

SUSSEX: THE COASTAL PLAIN

LINKS TO NATIONAL CURRICULUM

Science

- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other (*Year 2, Living things and their habitats*).
- Identify and name a variety of plants and animals in their habitats (*Year 2, Living things and their habitats*).
- Recognise that environments can change and that this can sometimes pose dangers to living things: Pupils should explore examples of human impact (both positive and negative) on environments (*Year 4, Living things and their habitats*).

Geography

- Pupils should develop knowledge about the World, the United Kingdom and their locality (*Key Stage 1*)
- Use fieldwork to observe, measure, record and present the human and physical features in the local area (*Key Stage 2*)
- Understand how human and physical processes interact to influence, and change landscapes, environments and the climate (*Key stage 3*).

KEY AREAS COVERED

1. Introduction to Sussex - location, history, size, sub-regions
2. Geography of the coastal plain - landscape, climate and habitats
3. Protecting the Sussex coast
4. Plants and animals of the Sussex coast (by habitat)
5. Human impact: tourism on the Sussex coast
6. Suggested activities linked to the Science National Curriculum

Note to Teachers

- These teaching notes run alongside a Powerpoint presentation and all slides are referred to in the notes.
- The notes are designed to provide key information about the region, whilst the presentation is full of effective images that will bring it to life for students in the classroom.
- Can be adapted to suit different ages of students by adding/deleting slides on the presentation and/or varying the level of detail used from the teacher notes.

KEY WORD GLOSSARY

(in alphabetical order)

Adaptation - the process by which a species becomes better suited to its environment.

Carapace - a hard shell on the back of some animals (such as crabs).

Carnivore - an animal that only eats meat.

Coastal plain - a flat, low-lying piece of land next to the ocean.

Conurbation - a large area consisting of cities or towns that have grown so that there is very little room between them.

Crustacean - type of animal (such as a crab) that has several pairs of legs and a body made up of sections that are covered in a hard outer shell.

Drought - when there is a shortage of rain over a long period of time.

Habitat - the home of an animal or plant.

Herbivore - an animal that only eats plants.

Invertebrate - an animal that does not have a backbone.

Mollusc - any one of a large group of animals that have a soft body without a backbone and that usually live in a shell.

Nature reserve - an area of land that is protected in order to keep safe the animals and plants that live there, often because they are rare.

Omnivore - an animal that eats plants and other animals.

Pollution - happens when the environment is contaminated, or dirtied, by waste, chemicals, and other harmful substances.

Predator - an animal that lives by killing and eating other animals. The animals they eat are called the **prey**.

Scavenger - an animal that eats dead animals that they find.

Succulent - a plant that stores water in its leaves or stems.

Tentacles - one of the long, flexible arms of an animal that are used for grabbing things and moving.

1. INTRODUCTION TO SUSSEX

Location

Slide 3: Located around 50 miles south of London, in the south-east of England, lies the ancient county of Sussex.

History

The history of human habitation in Sussex goes back to the Old Stone Age and the oldest hominid remains known in Britain were found at Eartham Pit, Boxgrove in West Sussex. The foundation of the Kingdom of Sussex is recorded by the Anglo-Saxon Chronicle for the year AD 477 and the archaeology suggests that Saxons started to settle in the area in the late 5th century.

The county's name is derived from the tribe who once ruled the area - the South Saxons. In the 9th century Sussex was known as Suth Seaxe (*Suth* meaning south and *Seaxe* meaning Saxon). By the time of the Domesday Book (1086) it was called Sudsexe.

Slide 4: Sussex boasts a number of spectacular castles which cover a wide range of history. The coast of Roman Britain had a series of defensive forts on them, such as Pevensey Castle which has a history dating back to the 4th century.

Area and Population

Sussex is one of the largest counties in England, encompassing about 1,461 square miles. It is 75 miles long and between 22 and 25 miles wide. The population of Sussex is around 1.6 million.

