The Birmingham Stage Company

SKELLIG was first performed at The Young Vic in 2003. The Birmingham Stage Company is only the second company to stage the play. The BSC production, directed by Phil Clark, opened at The Old Rep Theatre in Birmingham in 2008 and then visited London. Due to overwhelming demand the play has been revived for a national tour and a Christmas season at The Bloomsbury Theatre in London.

The Birmingham Stage Company was founded in 1992 as the new resident company of The Old Rep Theatre in Birmingham. It is a unique company because it is run by an actor, called the Actor/Manager and it is funded almost entirely by ticket sales. (In this production of SKELLIG, the Actor/Manager is playing the title role).

The company produces classic, contemporary, new and children's shows. Its classic productions include CAT ON A HOT TIN ROOF, THE GLASS MENAGERIE, ROMEO AND JULIET, SHE STOOPS TO CONQUER, THE CRUCIBLE and OTHELLO.

Since 1998 it has focused on new and contemporary plays including the world premieres of LIGHTING THE DAY and BRIDGES AND HARMONIES by Oren Lavie, THE DICE HOUSE by Paul Lucas, the world premiere of COLLISION by Dominic Leyton, SPEED THE PLOW and OLEANNA by David Mamet and the British Premiere of THE RETURN by Reg Cribb.

The BSC also produces work for children: current productions include HORRIBLE HISTORIES by Terry Deary, GEORGE'S MARVELLOUS MEDICINE by Roald Dahl and HORRIBLE SCIENCE by Nick Arnold.

The Birmingham Stage Company would like to express their thanks to the Young Vic for allowing the use of their material in this pack.

Young Vic

www.youngvic.org

THE BIRMINGHAM Stage COMPANY

www.birminghamstage.com

1. DAVID ALMOND

BIOGRAPHY

"Writing can be difficult, but sometimes it really does feel like a kind of magic. I think that stories are living things – among the most important things in the world." David Almond

David Almond was born in Felling in Newcastle-on-Tyne into a large Catholic family. Felling used to be a coalmining town, but by the time Almond was a child all the pits had been closed.

Almond always wanted to be a writer, stitching his first stories into little books. After a stint at a grammar school in Hebburn he went on to study English and American Literature at the University of East Anglia. He then trained to be a teacher, and worked for five years at a primary school on an estate in Gateshead.

At this point, a few of Almond's short stories began to be published in magazines and he decided to leave teaching to write full time. He sold his house and went to live in a commune in a dilapidated old mansion in Norfolk. When the money from the sale of his house ran out he wrote booklets for an Adult Literacy scheme and briefly went back to teaching.

However, Almond continued to write during this time. Several short stories were published and broadcast on Radio 4 and he completed a novel, called *Séances*, which went on to be rejected by "every publisher in the country", as Almond remembers.

Then one day he began work on *Skellig*. "It seemed to come out of the blue, as if it had been waiting a long time to be told. At times it seemed to write itself." *Skellig* was published 1998 and became an instant success.

In the same year it won both the Whitbread Children's Book of the Year and the Carnegie Medal. It was also shortlisted for the Guardian Children's Fiction Award.

Since then Almond has written several books for children and *Heaven Eyes*, published by Hodder, was shortlisted for the 2000 Whitbread Book Award. His other books include *Kit's Wilderness*, *Counting Stars and Other Stories*, *Secret Heart* and most recently *The Fire-Eaters*.

For the theatre David has written a play *Wild Boy, Wild Girl* (2001) for Pop-up Theatre and an adaptation of his novel *Secret Heart* was performed at the Royal Exchange in Manchester in 2002.

FURTHER READING

Kit's Wilderness

13-year-old Christopher Watson, nicknamed Kit, moves to Stoneygate, an old English coal-mining village where his ancestors lived, worked, and died. Kit finds a monument in the local graveyard bearing the name of child workers killed in the Stoneygate pit disaster of 1821. The list of names includes his own – *Christopher Watson, aged 13 (*also the name of a distant uncle) and that of John Askew, a classmate of

Kit's. When John Askew draws Kit and his other classmates into a game called Death, - a spin-the-knife, pretend-to-die game that they play with candles, bones, and carved pictures of the children of the old families of Stoneygate – the past threatens to cast its shadow over the present.

