

Nature's Web

Trial Issue

Autumn 2005

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New Arrivals!

It's that time of year again when seal pups are a common sight around the secluded areas of our coast.

There are two main types of seals around Ireland, the grey seal and the common seal. Grey seal pups are born from September to October and are covered in white fur to keep them warm. They weigh about 15kg at birth but after about 2-3 weeks of drinking their mothers fatty milk they can weigh as much as 45kg. Around this time the pups begin to lose their fur and gradually spend more time in the water. The mothers will stay with them for a few weeks until they are strong enough to look after themselves. Common seal pups are born in the summer and lose their fur before they are born. Their skin is a dark shade of grey at birth and they learn to swim almost immediately.

Never approach a seal pup if you see one alone on a beach. Mother seals rarely abandon or travel far from their pups and will keep a watchful eye even when they are in the water. If you get too close the mother seal may attack to defend her young and the pup may bite you or become distressed and may injure itself getting away from you.

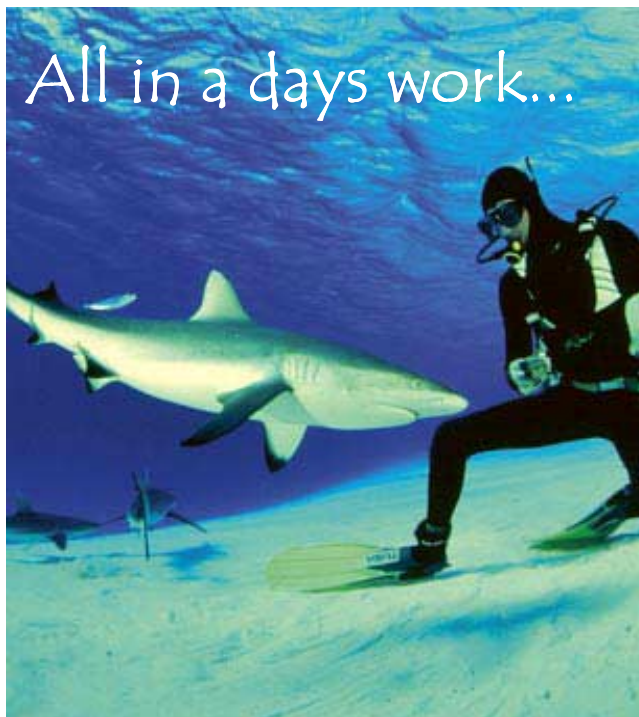


Grey Seal Pup



Adult Grey Seal

All in a days work...



Read about life as an Underwater Photographer with **Pete Atkinson**. He spent some time working at Sherkin Island Marine Station and then sailed the Pacific Ocean taking photographs of creatures like this Reef Shark. He now lives and works in Australia. In each issue we hope to introduce you to someone that has made the environment a part of their every day life.

See page 7...

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Editor's Page

Sherkin Island Marine Station

In 1975 Matt Murphy and his late wife Eileen set up the Marine Station on Sherkin Island. Their aim was to make people more aware of what goes on in the seas around Ireland and encourage people to take an interest in the environment around them.

The station carries out research on plankton, plants, otters, birds, sponges, rock pools, sandy beaches, mudflats, insects, butterflies, moths, seaweeds and the seashore. Every year volunteers from around the world visit the station to continue each project.

The Station organises conferences, workshops, exhibitions, environmental



competitions and a schools programme to increase awareness. The huge collection of reference material in the form of seaweeds, plants, insects, plankton and photographs is used for research, which is then included in the many publications produced by the Marine Station to help educate on the environmental.

Check out the Marine Station's website <http://homepage.eircom.net/~sherkinmarine> to view publications and the work that is carried out.

Welcome to the First Edition of Nature's Web!

Dear Reader,

We at Sherkin Island Marine Station are delighted to welcome you to this trial issue of our newsletter *Nature's Web*. We hope to bring you this exciting newsletter every season to keep you up to date with news and trivia from the environment! There will be topics from around the world to interest everyone and articles on how we can make a difference. We will bring you new features each season and many ways in which you can help in protecting our environment. We hope that by learning more about the environment we will all be more inclined to appreciate and look after it.

Signed
Audrey Murphy

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Michael Ludwig
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Station 2005



These days everyone is talking about saving energy - 'turn off the light', 'recycle this' or 'recycle that' seem to be on everyone's lips. We only have one environment which will be left for future generations so it is extremely important that we look after it. Every little thing will make a difference. By doing our bit to prevent waste going to landfill sites and by reducing the amount of electricity used in our homes we are doing our bit to help our environment last for a little while longer. If we can each reduce our waste by 5% imagine what a difference that would make. Check out page 13 for five ways you can make a difference this Autumn.

SEAFOOD RECIPE

Boxty Fish Cakes

What you need:

225g of fish
(e.g. salmon, cod, trout,
prawns or crab are good)
3 large potatoes
Olive oil
Salt and pepper



What to do:

Ask an adult for help before starting. Peel and grate the potatoes on the large side of the grater onto a clean tea towel. Dry well. Mix with the fish and season with pepper and salt. Spoon onto an oiled pan, pressing down lightly with a fish slice. Cook for three minutes on each side. Dip into ketchup, mayonnaise or chutney and enjoy!

Brought to you by BIM. www.bim.ie

Migrating Birds

Migration is a long journey carried out by some birds (and some animals) to other areas where they hope to find more food and a warm place to produce their young. Many birds prepare for the journey by eating a lot of food and storing this as fat. Some birds double in weight before they leave to survive the long journey.