Sub-Regions

Slide 5: Sussex has a fantastically varied landscape. The county can be divided into 3 geographical sub-regions:

1. The coastal plain
2. The South Downs
3. The Weald

There is a set of teaching notes with an accompanying presentation for each of these sub-regions.

2. GEOGRAPHY OF THE SUSSEX COASTAL PLAIN

Landscape

Slide 7: The coastal plain region of Sussex is a fertile narrow belt.

Slide 8: Over 80 miles of beaches stretch almost unbroken along its whole length from Chichester Harbour to Camber Sands. The beaches along the coast vary from sandy to shingle.

Climate

Slide 9: The Sussex coast has consistently more sunshine than the inland areas. Sea breezes, blowing off the sea, tend to clear any cloud from the coast. In fact, the coastal resorts of Sussex, together with neighbouring Hampshire, are the sunniest places in the UK and rainfall is below average. The climate is mild as the coastal plain is sheltered by hills from the north and east winds.

Tourist Development

Slide 10: The beaches and mild climate have resulted in the growth of many resort towns and the Sussex coastal plain has become a sprawling coastal conurbation. There are a long string of beach resorts including Bognor, Worthing, Hove and Brighton. Past Beachy Head lie Eastbourne, Bexhill-on-Sea and Hastings.

Plants and Animals

Slide: 11: Although some sections of the Sussex coast have become highly urbanised, others remain in a more natural state and provide a haven for a great variety of plants and animals. Many species are highly specialised and live only on the coast. A wide range of habitats exists along the coast including shingle and sand beaches, sand dunes, sea cliffs, salt marshes and mudflats and saline lagoons.

3. PROTECTING THE SUSSEX COAST

Sussex Heritage Coast

Slide 13: A heritage coast is a strip of coastline that is recognised for its natural beauty, wildlife and heritage. 1,057 km of the English coastline has been defined as heritage coast and the goal is to conserve their natural beauty and improve accessibility for visitors.

The Sussex Heritage Coast stretches for 6 miles from Eastbourne, along the chalk cliffs of Beachy Head and the Seven Sisters, past Cuckmere Haven and on to Splash Point at Seaford. It was the first Heritage Coast established as part of a plan to protect and conserve the best stretches of undeveloped coast in England. The Heritage Group have published an action plan that sets out how the area will be managed for wildlife, landscape, tourism, recreation, heritage and the local community.

Marine Protected Areas (MPAs)

Slide 14: The seas around Sussex are home to a huge variety of marine life and there are many important habitats and natural features. But they are also heavily used by ships, recreational users and maritime industry. Pollution and damage has resulted in destruction of habitats and decline of species. It is now recognised how important it is to protect the marine environment and **Marine Protection Areas (MPAs)** have been established - these are parts of the sea where wildlife and habitats are protected. This includes restricting human activities such as fishing. Areas of sea around the Sussex coastline, such as Beachy Head East and Pagham are now protected.

Area of Outstanding Natural Beauty - Chichester Harbour

Slide 15: Chichester Harbour is a large natural harbour to the south-west of the city of Chichester on the River Solent. It is an area of deep salt-water channels bounded by mud banks which are exposed at low tide and is the richest source of food for birds. There are a number of other habitats - a large area of salt marsh, sand dunes and shingle near the entrance.

Birds choose to spend all or part of the year here because the conditions suit them - there is plenty of food and little pollution or disturbance. Chichester Harbour is home to dozens of species of sea birds, in particular for wintering wildfowl and waders, of which five species reach numbers that are internationally important.

Chichester Harbour was designated an **Area of Outstanding Natural Beauty** (AONB) in 1964 and is a **Special Protection Area (SPA)** for birdlife.

Coastal Nature Reserves

There are many wonderful nature reserves on the Sussex coast, managed by organisations such as the Sussex Wildlife Trust and the RSPB. They act to protect wildlife and the natural environment of Sussex. A few notable reserves include:

Rye Harbour Nature Reserve

Slide 16: This is one of the most important conservation sites in Britain, managed by the Sussex Wildlife Trust. It is also recognised as a **Site of Special Scientific Interest (SSSI)**, a **SPA** for birds and a **Ramsar** site that takes account of its importance as a wetland on an international scale.