Heaven Eyes

One night, orphan Erin and her friends January Carr and Mouse Gullane run away from their orphanage, and sail away on the river using a makeshift raft. The three children soon run aground in some sticky mud flats called the Black Middens. There they meet a strange girl called Heaven Eyes, who insists that they are her long-lost sister and brothers. She takes them to her home in an abandoned warehouse where they meet Grampa, a stragglyhaired, scary old man. Erin and Mouse are soon at home with their new companions, but January isn't happy…

Secret Heart

Joe Maloney feels utterly alone and misunderstood by his peers, his mother and even his best friend, who keeps pushing him to be something he is not. One day he comes across a circus on the edges of town and there, in a blue tent, he meets a tiger who shows him a world filled with magic, risk and the unexpected.

Counting Stars

A collection of autobiographical stories set in and around Newcastle, the area where David Almond grew up.

The Fire-Eaters

On the Northumberland coast, north of Newcastle, the Burns, Gower and Spinks families live in houses on the dunes. Robert's father works in a shipyard; the motherless Spinks family are sea-coalers, the only daughter, Ailsa, kept willingly from school to care for the others. The Gowers, an intellectual couple with one self-possessed son, are originally from Kent. It is 1962 and, while the Spinks try to repel the authorities who want Ailsa to attend school, the world is on the brink of nuclear war. Robert Burns and Daniel Gower become embroiled in a plot to get the better of a violent teacher, the children erect bonfires on the beach and all are haunted by the figure of McNulty the escapologist and fire-eater, maimed by the skewers he drives through his skin and driven by apocalyptic visions.

DAVID ALMOND BY HEATHER NEIL

In David Almond's world dreams, memories, real and imaginary events exist side by side. You will find echoes of his own childhood in *Skellig* alongside things which are quite beyond explanation. The main characters in the story, Michael and his friend Mina, are at a stage in their lives just before they begin to experience all the changes of growing up. "Children", David says, "can accept that everything cannot be logically explained because that is the world they live in; many things are still mysterious. The huge questions of life and death are there every day for children; it is adults who cloud the issues. One of the first things children say is 'Where did I come from?'"

David Almond grew up on Tyneside, on the edge of Newcastle and the edge of the countryside, where he still lives. He came from a large family of six children, but his early life was touched with tragedy. He was only 15 when his father died and, eight years earlier, the family had suffered the loss of his baby sister. He grew up to be a teacher, writing stories whenever he could, until one day, he says, "*Skellig* wrote itself. It was as if the story had been waiting to be told. When I'd finished it I allowed myself to realise that I'd been drawing on my own experience. I didn't realise that until I'd finished it."

Michael's anxiety about his baby sister recalls David's feelings about his sister and there are other parallels with his own life. Like *Skellig*, David's mother suffered from arthritis and, about ten years ago, he moved into a house just like Michael's, with an abandoned lavatory in the living room and a garage on the point of collapse.

The garage, a real but sinister place, stuffed with rubbish and cobwebs, where small creatures scuttle across the floor, also symbolically represents Michael's need to be brave, to face danger, possibly even death, for the first time.

David says, "The emotional life of people at Michael's stage is very powerful as they begin to explore their potential and their own imagination. It is good to be writing for people who are still exploring language, still learning. Writing, even as a grown-up, is a bit like that; you are learning language all over again."

The children in David Almond's stories always learn something, grow up a little. "Most children are courageous. It sometimes takes huge courage even to go to school every day. In my stories, they want to strike out, to be brave. They put themselves in dangerous positions, but they work together to resolve things. In *Skellig* Michael needs Mina and she needs him; they each provide the other with access to a different world." Mina, he says, "arrived fully formed, quoting the poetry of Blake and bringing sternness and rigour into the story. That's when *Skellig* took off". This is an example of how characters can make their presence felt, as Kit, in another of David Almond's books, *Kit's Wilderness,* knows. He tells exciting stories of his own and says, "When the people in them start to live...You can't really keep them in control".

Skellig's journey to the stage began at The Young Vic Theatre, London. The director Trevor Nunn and his family listened to a reading of the book on tape as they traveled home from Cornwall. When they arrived in London they sat together in the car outside their house unable to go in before they had heard the end of the story.