Even though young birds will have never made this long journey they still seem to know the route and arrive safely at their new home. Since they do not learn about migration from their parents it is believed that the instinct to migrate was inside them when they were born. It is thought that birds use the position of the sun and the stars to find their way. Birds seem to have an 'internal clock'

which helps them know what time of the day it is and where the sun is at that time. Therefore when they fly to their summer destination they use the sun's position in the sky as a compass. Birds that fly over the sea have no landmarks to guide them on their way and so travel in a straight line. Unfortunately strong winds over the sea during migration may push birds off course causing them to get lost. Birds may fly alone or in large groups and many large birds travel during the day whereas the smaller birds will use the cover of darkness to fly in. Birds also start off their journey on a fine day to give themselves a better chance.

Two birds that travel great distances are the

Arctic tern and the swallow. The Arctic tern lives in the Arctic during the northern summer and then flies south to the Antarctic for the summer down there. The trip there and back is nearly 25,000 miles. Birds that fly that far south have summer all year round. This ensures they will have a good supply of food all year round. Swallows migrate to South Africa several weeks after they are born and some even return in the spring to the exact same nest as the year before. This can be a distance of over 6,000 miles. Two other birds that migrate are the Brent Goose and the Cuckoo. The Brent Goose spends the summer in the Arctic and migrates to Ireland in the winter, where as the cuckoo migrates here in the spring. This gives them a better chance to find food.



Swallow



Brent Goose



Arctic Tern



Cuckoo

Swallow *Hirundo rustica* Fáinleog

The swallow spends the winter in Africa and then comes to Ireland from April to October. It usually returns to the same nest as the year before. The nest is made of mud and is built on rafters, usually inside barns, out buildings or under bridges. Swallows have a long forked tail, but the female's is slightly shorter than the male's. The swallow is able to drink while it flies by flying low over a river and dipping its bill into the water.

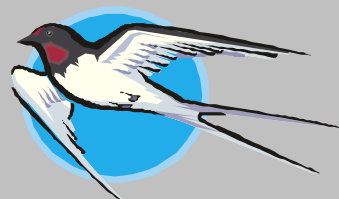
Colour: Blue-black back, wings and top of head, with white belly. Red patch on throat and face.

Length: 17-21 cm

Diet: Flying insects.

Habitat: Low over the ground, rivers and lakes.

Number of eggs: 3-6



Most birds lay only a few eggs so as to be able look after each chick when they hatch. A cuckoo often lays 12 to 15 eggs, but does so in the nests of other birds so that they will look after her young for her. She waits by a nest until the mother leaves and then flies down and lays her own egg in the nest. She may have to push one of the other eggs out to make room. Usually the new mother treats the young cuckoo as one of her own.

A Cuckoo's Nest?

WHALES

WHALES, along with dolphins and porpoises are mammals and make up the group called cetaceans (pronounced si-tay-shuns). There are more than 83 different species of whales but they can be divided into two main groups – toothed whales and baleen whales. Toothed whales e.g. killer whales, have triangle-shaped teeth which they use to catch prey where as baleen whales e.g. fin whales, have baleen plates in their mouths instead of teeth. Toothed whales eat fish, squid, sharks or seals and baleen whales eat krill (these look like tiny shrimp).

A group of whales is called a pod and many of these migrate from one area to another during the year communicating with each other as they move using a series of clicks and whistles. They spend the summer feeding in the North or South Poles where there is a lot of sunlight for food to grow. In winter they move to warmer waters to feed and to give birth to their young. Whales give birth to a single calf every one to three years. The calf is inside the mother for 10 to 17 months before it is born (tail first). The mother immediately pushes it to the surface for air. It feeds on the mothers milk, which is rich in fat. This helps the calf to form a layer of blubber in order to stay warm.

MAMMAL FACTS

YOUNG mammals drink milk from their mothers body.

Mammals are warm blooded which means the temperature inside their bodies is warm no matter what the temperature outside is.

Mammals use lungs to breath oxygen and so those living in the sea must come up to the

Whale Features

Body shape:

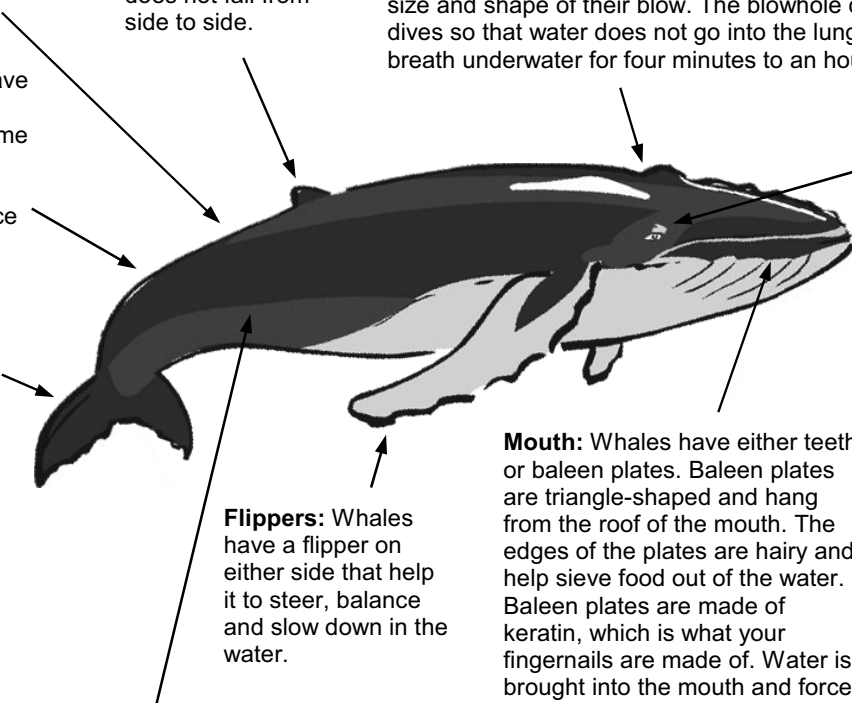
whales have streamlined bodies to move quickly and easily through the water.