The beach at Rye Harbour is a fantastic stretch of coastline, featuring vegetated shingle and an expanse of sand at low tide. The shingle is an important breeding ground for terns, which also use the coastal waters to forage for small fish. As well as shingle, there are many other habitats to be found here such as saltmarsh, saline lagoon and grazing marsh.

Over 3,300 species have been recorded here so far; but it is not just the number of species recorded that is important, but also the large number that are considered local, notable, rare or endangered.

Pagham Harbour Local Nature Reserve

Slide 17: Managed by the RSPB, this is one of the few undeveloped stretches of the Sussex coast. Its sheltered inlet is an internationally important wetland site for wildlife where, amongst others, you can see brent geese, little egrets, little terns and pintails.

Medmerry Nature Reserve

Slide 18: Medmerry is the result of the largest realignment of the open coast ever undertaken in the UK. It is an Environment Agency flood protection scheme, created in partnership with the RSPB and is forming vital new intertidal wildlife habitats.

As Medmerry's intertidal mudflats and saltmarsh develop naturally, this brings in a wealth of new wildlife - from plants, fish and invertebrates, to the birds that feed on them.

4. PLANTS AND ANIMALS OF THE SUSSEX COAST

Sussex has a huge stretch of coastline which supports a variety of different habitats and their associated species. There are far too many species to list here, so below is a selection of those you are most likely to see in each habitat, together with a few rare species you may be lucky enough to spot:

Habitat 1: Vegetated Shingle

Plants

Slide 20: Shingle beaches are harsh environments for plants. There is hardly any soil, very little freshwater, strong wind sand salt spray. But a few plants have developed special **adaptations** to survive these conditions, including:

Slide 21: **Sea kale** - a type of cabbage. This is a large plant with white flowers and thick grey-green leaves, with a waxy coating to reduce water loss. Its root can be up to 2m long to reach the freshwater far below the ground surface.

Slide 22: **Sea campion** - has very small leaves and grows in mats or cushions to protect itself from the wind.

Slide 23: **Vipers bugloss** - very distinctive with beautiful blue flowers and a very long root.

Animals

Slides 24-25: Shingle is an important breeding ground for **terns** which also use coastal waters to forage for small fish.

Slide 26: The **ringed plover** is a small short-legged wading bird that breeds on beaches around the Sussex coast.

Slide 27: Some invertebrates are shingle specialists e.g. the caterpillar of the rare **toadflax brocade moth** is found on shingle at a few sites in East Sussex. There are also several spiders which are only found on shingle beaches and a completely new species of fly was recently found living deep within the beach at Rye Harbour.

Habitat 2: Sand Dunes

Slide 28: Sand dunes develop behind wide sandy beaches that dry out at low tide. Strong winds blowing onshore pick up the sand and carry it away, depositing it in small mounds at the back of the shore. If they survive long enough, they start to become colonised by plants. The sand dune system at Camber Sands

contains locally and nationally important animal and plant communities. There are also sand dunes at East Head and West Wittering. The plants and animals that live here have special **adaptations** that allow them to tolerate the difficult conditions.

Plants

Slide 29 : Marram grass is specially adapted to the difficult growing conditions. These plants help to stabilise the sand with their extensive root systems and also trap further supplies of sand amongst their leaves and stems.

Slide 30: Sea buckthorn is a large deciduous shrub with narrow, willow-like, silvery leaves and thorny shoots. Small yellow flowers are followed by small, bright orange berries on female plants.

Slide 31: Common evening primrose is also known as 'evening star' and has large, yellow, sun-like flowers that only open in the evening.

Animals

Rich dune grassland eventually supports species such as orchids. The plants in turn attract invertebrates providing food for animals such as the common lizard.

Slide 32: Common lizard - the UK's most common and widespread reptile. It is unusual among reptiles as it incubates its eggs inside its body and 'gives birth' to live young rather than laying eggs.