Eventually David found himself finalising a script. "Yes, there are constraints in writing a play which you don't have when writing a story; if it's a good story, you can just allow it to run. You are dealing with a smaller space in a play. You must people this space with characters. The structure forces a different kind of logic: things have to happen in sequence in a way they might not in a book. And it musn't be too long, so you have to be ruthless about cutting. Then there are the practical difficulties, like getting people on and off stage in a natural way, not to mention remembering that some actors are playing more than one character. But I think we have captured the heart of the story. Stage adaptation, like reading, still leaves quite a lot to the audience's imagination, more so than film. You concentrate on the rhythm of the language, and music and lighting help establish atmosphere.

Some moments can even become stronger, more powerful emotionally, when you actually see them."

David Almond has written five books and a play, *Wild Girl, Wild Boy*, since *Skellig*, which has been translated into 26 languages and is being made into a film. It is popular with children and teachers in schools and with many adult readers. The advice he gives to young writers is: 'We all know that writing can be serious and difficult, but it is also like playing. It is about going out into the ordinary everyday world, discovering amazing places, exploring possibilities, discovering the astonishing potential of our own minds.' For adults, he adds, "Children don't want irony. They want you to say, 'This is true' and believe it."

Enter the world of *Skellig* - mysterious but ordinary, natural but supernatural. See and believe.

INTERVIEW WITH DAVID ALMOND

Is this the first of your novels you have adapted to the stage yourself?

Yes, it's the first I've adapted for stage myself, though I did a radio adaptation of *Skellig* for Radio 4 a couple of years ago. *Secret Heart* was adapted by Amanda Dalton for the Royal Exchange, Manchester last year. My first original play, *Wild Girl, Wild Boy*, was on at the Lyric Hammersmith, and was toured nationally by Pop-Up Theatre.

How did the project arise? Were you approached by the Young Vic to adapt Skellig yourself?

I was approached by Trevor Nunn not too long after the novel came out. Trevor read the book, heard the audio book and came to me with the proposal that it should become a stage play. Trevor directed a fortnight of workshops about four years ago, and commissioned a script, which forms the basis of the current production.

What do you think is the main difference between a play and a novel? How does the role of the imagination of

the reader/audience compare?

First of all, I'd stress the similarities. They are both forms of storytelling. One of the great joys of writing for a young audience is that children do not acknowledge the supposed boundaries between different forms. Read children the story of *Hansel and Gretel*, and pretty soon they'll be miming creeping through the woods, nibbling the witch's house, shoving the witch into the oven. And given the opportunity they'll be dressing up and humming a scary soundtrack etc etc. So the written on the page becomes a story spoken by the voice and a story acted out in space. But there are differences, of course. When it becomes a play the story is liberated from the page, characters take on new (and often surprising) forms. The language becomes leaner, barer. Much has to be stripped away from a book so that it can work on a stage.

Making a production like *Skellig* is a communal act. The writer has to be willing and able to 'let go', to allow director and actors to offer their own interpretations. And the story is given different strengths by the effects of music, design, lighting, costume. In the end, of course, all stories exist in the minds of the reader, listener, audience. Each time a story is told again, the story is recreated. Reading is a private act. It involves the writer and reader in a kind of conspiracy. 'Tell me your story,' says the reader, ‘and if you tell it well enough then I'll believe you.' A play, of course, is public. It's a bigger conspiracy. It involves hundreds of people watching a dozen or so people, but the basis is the same: 'Show us the story well enough, and we'll believe you.' All storytelling depends on the talents of writers, directors, composers, performers etc, but it could not exist without the talents of the audience, without the human imagination, which is shared by all of us, and which is ordinary, commonplace, and quite, quite amazing.

5. MINA'S GLOSSARY

David Almond has very cleverly woven together a number of themes and facts that contribute to the story of *Skellig*. Mina has an incredibly enquiring mind and through her we are invited to look at the world with surprise and wonder and discover many new and surprising ideas and facts. As Michael says, “the world is full of amazing things.”