Dorsal fin: This helps the whale balance so that it does not fall from side to side.

Blowhole: Whales do not have a nose and so breath using a blowhole. Baleen whales have two holes whereas toothed whales have only one. Warm air from the whales' lungs is pushed out through the blowhole into the cooler air outside and turns into water vapour. This is called the blow. Whales are often identified by the size and shape of their blow. The blowhole closes when a whale dives so that water does not go into the lungs. Whales can hold their breath underwater for four minutes to an hour or longer.

Skin: Whales have very soft and smooth skin. Some have lumps and parasites like barnacles and lice on the skin.

Flukes: There are two flukes that make up the whales tail. This moves up and down and propels the whale through the water. Individual whales are often identified by markings on their bodies and flukes.



Flippers: Whales have a flipper on either side that help it to steer, balance and slow down in the water.

Blubber: Blubber is a thick layer of fat under the skin that keeps the whale warm. It is also used as energy for the whale when food is scarce. It is lighter than water and so helps the whale float.

Mouth: Whales have either teeth or baleen plates. Baleen plates are triangle-shaped and hang from the roof of the mouth. The edges of the plates are hairy and help sieve food out of the water. Baleen plates are made of keratin, which is what your fingernails are made of. Water is brought into the mouth and forced out through the plates, catching the food. Whales also have a large tongue that can weigh as much as an elephant.

Eyes and ears:

Whales have good eyesight and excellent hearing. The eyes are on the side of the head and the ears are tiny holes located just behind the eyes. Some whales use echolocation to find objects in the water and to work out their size and shape. (Clicks produced by a whale can travel many miles in the water and bounce off objects. These sounds return to the whale as an echo helping it to work out the location of objects up ahead.)

SLEEPY DAYS! Who sleeps during the cold weather!

Frogs

Frogs are cold-blooded amphibians, which means their body temperature changes with the temperature around them. To keep their skin wet they live near ponds, rivers and streams but are often seen on land on rainy nights when their skin is kept wet by the rain. Basking in the sun will keep them warm but on chilly days they will need to shelter to stay warm. During a hot summer or cold winter they bury themselves in mud and leaves to protect themselves from the extreme temperatures. By remaining dormant in the mud they can save energy and will not need food for some time.

Frogs are carnivores, which means they eat other creatures such as insects and bugs and use their long sticky tongue to catch them. Hundreds of soft round eggs known as spawn are produced in the spring, which will hatch into tadpoles. Gradually their legs begin to develop and soon they look like adult frogs.



Bats

Bats hibernate in caves or roofs for the winter when temperatures are cold. They hang upside down by their feet from the roof of the cave or building they inhabit. They slow down their heart rate, breathing and growth rate during this time and survive off the fat stored in their bodies. Their body temperature drops to about 2°C and will remain like this until the temperature outside rises.



Squirrels

Did you know that squirrels don't hibernate – they curl up in their den or drey in bad weather but come out when they need food. Squirrels eat a lot of food in autumn which makes them fat but they do not eat enough to hibernate. They stock up on seeds and nuts from trees, which are their favourite, but will also eat berries, mushrooms and flowers.



The Hedgehog

Although hedgehogs mainly eat insects, they also eat slugs, worms, fruit and berries. Their backs are covered in about 5,000 spines but there is hair and soft fur underneath. Young hedgehogs are born naked but the spines break through several hours after they are born. Hedgehogs are good swimmers and climbers and make a lot of grunting sounds. They sleep during the day and come out at night

to find food when they will be hidden from predators. If an attacker gets too close the hedgehogs roll into a ball so that the head and feet are

protected. Sometimes leaves or grass get stuck to the spines helping them camouflage (blend in with their surroundings).

In winter when the weather gets cold hedgehogs curl up in a bed of leaves and sleep. Their body temperature drops to match the outside temperature and growth slows down to save energy, so much so that hedgehogs have been known to stop breathing for periods of up to an hour during hibernation. Before they sleep they eat as much food as possible, which they store as fat in their bodies, so as to survive long periods without food. On mild winter days hedgehogs have been known to sneak out of their warm nest to find food!



Plant Life



Why do some leaves change their colour in the Autumn?

In summer leaves are mostly green but in the autumn some change to various shades of orange, yellow and red.



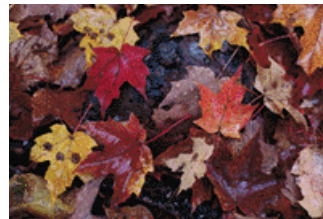
This is not because the leaves have become old or that there is something in the air that turns them that colour. Nor is it because the tree is taking up food that is made up of all these colours. Believe it or not, all these colours are present in the leaves all year round! We just can't see them!

All leaves have something called **chlorophyll** (pronounced klor-o-fill) in them. This is a chemical mixture found in the cells of leaves that gives them their green colour. Chlorophyll is used by plants to make food using the energy from the sun in a process called photosynthesis.

Along with chlorophyll there are also three other chemicals found in leaves.

- Xanthophyll (Zan-tho-fill) which is yellow,
- Carotin, which is orange
- Anthocyanin (an-tho-sy-an-in) which is red.

These are found in very small amounts that cannot be seen in summer because there is so much green chlorophyll.



In the autumn, when the weather gets colder, all the food that had been stored in the leaves is sent down to the trunk and branches where it is needed to keep them alive and strong. Since no food is made at this time the chlorophyll is no longer needed. It disintegrates and the green colour disappears. Once the green colour is gone all the other colours can be seen on the leaf, leaving beautiful leaves for us to admire!



What is the difference between Evergreen and Deciduous?

Trees and shrubs can usually be divided into two groups. Those that lose their leaves in autumn and those that don't.