Slide 33: Sand lizard - males have green flanks which are at their brightest in the breeding season, making them easy to spot. They favour sandy heathland habitats and sand dunes and can be spotted basking on bare patches of sand.

Slide 34: Long-winged conehead - a small Bush-cricket, named for the angled shape of its head. It is a slender green insect.

Habitat 3: Saltmarsh and Mudflats

Slide 35: Saltmarsh and mudflats are very productive wildlife habitats and are home to a unique set of plants and animals.

Saltmarsh is a rare habitat found around river estuaries at only a few places in Sussex - mainly at the harbours of Rye, Chichester and Pagham. Although saltmarsh is sometimes seen as 'unsightly' with lots of exposed mud, it is in fact one of the richest habitats in Sussex. It is an extremely important food resource for breeding and wintering wading birds and wildfowl and can also be important for invertebrates.

Plants

The type of vegetation that grows here depends on how high the land is above sea level and so how often it is covered by the sea. All these plants are very salt tolerant and are adapted in some way to retain freshwater:

Slide 36: Glasswort - the first plant to colonise low down on the shore. Also known as 'marsh samphire', its succulent nature makes it tolerant to the harsh conditions of the shore.

Slide 37: Sea spurge - a common plant of sand dunes and coastal areas. It flowers between June and October and has fleshy leaves that help the plant to retain water in the dry conditions in which it thrives.

Slide 38: Sea aster - has fleshy leaves to retain water. Asters are also known as 'Michaelmas daisies' due to their late flowering period and are a particularly valuable source of nectar for late butterflies like the Red Admiral.

Animals

The salt marsh and mudflats provide a welcoming nesting and feeding habitat to a wide variety of birds:

Slide 39: Herring gull - a large gull that can be seen at most seaside towns in the breeding season. For more information on the herring gull please see this fact sheet: <http://ypte.org.uk/factsheets/gull-herring/overview>

Slide 40: Black headed gulls are quite feisty birds and groups will often squabble over available food.

Slide 41: Snipe - a medium sized wading bird with short legs and a long straight bill.

Slide 42: Grey heron - a large and long-legged wading bird that can be seen around many rivers and lakes. Please see YPTE's factsheet on the grey heron for more information: <http://ypte.org.uk/factsheets/heron-grey/overview>

Slide 43: Mute swan - a large white water bird that flies with its neck extended and with regular, slow wingbeats. You will find more information on the mute swan here: <http://ypte.org.uk/factsheets/swan-mute/overview>

Slide 44: Canada goose - a large goose, with a distinctive black head and neck and large white throat patch.

Slide 45: Greylag goose - a big bird with broad wings. The greylag goose is the only other 'wild' goose, apart from the Canada goose, that breeds in Britain.

Slide 46: Brent goose - during the winter the United Kingdom is home to globally important numbers of brent geese, that have spent the breeding season in the Arctic.

Slide 47: Mallard duck - the familiar 'quack' is the call of the female summoning her ducklings.

Slide 48: Tufted duck - smaller than a mallard with a small crest and a yellow eye.

Slide 49: Pintail duck - recognised by its slender build, long, elegant neck and elongated, spiky central tail feathers.

Slide 50: Shelduck - large birds with white plumage, a dark green head and neck, chestnut-brown belly and a red bill.

Slide 51: Avocet - a distinctively-patterned black and white wader with a long up-curved beak.

Slide 52: Redshank - a common wading bird with bright orange-red legs and bill.

Slide 53: Lapwing - Its black and white appearance and round-winged shape in flight make it distinctive, together with its splendid crest. It is also known as the 'peewit' in imitation of its display calls.

Slide 54: Oystercatcher - a large, stocky, black and white wading bird. It has a long, orange-red bill and reddish-pink legs.

Slide 55: Cormorant - a large black, fish-eating bird with a long, hook-tipped bill. Often seen standing with its wings held out to dry. You will find more information on the cormorant here:

<http://ypte.org.uk/factsheets/cormorant/overview>

Slide 56: Shore Crab - despite also being called the 'green crab', it is very variable in colour. It grows to a maximum size of around 8 to 9 cm across the **carapace**. The front edge of the carapace has a serrated edge and it has eight legs and two claws.