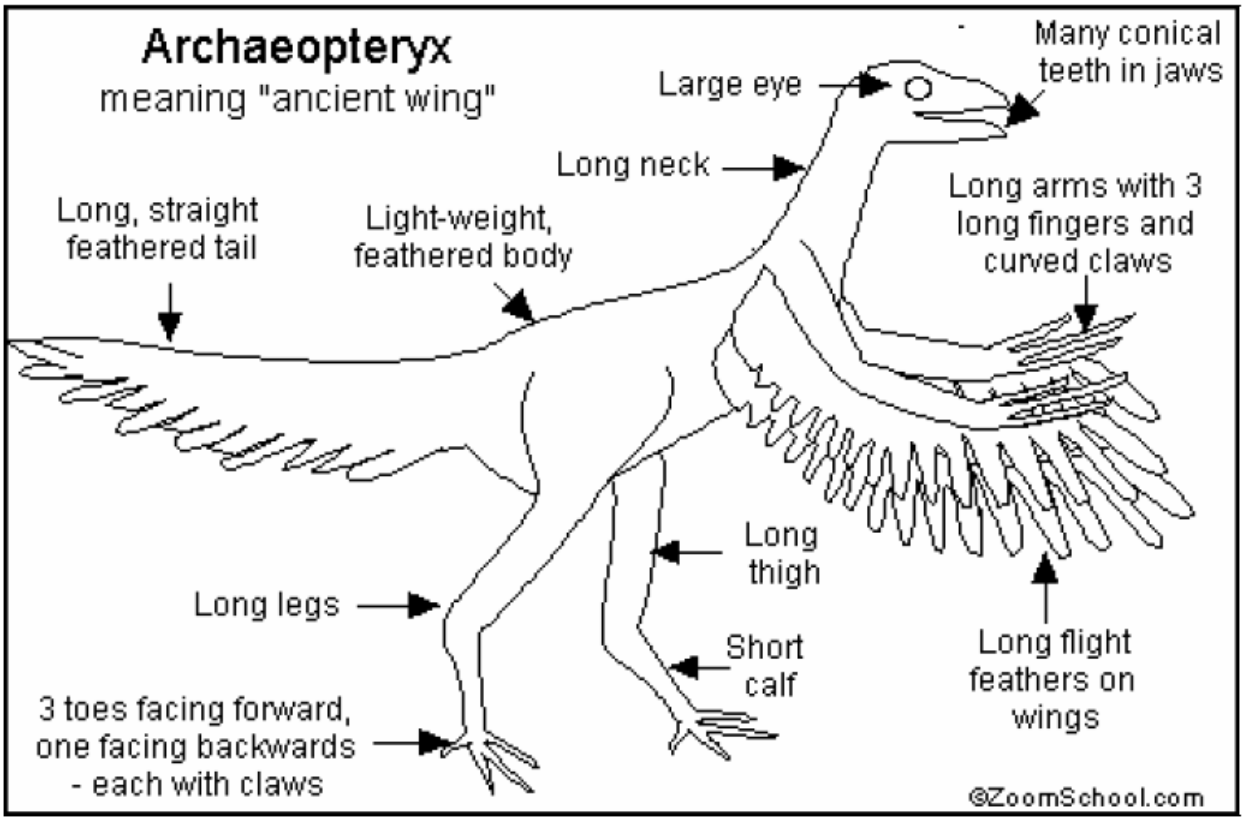
ARCHAEOPTERYX AND THE EVOLUTION OF BIRDS

"The dinosaur that flew. We believe that dinosaurs became extinct. But there's another theory that their descendants are with us still. The little archaeopteryx survived, and began the line of evolution that led to birds. Wings and feathers see? But the creature was a heavy, bony thing capable of nothing but short, sudden flights. From tree to tree, stone to stone... if you held the true archaeopteryx, it would be almost as heavy as a stone in your hands." (Mina in *Skellig)*

The fossil record of early birds is sparse because their bones are very fragile and don't fossilize well. In addition, feathers don't fossilize well either, so reconstructions of extinct birds tend to be based on educated guesses. Birds arrived comparatively late on earth. Several hundred million years ago, *Pterosaurs*, or flying dinosaurs, took the lead. These massive creatures had wings of skin, stretched between one enormously elongated finger and their flanks. Around 150 million years ago they were joined by – or, as many scientists say, they began to turn into – a much more aerodynamic, feathered

creature, the bird. In 1861 a fossil was discovered in the Jurassic Limestone of southern Germany, where a lot of rare and exceptionally well-preserved fossils have been found. The fossil contained the imprint of a feather. A search led to the discovery of another feathered skeleton which scientists named *Archaeopteryx lithographica*.