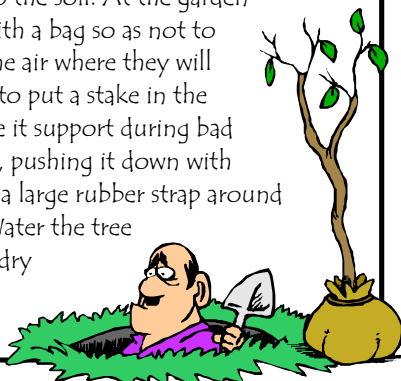
Evergreen trees, e.g. pines, keep their leaves all year

round whereas deciduous trees e.g. oak and sycamore shed their leaves in the autumn.



Planting Trees

The perfect time to plant a tree is from the start of November. At this time of the year garden centres have bare rooted trees (trees without pots and soil) which are dormant (not actively growing). Before heading to the garden centre dig a hole big enough to hold a large root and add some fertiliser to the soil. At the garden centre cover the roots with a bag so as not to leave them exposed to the air where they will dry out. It's a good idea to put a stake in the hole with the tree to give it support during bad weather. Replace the soil, pushing it down with your foot and gently tie a large rubber strap around the tree and the stake. Water the tree immediately and also in dry weather.



Why do we need trees?

Trees are very important to all forms of life. We use trees to make furniture, tools, hurleys, coffins, floors, baskets, paper, boats and houses. Trees provide oxygen for us to breath and help remove dust and pollution from the air. Trees provide habitats for animals and plants and a source of food in the form of berries, seeds and nuts. Squirrels and birds use trees for a home, food and to hide from predators. Bees and other small creatures are attracted to the nectar of trees and are also a source of food for other animals that live there. Because trees are so important we can never have enough! Plant one this autumn!



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All in a Day's Work

PETE ATKINSON

UNDERWATER PHOTOGRAPHER, WRITER AND MARINE ZOOLOGIST

PROFILE

Pete studied Marine Zoology at Bangor University in Wales and worked briefly in the Zoology Department at Bangor. He then spent some time at Sherkin Island Marine Station taking pictures of underwater life

around the island. After that he bought the 1935 classic yacht *Eila*, which was his home for 17 years. On *Eila* he sailed 45,000 miles through the Pacific Ocean shooting photos as he moved. He now lives in Queensland, Australia.



What advice would you give to anyone wanting to be a wildlife photographer?

I think to be a wildlife photographer today, you need another job, which gives you money and some free time. Study art rather than photography. Do what you love, with passion. Shoot digital and make the computer programme PhotoShop your friend. Look at the photography of Jan Tove, one of the few artists in this field.

What is your favourite creature?

Sharks, and whales too. Sharks are just so beautiful to watch and exciting to photograph.

What was the most exciting creature you have had to photograph?

Two and a half metre bull sharks in Fiji being hand-fed about a metre from the camera.

A Day in the Life of Pete Atkinson

When did you decide you wanted to be a Wild life photographer?

From about the age of four I was fascinated by fish and the ocean. I wanted to be a trawler man as a kid, and then I wanted to be Jacques Cousteau. This obsession made me want to study Marine Zoology in Bangor, in Wales. I built my first underwater camera housing for an instamatic camera when I was 17. I made my second while I was learning to dive at Bangor and then started taking photos. It was on the strength of these photos that I was invited to Sherkin Island Marine Station. And it was Matt Murphy, more than anyone that convinced me that a living could be made from underwater photography.

What is the best thing about your job?

The best thing is the freedom to do what I want, when I want.

What's the worst thing about your job?

All my film gear having so little value when I switched to digital and the frustrations of using film all my life - digital would have made life so much easier.



What is a typical working day for you?

I have to be at the boat at 8am with about 65kg of gear. From where I live it takes about 1hr 40 minutes to get to the Great Barrier Reef. The other people go off for their dive and I usually do my own thing, often in shallow water, just snorkelling shooting pictures over/under pictures. I'll go in the water three times before we head back. Before, when I lived on my yacht in the Pacific, it was easier. At Beveridge Reef, I'd set up three cameras and take them all in the water with a box of fish, which I would jam in the coral. The grey reef sharks would come up the smell-corridor so you could shoot three rolls on a single dive. We rarely had any trouble with the sharks at all.

School Talk



St. Joseph's CBS

Over the last year the boys of St. Joseph's CBS Primary School in Fairview, Dublin 3 have been getting involved in loads of activities to explore and protect their local environment! In each issue of Nature News we hope to introduce you to a school that plays a big part in looking after their local environment.



The lads have been working hard at recycling as much of the school's daily waste as possible, from paper and milk cartons, to plastic bottles and even batteries!!! The boys put all their fruit and vegetable waste in the school's compost bins. This compost is used everyday in the school garden, where classes grow flowers and plants and even goes in our wormery!!

As regards recycling, we have green bins in the school, which are collected each month, but the boys also make regular trips to our local 'Bring Centre' in North Strand. Every week a different class organises a whole-school collection of recyclable things like batteries, plastic bottles, stamps etc. which are then brought down there.

That's not all though!!! The Joey's lads also go outside their school to protect their local area! For example, here we see the boys from 4th class doing some spring cleaning on our local beach, Dollymount Strand, and in Fairview Park. Joey's boys also mapped out the whole of Fairview and Marino and performed surveys on the

amount of litter bins in our local area!

Back inside the school, the boys are kept very busy too! The boys did so well last year in the areas of science and nature studies

visited the school to talk about natural history and Irish wildlife. Joey's boys also attended a talk in ENFO about how to spot and protect whales and dolphins in Irish waters.



Above: Clean-up at Fairview Park



Above: Naturally dyed t-shirts.
Right: Clean-up at Dollymount



that they were awarded the 'Discover Primary Science Award of Excellence'. As part of their studies, the lads visited the Natural History Museum in Dublin City Centre, Dublin Zoo, the Ark project and the Bray Aquarium. Guest speaker Mr. Patrick Madden also

The lads found out that Howth Head, near Joey's school, is a great place to spot lots of sea life!