Slide 57: Starwort moth - mainly coastal in distribution, they feed on the flowers of sea aster.

Saline Lagoon

Slide 58: Saline lagoons are very rare - it is thought there are 13 in Sussex. They are bodies of water which form behind sand or shingle ridges and are fed by salt and freshwater. They are often tidally influenced and provide unique niches for unusual coastal species. Lagoons often have mud or sand, making them important for burrowing **invertebrates**. The water is full of shrimp and small fish that attract fishing birds.

Slide 59: Little egret - a small white heron with black legs and bill and yellow feet.

Slide 60: Little grebe - small and dumpy water bird with a pointed bill. Often appears to have a 'fluffy' rear end.

Slide 61: Kingfisher - small bright blue and orange birds, found by slow moving and still water.

Slide 62: Knot - a short-legged, stocky wading bird. In winter, it is grey above and white below, but in the summer the chest, belly and face are brick-red.

Slide 63: Lagoon cockle - A cockle has a soft body enclosed in two hard, thick shells. The two shells are of the same size and shape (semi-spherical) with a ribbed surface of around 25 lines. They are usually an off-yellow or brown colour with a white inside. The inside sometimes has a brown or purple tint to it.

Rocky Shore

Slides 64-65: In Sussex, brilliant rockpooling sites include Seven Sisters Country Park near Seaford, the coastal stretch between Brighton Marina and Rottingdean, around Worthing Pier and The Pound in Eastbourne.

Plants

Slide 66: Sea lettuce - a seaweed that can form dense patches on the seashore, especially in mid summer. If detached from where it is growing by the waves, it is able to live by floating freely on the water.

Slide 67: Bladderwrack - a seaweed that has pairs of air bladders, which float fronds towards the light on the surface of the water.

Slide 68: Seagrass - flowering algae that form vast meadows (or beds) on the seafloor. Some beds can be seen at low tide, whilst others are permanently immersed in seawater. They complete their full life cycle underwater and even have waterproof pollen!

Slide 69: Serrated wrack - a common wrack seaweed that grows just above the low water mark on rocky shores. Its name comes from the serrated edges on its fronds.

Slide 70: Oarweed - a typical 'kelp' seaweed. Dark brownish-green, with long fronds split into long 'fingers' or 'ribbons'. Grows in dense beds and floating fronds may be exposed at low tide.

Rockpooling Guide

- The best places to find interesting creatures are fairly sheltered, rocky seashores, whether they are gravelly or sandy.
- Most rockpool creatures are marine animals and need full seawater, so look for pools close to the sea edge.
- Wear shoes with a good grip to prevent slipping on wet rocks, such as beach shoes - definitely not flip flops!
- Check tide times for the area you are rock pooling in - the best time to set out is low tide when the greatest number of rock pools are exposed.
- Keep an eye on the tide and sea conditions all the time, as they constantly change. Make sure it's safe to be there!
- Try not to use a net as many rock pool creatures are small and delicate, so being tangled in a net can cause them harm. Use a clear bucket instead - this will let you contain creatures for closer inspection. You can either place the bucket in the water and see what swims in or push it gently through the water to scoop up a creature you have spotted.
- Respect marine creatures by carefully returning them to the pools they have come from. Never remove them from their habitat or leave them sitting in the sun.
- Don't forget to look into the crevices between rocks.

Animals

It's a good idea to take an identification guide with you or a camera so you can look up the creatures you find later. Here are some of the rockpool creatures you are most likely to find:

Slide 71: Common brittle stars are echinoderms and usually have 5 arms covered with spines. Some can swim but most crawl along the seabed using their flexible arms. They can also cast off an arm if injured - not a problem for them as they can grow another arm within months! They are **omnivores**, eating both algae and feeding on plankton and detritus (decaying matter).