Archaeopteryx lived over 150 millions years ago, when dinosaurs still walked the earth. It had three toes armed with claws and long, strong legs. Clearly it walked and perched like a bird. Its head had the reptilian feature of jaw bones. Its spine was extended into a bony tail – just like a reptile's. However, on both sides of the tail bones, clearly visible, were feathers. (see diagram)



Archaeopteryx is one of the most important and most debated fossils ever discovered. Because it has feathers, *Archaeopteryx* is considered by many to be the first bird. However it also closely resembles twolegged, running dinosaurs called theropods. In fact, one skeleton of *Archaeopteryx* that had poorly preserved feathers was originally described as a skeleton of a small bipedal dinosaur, *Compsognathus*. Because of this *Archaeopteryx* provides evidence of a strong genetic link between the two groups and many scientists believe that birds are the descendents of dinosaurs. However, not all scientists agree with the birds-from-dinosaurs link. Some contend that *Archaeopteryx* wasn't the ancestor of all birds, but just another of nature's many experiments that became extinct. More importantly they argue that the evolution of birds had been going on before *Archaeopteryx*, and that they evolved from four-legged forest reptiles.

Whether birds evolved from dinosaurs or not, it is known that since the catastrophe that wiped out the dinosaurs – now commonly believed to have been a huge meteor – birds have taken total command of the skies. Indeed, for a time, when the early mammals were still quite small, birds effectively ruled the planet. Huge flightless 'terror-birds' stalked the land. Mighty vultures cruised the skies. One had a wingspan of over twenty feet – bigger even that that of the Andean Condor, and probably the biggest flying bird that has ever existed.

ARTHRITIS

Arthritis is the inflammation of one or more joints, causing pain, swelling and restriction of movement. Many different diseases can cause arthritis including osteoarthritis, rheumatoid arthritis and gout. Rheumatoid arthritis is more common in women and usually affects the hands, feet, hips, knees and shoulders. It is an autoimmune disease, where the body's own antibodies (the body's defence against disease) attack and damage its own tissues.

Osteoarthritis is caused when the internal surfaces of the joint are rubbed away and they become swollen and painful. This becomes increasingly common as people age: almost all older people have osteoarthritis, but some younger people can have it as well. The joints that bear the most weight are most commonly affected: back, hips and knees. Drugs can reduce the pain of the joints but cannot reverse the disease. Some people use cod liver oil to treat, but mainly to prevent, arthritis. With a high Vitamin D content, cod-liver oil is very good for bones. While moving about with a very bad case of osteoarthritis is not a very good idea, exercise can help a bad case of rheumatoid arthritis and an active lifestyle is very beneficial to healthy bones. In *Skellig,* Dr McNabola says when talking about treating arthritis: "The needle. Deep injections right into the joint. Cut bits out and new bits put in." A needle might be used to inject steroids into the joint (to reduce swelling) or pain killers to ease pain. It might also be used to *remove* a build-up of fluid, which is common in arthritic joints. A joint, such as a knee, which has been badly damaged by arthritis, might also be replaced in surgery.

Both the old woman and Dr McNabola mention the power of a positive mind ("Don't give up") in fighting arthritis. Mental health and optimism will always give patients a better chance, whatever disease they are fighting.

William BLAKE

"He painted pictures and wrote poems. Much of the time he wore no clothes. He saw angels in his garden."

(Mina on Blake)

William Blake was a visionary poet and engraver of the late eighteenth and early nineteenth century. His work is dominated by a passionate belief in liberty, equality, social justice and the transformative power of human creativity. As well as shorter epigrams, sonnets, songs and poems, Blake also wrote several longer works which blend Christian and European myth with his own creations. Blake believed in the existence of spirits and other extraordinary phenomena and his work is populated with apparitions,

angels, devils and spirits. His early intellectual growth was dominated by the influence of his brother, Robert, who died of consumption at the age of 20. Blake, witnessing his brother's death, remarked that he saw his brother's soul "ascend heavenward clapping its hands for joy", and continued, from that point on, to feel Robert's influence over his work. At the age of ten he tried to convince his father that he had seen hosts of angels in a tree in Peckham Rye and he would often claim in later life to have spoken with the strange and wonderful beings he writes about in his work.