Some boys designed their own trendy t-shirts, using all natural dyes from red cabbage, lemon juice, vinegar and baking soda!!!

Our Green School Committee meets every Monday to make sure our school continues to be environmentally friendly. The committee has made up a Green School Song, which our band 'The Groovy Blues' can perform. The first letter of each line spells out our school's name...Joey's!
The words are:

*Just about everything
can be reused,
One class a week bring
whatever they choose,
Even fruit and veg
goes in the compost
bin,
You must be green
'round here or that
would be a...
Sin!!!*

So finally, with all of this great science and nature study being done in Joey's, plus the way everyone around our school behaves in an environmentally friendly way every day, we hope to get a Green Schools Flag for our school in the spring of 2006. We really hope we get it because in Joey's we like to say that we're 'The best and busiest little school in the world!!!'.

Article by
Mr. Ciarán Caulfield,
class teacher in
St. Joseph's CBS.
If you would like to contact
St. Joseph's CBS School, please
check out our website
www.Stjosephscbs.ie

Experiment With Nature

Make a Food Chain Mobile

In nature all organisms are part of a food chain. This is when they form a chain by eating each other. A food chain always begins with a plant. This can then be eaten by a small creature like a snail which can be eaten by a small bird which can then be eaten by a larger bird or creature. There are many food chains. See how many you can list!

Things you need

A large sheet of card, scissors, a wire coat hanger, thread, sticky tape and a pencil.



And then...

Draw eight leaves, four caterpillars, two birds and one cat. Cut these out and using the thread and sticky tape attach the leaves onto the hanger. Attach a caterpillar to two leaves and a bird to two caterpillars. Finally attach the cat to the two birds. Now you have a food chain!

Here are some activities you can try at home or at school. Please ask for permission from a grown-up before you begin.

Environmental Friendly Badge

Things you need

330ml of milk, tablespoon of vinegar, a saucepan, a cooker, a sieve and a safety pin.

And then...

Heat the milk in the saucepan over a low heat, but do not bring it to the boil. Add the vinegar. This causes a white rubbery material called casein to form. Over the sink, pour the milk through the sieve and collect the casein left behind. Allow this to set (for a day or two) but press the safety pin in before it hardens completely. You now have a blank badge, which you can decorate yourself with a photo or drawing!

Experiment with your Bird Feeder

This is a fun and interesting experiment that can include the whole school. It involves observing birds and their feeding habits at different times of the day and year.

Things you need

A variety of different bird feeders i.e. a bird table, hanging feeders etc. a range of different types of food i.e. nuts, seeds, raisins, suet etc. An outdoor thermometer and a notebook and pencil.



And then...

In your garden set up the bird feeders in slightly different locations. Measure and record the amount of food you put on each and take note of the weather and temperature. Watch and take note of the birds that feed during the day.

What to look for

Does the weather or temperature affect what food the birds eat? Are different types of birds attracted to different foods? What conclusions can you come up with from your observations?

Experiment to Observe a Chemical Reaction



Things you need

2 iron nails, 2 jars with lids, cooking oil, tap water and cooling boiled water.

And then...

Jar no.1: Put the nail into the jar, cover with tap water and firmly close the lid. Leave for a few days

Jar no.2: Put the nail in the jar and carefully cover the nail with the cooled boiled water. On top add a layer of oil. Firmly close the lid. Leave for a few days.

What happens and why?

The nail in the tap water goes rusty but the other does not. This is because oxygen must be present to make something go rusty. The tap water has oxygen in it whereas the boiled water has had all the oxygen boiled out of it and no oxygen can enter it now as the layer of oil stops it.

Learn More

Useful Addresses

GSI

Geological Survey of Ireland
Beggars Bush,
Haddington Road,
Dublin 4
web: www.gsi.ie

BIM

Board Iascaigh Mhara
Irish Sea Fisheries Board
P.O. Box No.12,
Crofton Road
Dun Laoghaire,
Co. Dublin
Tel. 01 214 4100
web: www.bim.ie

BirdWatch Ireland

Rockingham House,
Newcastle
Co. Wicklow
Tel: 01 2819878
Web:
www.birdwatchireland.ie

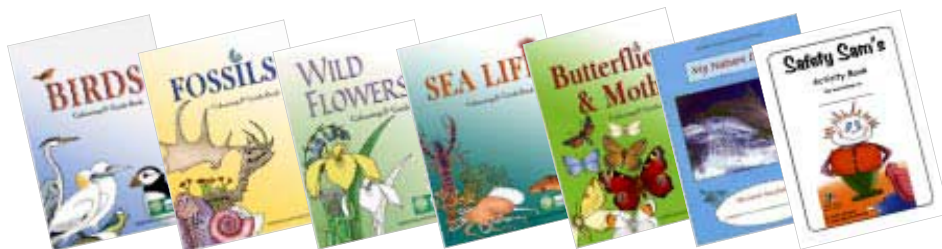
Central Fisheries Board

An Príomh-Bhord
Iascaigh
Mobhi Boreen,
Glasnevin
Dublin 9
email: info@cfb.ie
web: www.cfb.ie

Irish Whale & Dolphin Group

Merchant's Quay
Kilrush
Co Clare
email: enquiries@iwdg.ie
web: www.iwdg.ie

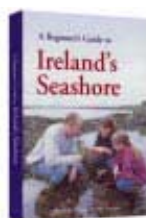
Colouring Books and Guides from Sherkin Island Marine Station



Sherkin Island Marine Station has published a range of colouring books, guides and activity books for children. Each thirty two page **Colouring & Guide Book** gives you the chance to colour, identify and learn about the wildlife around Ireland. **My Nature Diary** and **Safety Sam** will keep you occupied for hours.

Only €1.50 each including postage or all seven for only €8.50 including postage.