Slide 72: Common starfish - five arms covered with white pimples, and can reach 30 cm across. If they have to, they can survive for several months without food.

Slide 73: Common sunstar - has 12-14 arms and bright yellow, red and orange circular bands of colour which fade when it dies.

Slide 74: Common limpet - these are dome shaped **molluscs** and are very well adapted for a life on exposed rock surfaces. Each limpet has its own 'home' - an exact spot on the rock where it stays when the tide is out. When the tide covers their rock, the limpets leave their base and wander about, grazing on young seaweeds on the rock surface (they are herbivores). Before the tide goes out, each limpet returns to its own 'home'. Limpets boast the strongest muscle tissue of any animal.

Slide 75: Common mussel - a roughly triangular shell, which is bluish, purplish or brown in colour and covered with a black outer layer. The inside of the shell is pearly, with a blue outer edge.

Slide 76: Common whelk - a yellowish-brown shell with lighter and darker spiral areas. It has 7-8 whorls, and a large oval opening, which tapers to a point.

Slide 77: Dog whelk - these pointy-shelled molluscs are **predators** and will happily feast on the mussels and barnacles that line British rock pools. Their tough, thick shell offers them some protection from both crabs and seabirds.

Slide 78: Razor clam (or razorfish) - gets its common name from its resemblance to an old fashioned cut throat razor. It has a rectangular shell which is split into two halves. It is quite brittle and fragile and is open at either end. The flesh of the razorfish inside is usually a white to pale orange in colour, while the shell itself can be a light brown to olive green.

Slide 79: Edible periwinkle - these are molluscs with rounded, smooth shells. The edible or common periwinkle is the largest of the winkles, about 3.5cm with a more pointed shell. They are **herbivores**. Common periwinkle can live for many

days without food or water. In common with many marine shellfish, they have an operculum – a trapdoor-like structure that they can use to seal themselves inside their shell, trapping water inside with them and gills, that enable them to breathe underwater.

Slide 80: Common hermit crab – these **crustaceans** usually live in the shells of molluscs, as their own outer shells are very soft. As they grow, they search for a bigger shell to fit into. Unlike other crabs they walk forwards and backwards, instead of sideways. Hermit crabs are omnivores and scavengers.

Slide 81: Common shore crab - these are common on all shores. They are **carnivores** and **scavengers** and eat most animals, especially molluscs like periwinkles.

Slide 82: Edible crab - when disturbed it curls its legs under its body and into a ball to protect itself. They are carnivores and feed on smaller animals.

Slide 83: Velvet swimming crab - easily distinguishable from the common shore crab as the back legs are adapted into flat paddle-like flippers to aid swimming and its eyes are red.

Slide 84: Beadlet anemones are carnivores and use their **tentacles** to sting shrimps, fish and other small animals that they eat. Sea anemones rarely move and are usually found attached to a hard surface such as a rock, seashell or the back of a crab. They can survive on the upper parts of shores by retracting their tentacles, reducing their surface area to a minimum and trapping water inside their bodies.

Slide 85: Snakelocks anemone - distinguished by long flowing tentacles and will usually be found in a bright green colour, sometimes with purple tips to the tentacles. They can't retract their tentacles when exposed to the air.

Slide 86: Tompot blenny - a medium-sized, large-headed and large-eyed fish found in rock crevices below the low tide line. It is orangey-brown in colour, sometimes greenish, with several darker bars running down the body. It also has two branched, feathery tentacles on the top of the head, one above each eye. The tompot blenny can grow up to 30cm long.

Slide 87: Two-spotted goby - can be any colour from red to green. They are very small - only about 6 cm.

Slide 88: Sand hopper - live under seaweed and rocks around the tide line, where they feed on rotting seaweed and animals. They grow up to 2 cm long.

Slide 89: Acorn barnacle - These are crustaceans and relatives of shrimps, crabs and lobster. They are sharp, shelled little creatures that attach themselves firmly to rocks, withstanding the biggest of waves. You can often see lots of these on the upper shore when they're closed up and waiting for the tide to come back in. But when in water they are more active - 6 pairs of feathery legs stick out of the top, sweeping through the water and catching food (they are omnivores).