As a talented artist as well as poet, Blake produced illustrated editions of his work full of richly coloured and imaginative representations of extraordinary creatures and strange visions (see illustrations). Brought up in a poor household, Blake was the son of a hosier and received little formal schooling. In 1771 Blake was apprenticed to James Basire, a noted engraver, after which he enrolled as a student at the Royal Academy. From 1779 he was employed as an engraver for a local bookseller and Blake continued to earn an often precarious living from contracted engraving until he was able to set up his own, largely unsuccessful, engraving business at 27 Broad Street. London.

Working with the help of his dedicated wife Catherine Boucher (the daughter of a market gardener, whom he married in 1782), Blake divided his time between composing and engraving illustrated poetry, and eking out a precarious living as a contract engraver. His first illustrated works – two philosophical pamphlets called *All Religions Are One* and *There is No Natural Religion* (1788) – followed on from the satirical verse of *An Island in the Moon* (1784-5), but it was in 1789, the year of the French Revolution and the Storming of the Bastille, that saw Blake's early masterpieces, *The Book of Thel* and *Songs of Innocence*.

Between 1789 and 1800, when the Blakes moved to Felpham in Sussex, Blake was prolifically active, composing *The Marriage of Heaven and Hell* (1790-93), *The French Revolution* (1791), *America: A Prophecy* (1793), *Visions of the Daughters of Albion* (1793), *The Book of Urizen* (1794), the *Songs of Experience* (1793-4), *Europe: A Prophecy* (1794) *The Book of Los* (1795) and *The Four Zoas* (1795-1804). In these works Blake was greatly influenced by the events of the late eighteenth century: he saw the American Revolution of 1775 and the French Revolution of 1789 as a necessary rebellion against corrupt authority. Yet, as Blake himself realized, the forces of rebellion swiftly gave way to the bloodshed and anarchy of the Reign of Terror and the imposition of new and stricter forms of social control in both France and Britain. His works, from 1794 onwards, reflect a sense of the paradoxes and complexities of rebellion although, as his work also testifies, Blake remained unswervingly committed to the principles of equality in all forms (social, political and sexual), to liberty and to justice.

In 1800 Blake moved to West Sussex and spent nearly three idyllic years there, until in 1803 he was charged, at Chichester, with high treason (for being too vocal in his responses to a soldier he found urinating in his garden). That year Blake returned to London, where he lived until his death in 1827. The final 24 years of his life Blake produced a great deal of illustrated work and engraving, including the monumental work *Milton* and *Jerusalem*, and illustrated versions of Dante and The Book of Job. After years of extreme poverty and little public recognition, Blake died in 1827, and was buried in a common grave.

William Blake

Infant Joy

William Blake

Pity

This print is thought to illustrate lines from Shakespeare's Macbeth:

And Pity, like a naked new-born babe,
Striding the blast, or heav'n's cherubim hors'd
Upon the sightless couriers of the air

Blake shows a female cherub leaning down to snatch the baby from its mother. His image refers closely to Shakespeare's text, although it also carries a sense of one of the artist's own Truths: 'Energy is the only life and is from the Body'.

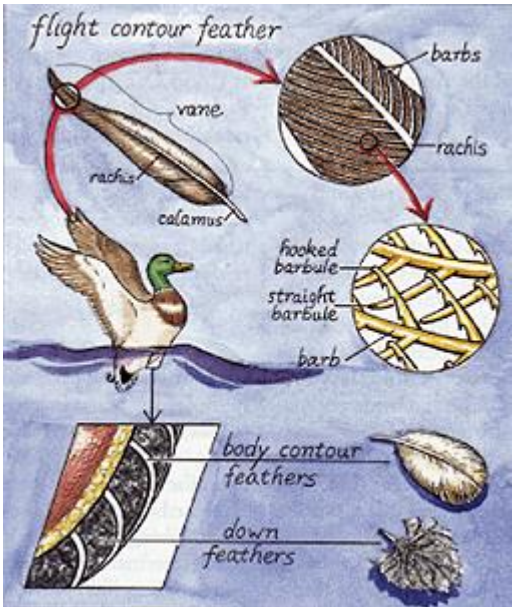
To view this print in colour you can visit the Tate Britain website www.tate.org.uk Or you can visit Tate Britain to see the original painting, their address is:

Tate Britain
Millbank
London SW1P 4RG

BIRDS

Birds have adapted to their environment by flying – making them more efficient hunters, better able to escape from hungry predators, and taking them away from harsh weather by allowing them to migrate long distances. However in order to fly, birds have had to develop a unique set of physical qualities allowing them to get off the ground.