A Beginner's Guide to Ireland's Seashore is a pocket-sized guide, suitable for beginners of all ages. This book will help you will to explore the wonders of marine life found on the shores around Ireland.



Only €6.97 including postage

A collection of photographs of Ireland's bird life, featuring over 200 colour photographs taken by one of Europe's finest wildlife photographers, Richard Mills.

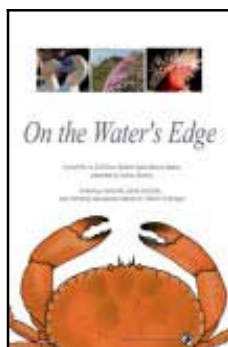


€16.00 including postage

NEW DVD!!

"On the Water's Edge"

Sherkin Island Marine Station is about to launch a new dvd called 'On the Water's Edge'. It is made up of a short film on life beside the sea and is presented by Audrey Murphy. It includes interactive material for children of all ages. Watch this space!



To order, send your name and address along with a cheque or postal order made payable to **Sherkin Island Marine Station** to:

Matt Murphy
Sherkin Island Marine Station,
Sherkin Island,
Skibbereen,
Co.Cork.



17 St. Andrews Street,
Dublin 2.

Email: info@enfo.ie

Website: www.enfo.ie

ENFO is a service that provides information on the environment to encourage us to be more aware of our environment so that we will protect it for future generations.

Visit the ENFO centre to see its exhibition area, reference library, information desk, research facilities, activities for children and much more. Posters, leaflets, fact sheets, videos and resource packs on the environment can all be obtained from the centre. There is a Children's Club and groups that visit the centre can avail of talks by a member of staff.

ENFO is a wonderful place to visit whenever you are in Dublin or you can simply look up their website. The drop-in centre is open Monday to Saturday (except public holidays) from 10.00am to 5.00pm.

The World Around Us



"Foreign Correspondent"
Michael Ludwig reports
on the some strange
goings on in the natural
world.

Giant panda gives birth to twins

On August 10th this year a panda called Xue Xue gave birth to twins in a Chinese animal rescue centre. This is good news for the panda population as there are only 1,600 pandas left in the wild. The baby boy and girl pandas are doing well but their 18 year old mother is only able to look after one cub so the boy is being cared for by the staff in the rescue centre. Xiao Xing, the little boy, weighed in at 122g and his sister, Da Xin weighed in at 151g.



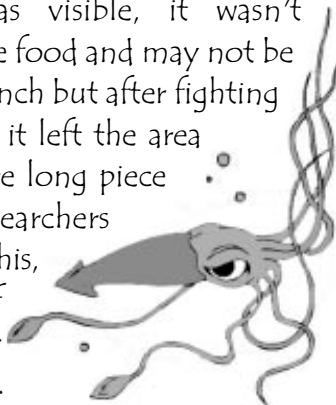
Ivory-billed Woodpeckers No Longer Extinct

It seems the Ivory-billed Woodpecker, which disappeared about 60 years ago, is actually alive and well in a National Wildlife Refuge in Arkansas, America. The bird with a wingspan of three feet had not been seen in so long it was assumed to have become extinct. It is one of the largest woodpeckers in the world.



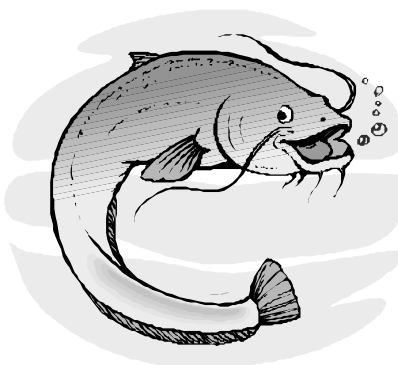
Verne's Giant Squid

It seems that Jules Verne in his book "20,000 Leagues Under the Sea" had it right when he wrote that large, nasty and hungry things swim beneath our feet at the beach. A team of Japanese researchers have taken pictures of one of Verne's giant squid attacking and fighting with a large chunk of bait hanging on hooks about 1000 meters below the sea surface at a research site off the Japanese Ogasawara Islands in the western Pacific Ocean. Purplish red in colour, like its smaller squid cousins, but almost 8 metres in length, the giant squid was attracted to the bait and cameras and put on a display of its feeding practices for the researchers. The squid pictures reveal that over the almost four hours the monster was visible, it wasn't successful at getting all the food and may not be very smart. It came for lunch but after fighting with the food and hooks it left the area after tearing off a 5 metre long piece of one of its arms. Researchers recovered and studied this, but there was plenty of meat left for a BIG dinner party for the investigators.



Huge Catch

The largest catfish ever caught was landed in the Mekong River in Northern Thailand recently. The Mekong giant catfish weighed 294 Kgs which earned it a place in



the Guinness Book of World Records. Because the Mekong giant catfish is so rare it was hoped to release the fish again to allow it to increase the population of catfish in the river but unfortunately it died before this happened. The fish, which was described as being as big as a grizzly bear was eventually eaten by the inhabitants of a local village.

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Crabs

Crabs belong to a large group of animals known as crustaceans. These animals usually have a hard, shell-like skeleton. The shell that covers the body is called a carapace, and this protects the soft parts inside. The crab has five pairs of walking legs, which are jointed to help movement. The first pair of legs bears large pincers or claws. These are used for defence, feeding, and in some species for courtship display. They are also very strong and powerful, so be careful!

Velvet Swimming Crab

Necora puber Luaineachán



This crab gets its name from the velvet feel of its shell, and its paddle-like back legs, which are used for swimming. Its bright, red eyes and aggressive nature have earned it the nickname "red-eyed devil". The hairy carapace is wider at the front than at the back. The front edge is also deeply toothed, giving it a saw-like appearance. Usually dark grey to brown in colour, features to look out for are the dark blue-black lines

Edible Crab

Cancer pagurus Portán dearg



It is easy to recognise this red-brown crab, with the "pie crust" edging of its carapace, its small green eyes, and the black tips on its large pincers. These claws, which are used for defence and feeding, tend to be bigger on the male than on the female. The edible crab can tuck its legs underneath its body and partly bury itself among stones and pebbles, making it difficult to see. Those found on the shore are usually small, but much larger specimens are found in deep waters.

