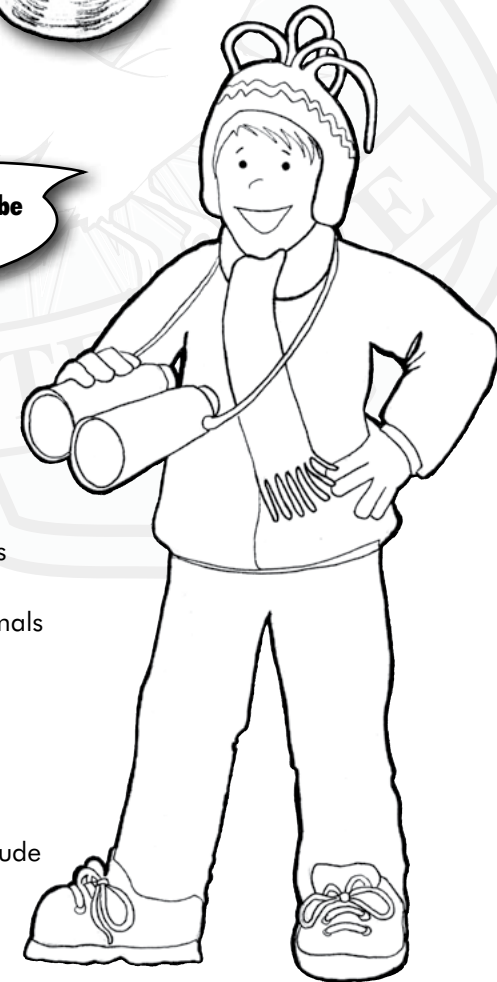
A Special Place

Do you have a special place you like to visit to enjoy wildlife? It could be in the countryside or the town or your back garden.

If you do have a favourite place – why not tell us all about it?

Why not make a study of it and create a personal booklet? It could include

- a description of the place and why it is special to you
- information about the plants and animals that live there
- stories about it
- poetry
- drawings
- photographs
- or anything else you would like to include



Know the Code before you go

The Scottish Outdoor Access Code is all about your rights and responsibilities when you're making the most of our great outdoors.

To find out more go to www.outdooraccess-scotland.scot

Nature detectives can use the checklist below to help follow the Code:

- I was careful not to disturb wildlife
- I kept my dog under close control
- I took my litter home with me
- I was careful not to disturb livestock
- I walked around the edge of a field with a crop in it
- I left gates as I found them
- I followed a path if there was one
- I didn't get in the way of farmers working in the countryside
- I didn't go through anyone else's garden or farmyard

Why is it important to follow the code in the countryside?

.....

.....

.....

.....

.....

And remember - always take warm and waterproof clothing with you and wear sturdy footwear.

Where to get help

You could ask:

- | | |
|-----------------------------|---|
| Scottish Natural Heritage | Eastbank, East Road, Kirkwall
Tel: 07717618805 |
| RSPB | North End Road, Stromness
Tel: 01856 850176 |
| Orkney Islands Council | Council Offices, School Place, Kirkwall
Tel: 01856 873535 ext 2828 |
| Orkney Field Club | www.facebook.com/OrkneyFieldClub |
| World Heritage Site Rangers | orkneyrangers@hes.scot
Tel: 01856 841732 |

Your teacher, your friends and your family may also be able to help you. Or why not try using the internet, Facebook or your local library.

The following websites may be useful:

- www.nature.scot
- www.rspb.org.uk
- www.historicenvironment.scot
- www.naturalhistorymuseum.org.uk
- www.orkneylibrary.org.uk

Or visit a local museum:

- Stromness Museum, 52 Alfred Street, Stromness
- Fossil and Heritage Centre, Burray

Updated in 2022 by the Stromness Museum, this Nature Detective booklet was originally developed by Outdoor Orkney.

A variety of organisations were involved, their aim to provide environmental education throughout the county, raising awareness of its natural environment both past and present for people of all ages and level of interest.



STROMNESS MUSEUM





Printed on recycled stock