Slide 90: Common prawn - a crustacean related to crabs and lobsters. They flick their tails and shoot backwards quickly to escape from danger. If you put your bare feet carefully into a rock pool, prawns might come and eat your dead skin - a prawn pedicure! Prawns are omnivores and are prey to a large number of fish - cod, plaice and haddock will all feed on prawns.

For a very simple spotter sheet please see here:

<http://www.wildlifewatch.org.uk/images/Downloads/spotTERS/rockpool%20detective.pdf>

5. HUMAN IMPACT: TOURISM ON THE SUSSEX COAST

History of Tourism on the Sussex Coast

Slide 92: The tourism trade in Sussex really started in 1753 when Dr Russell of Lewes published a thesis on sea bathing and the benefits to health of seawater. The shelter provided by the South Downs means that the climate on the Sussex coast is generally milder than other parts of England. Being in easy reach of London the south coast became a popular holiday destination. This led to the development of the South Coast and fishing villages such as Bognor Regis, Littlehampton, Worthing, Eastbourne and Bexhill-on-Sea flourished as seaside resorts.

Slide 93: Today Sussex is one of the most visited counties in England. Much of the Sussex coast is now built on, with towns and villages merging into one another.

Benefits of Tourism for Sussex (slide 94)

- Income for the local economy
- Jobs for local people - a large number of people depend on tourism for their employment
- Pressure to conserve the habitats and wildlife that tourists are coming to see and enjoy.

Negative Environmental Impacts

- Traffic congestion and pollution (slide 95)
- Litter (slide 96)
- Erosion (slide 97)
- Damage to plants that play a crucial role in stabilising beaches (slide 98)
- Fires (slide 99)
- Fouling by dogs (slide 100)
- Disturbing wildlife (slide 101)

How Can Visitors Help to Reduce Environmental Damage?

Slide 102:

- Try to avoid using a car and where possible consider the train, bus, bike or walking.
- Dispose of litter responsibly - never drop it.
- Try to pick lesser-known areas to help reduce pressure on the most popular sites.

- If there is a designated path, stick to it.
- Take care not to trample on plants and avoid walking through densely vegetated areas.
- Do not remove plants or shingle from the beach.
- Try not to disturb wildlife e.g. birds nesting on a beach
- Make sure dogs are kept on a lead if they are likely to disturb wildlife.
- Clear up after dogs.
- Don't light bonfires on the beach.

6. SUGGESTED ACTIVITIES

(linked to Science National Curriculum requirements)

Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other (*Year 2, Living things and their habitats*).

Choose a plant or animal that lives on the Sussex coast. Produce a fact file on your species and try to include photographs and sketches where possible. Your factfile should address the following questions:

- What does your species look like?
- What habitat(s) is it found in?
- What does it need for its survival?
- How is it suited/adapted to the habitat it lives in? Think about the climate, food sources etc.
- Are there any plants or animals that depend on your species for their survival?
- Are there any threats to its survival (natural and/or human)?

Identify and name a variety of plants and animals in their habitats (*Year 2, Living things and their habitats*).

If possible, visit an area of the Sussex coast to observe the animal and plant life at first hand in its natural habitat. It could be some rock pools, a coastal nature reserve, some sand dunes or a shingle beach. Try to identify as many different plants and animals as possible and take photographs of any that you cannot identify, so you can find out what they are back at school. Produce a guide on 'The Plant and Animal Life of.....', so that visitors to the area can learn all about the local wildlife.

Recognise that environments can change and that this can sometimes pose dangers to living things: Pupils should explore examples of human impact (both positive and negative) on environments (*Year 4, Living things and their habitats*).

Find out more about how human actions are having a positive impact on the environment of the Sussex coast e.g. nature reserves, beach clean-ups and coastal defences.

Research the ways in which humans are damaging the environment of the Sussex coast e.g. tourism, pollution, litter and damage to habitats. What do you think can be done to reduce the damage?