Common Shore Crab

Carcinus maenas Portán glas



This is the most common of all the crabs found on the shore. It has a mottled appearance, its colour varying from yellows to reds through browns and greens to black. These colours provide camouflage amongst seaweeds on the shore. The front of the carapace is deeply serrated like a saw and is much broader than the back. This crab is found under rocks and seaweed, on rocky and sandy shores and in shallow waters.

Common Hermit Crab

Pagurus bernhardus Faocha ghliomaigh



If you see a shell on legs moving quickly across the floor of a rockpool, what you may be seeing is a Common Hermit Crab. Unlike most, the hard carapace of this crab does not cover the whole body. To protect its soft abdomen it "borrows" an empty mollusc shell, moving to a larger one every time it grows. If disturbed, the hermit crab can retreat right into the shell and close the opening with its right pincer, which is much larger than the left.

Fun Page

How much did you learn?

The answers to all these questions can be found in the newsletter...see if you can remember!

1. What is the name given to the journey which birds and animals undertake at certain times of the year? _____
2. Are whales fish, amphibians or mammals? _____
3. Are mammals warm-blooded or cold-blooded? _____
4. How many blowholes does a baleen whale have? _____
5. What does a hedgehog do when a predator frightens it? _____
6. How many pandas are left in the wild? _____
7. Do deciduous trees lose their leaves in winter? _____
8. What do trees provide to help us breathe? _____
9. How many moons does Jupiter have? _____
10. Where in the world were twin pandas born this year? _____
11. How many gallons of water would you save if you had a shower instead of a bath? _____
12. At what temperature is paper dried before it is rolled ready to use? _____
13. How long does it take the earth to orbit the sun? _____
14. Name the Galaxy in which the earth is situated _____
15. In what county is Sherkin Island situated? _____

Answers: (1) Migration (2) Mammals (3) Warm-blooded (4) 2 (5) Rolls into a ball (6) 1,600 (7) Yes (8) Oxygen (9) 18 (10) China (11) 22 (12) 600°F (13) 356 days (14) The Milky Way (15) County Cork

Nature Jokes

Why does the ocean roar?
You would too if you had
crabs on your bottom!



What did Neptune say to Saturn?
Give me a ring sometime!



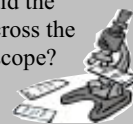
How do trees get on the internet?



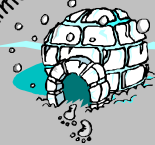
Where did the seaweed
find a job?
In the Kelp Wanted section!



Why did the
germ cross the
microscope?
To get to the
other
slide!



What is an igloo?
An Eskimo's home without a loo!



What runs but
never walks?
A river!

What did the Atlantic Ocean say to the Indian Ocean?
Try and be more Pacific!

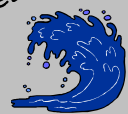
What did the Atlantic Ocean
say to the Pacific Ocean?
Nothing, it just waved!



What is the
centre of
gravity?
V!

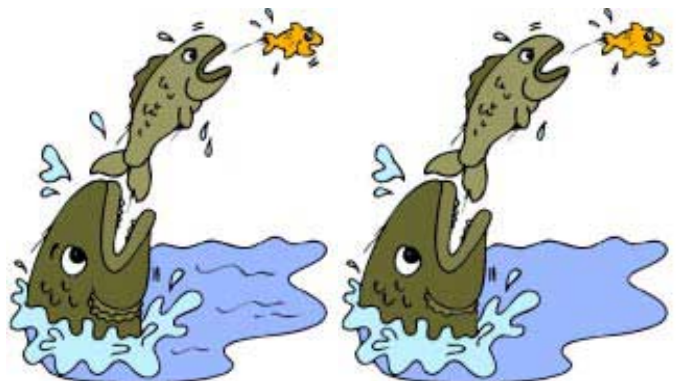


How can you tell if the ocean is friendly?
Because it waves!



What am I saying....?

Have
fun with
your
friends
making
up a
caption
for this
picture!



Spot the five differences!

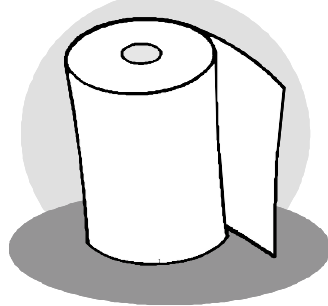
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HOW PAPER IS RECYCLED

After collection, huge bales of newspapers, magazines and other waste paper are sent to a paper recycling factory.

The bales are opened and the paper is put into a huge vat of hot water and detergents, stirred and heated to 110°F. This dissolves the ink off the paper and turns it into a grey mush or pulp.

The pulp is then sprayed through a cleaning screen which removes more ink, glue and other substances that coat the paper. Gradually the pulp becomes cleaner and brighter. The pulp that is left is the natural cell material from the inside of the tree and is called cellulose fibre.



off the cylinders with a huge blade and rolled at high speed onto a huge paper roll. A mile of paper can be rolled per minute!

This must be tested for strength, brightness and thickness and is then packaged to be reused as writing paper, toilet paper, kitchen paper etc.

So remember to recycle all your paper at home and at school and whenever possible, use recycled paper.

Remember, **REDUCE**, **RECYCLE** and **REUSE** what you can!

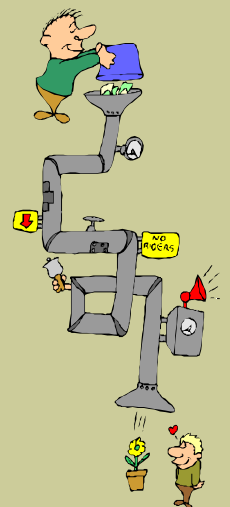
These fibres are then bleached to make them white and tested to make sure they are bright enough and properly cleaned. The fibres are then sprayed onto a large paper-making machine and squeezed through rollers to remove water.

Once the water is removed the paper is then dried over cylinders that are heated to 600°F. The dried paper is lifted

FIVE WAYS TO HELP THE ENVIRONMENT THIS AUTUMN

This Autumn try and make a difference to your environment. If you can do these five simple things you will be helping to save our planet!

- 1 Pack a litterless lunch – a lunch with no cartons or packaging.
- 2 Turn off your computer at night, it saves energy and helps your computer last longer.
- 3 Turn off lights when you leave a room.
- 4 Plant a tree, not only will it produce oxygen for us to breathe but it also provides a home and food for wildlife.
- 5 For Christmas try making new cards by reusing old ones.



Special Feature



Our Place in Space



You are one of millions of humans that live on Earth.



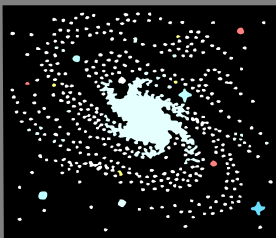
The Earth is one of nine (ten!) planets that orbit the Sun in our Solar system.



The Sun is one of 100,000 million stars that make up a Galaxy called the Milky Way.



There are roughly 100,000 million galaxies in the whole Universe.



The Milky Way

It is believed that a galaxy first begins as a huge cloud of gas that is pulled apart to make lots of stars, these seem really small because they are very far away but are actually often bigger than the sun. We belong to a galaxy called the Milky Way, which constantly moves around in space. It apparently got its name because it

looks like a splash of milk in the night sky but if you saw the Milky Way from space it would actually look like a huge white spiral. Because the earth is inside the Milky Way looking out, we cannot make out the spiral shape but on a clear night, if you look closely enough, you can make out a white patch that looks like a cloud right up amongst the stars. This is the Milky Way. Look around it and you may even be able to make out some of the other planets and constellations of stars that are in this Galaxy with us. Scientists used to think that the Milky Way was the only Galaxy in the Universe but we now know that there are millions of them and we also know that in each Galaxy there are millions of stars. Remember this when you look up at the sky at night and you will suddenly feel very small!

Planet Facts

Mercury – Mercury rotates and revolves around the sun the same way all the time which means the side always facing the sun is bright and hot and the other side is always dark and cold.

Venus – After the sun and moon, Venus is the brightest object in the sky. A good time to see it is just after sunset or just before sunrise.

Earth – This is the third closest planet to the sun and takes one year to revolve around it. As far as we know it is the only planet where life exists.

Mars – This planet is the most similar to earth as it also has different days and seasons but it would not be suitable for humans as there is very little oxygen.

Jupiter – This is the largest planet in our solar system and has 18 moons.

Saturn – Saturn has three rings around it made up of rock and dust particles that are 6,000 miles away from its surface.

Uranus – This planet is in sunlight for 42 years and darkness for 42 years.

Neptune – Since it was first discovered in 1846 Neptune still has not made a complete trip around the Sun.

Pluto – Pluto is so small some scientists think it is a comet or moon and not a planet. It is covered in ice and frozen methane.

Did You Know...?

It takes the earth 356 days to orbit the sun but it takes the sun 220 million years to orbit around the centre of our galaxy – the Milky Way.



It takes 8 minutes for light from the Sun to reach the Earth and it takes 27,000 years for light from the centre of the Galaxy to reach the Sun.



New Planet

Did you know that we have a new planet in our solar system? The planet, which is roughly the same size as Pluto, has not formally been named but has been given the number 2003UB313. It was first photographed in October 2003 but it was not until January 2005 that it was identified as a planet. It is a very cold and dark planet and is believed to be three times further away from the sun than Pluto.

Nature's Calendar

Autumn 2005

This is a good time to plant trees. Visit a local garden centre to see what special offers they have on bare rooted trees and pick one that is suitable for your garden.

Mo

Tue

Wed

Thu

1

This is the time to plant bulbs in your garden. Daffodils, tulips and other bulbs should be planted now so that they will come up in the spring. Visit your local garden centre and supermarket for good deals on bulbs.

4

REMEMBER...

- if you can, walk or cycle to school....
- turn off lights when you leave the room....
- close curtains at night to keep the heat in....
- have a car free day at home once a month....
- recycle Christmas cards....
- feed the birds....
- reduce, reuse, recycle...

10

Clean up your garden. In the autumn leaves, twigs, fruit and other debris end up in your garden. Now is a good time to collect all these for your next year you will have wonderful compost for your plants.

Encourage birds to your garden by feeding them nuts, fruit, fat, seeds, wet bread and even cooked meat.

17

18

25

Nesting
Although birds will not breed until the spring some search for nesting sites in late autumn so now is good time to put up nesting boxes. There are two main types of nest boxes, one with an open front and the other with a small hole on the front. Different birds choose different boxes. Place it in a sheltered spot away from direct sunlight and prevailing winds so as to protect the young inside.

24

If you don't have one already, set up a bird bath in your garden. It is very important for birds to have water to drink and to clean themselves with. A lid from a bin turned upside down is ideal. Just remember to keep it up and away from cats. To help prevent the water freezing in cold weather float a ball in it.

Sherkin Island Marine Station would like to thank Pharmachemical Ireland for their support in making this newsletter possible. We would like to thank those who have contributed to this newsletter especially Pete Atkinson, Ciarán Caulfield, Michael Ludwig and Robbie Murphy.

PHARMACHEMICAL IRELAND
Focused on a Healthy Future

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