Feathers : Depending on the species, birds have between 1,000-25,000 feathers, which take up to 15-20% of their body weight. Feathers have developed from reptilian scales in several different ways to fulfil different uses, including flight (feathers which grow in the wings and tail), thermal insulation (soft down feathers that grow close to the skin keep birds from getting too cold or too hot) and courtship and mating displays. The structure of a basic feather consists of a central spine or *rachis* which carries hundreds of vanes which in turn carry barbs which are made of many barbules which hook together with tiny hooklets. (See diagram below)

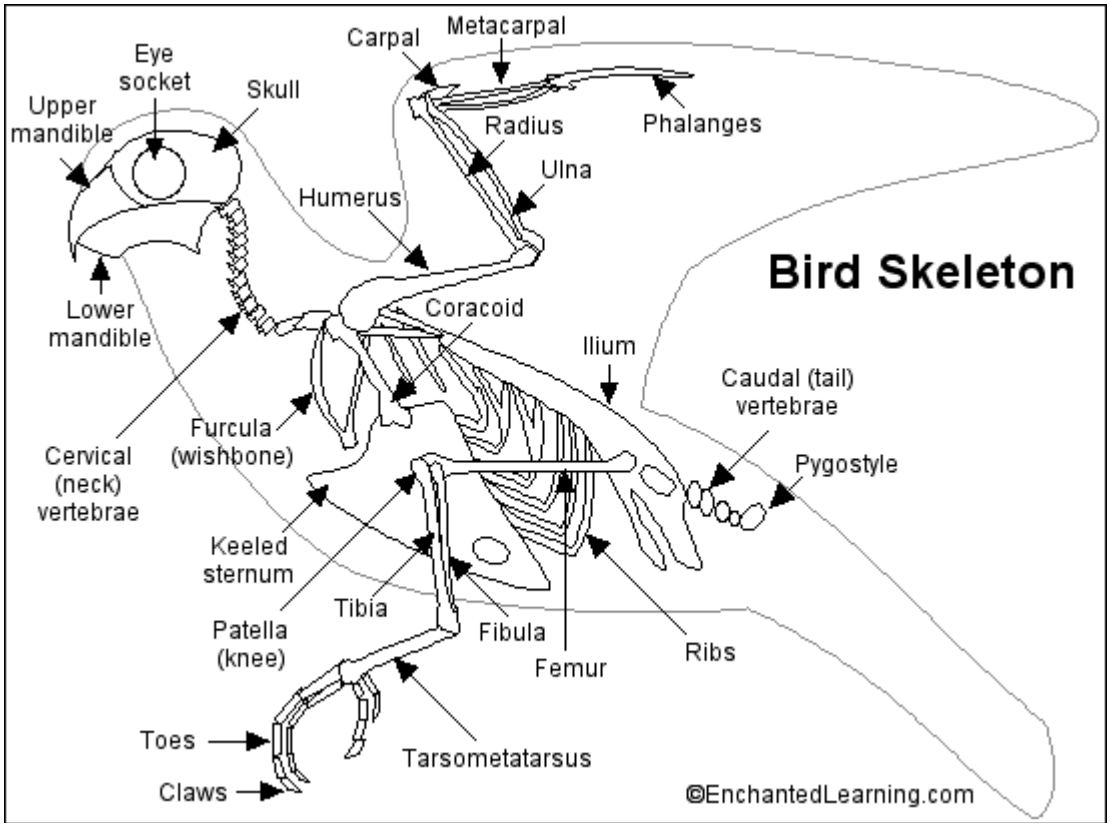


Heart Rate and Breathing: In order to fly, birds need a lot of oxygen, which they get by using a unique system in which air follows a one-way route through the respiratory system. Birds have two relatively small lungs augmented by bellows-like air sacs which keep the lungs perpetually inflated (even when the bird is exhaling). This is unlike our own respiratory system where our lungs alternately fill and empty out. The bird's respiratory system takes up 20% of a bird’s body volume (our respiratory system takes up only 5% of ours).

Birds also need a strong circulatory system, including a large powerful heart in order to circulate the oxygen. A bird's heart beats much faster than our heart does. A hummingbird's heart beats about 1,000 times each minute; a human's heart beats about 60-90 times each minute.

Skeleton: In order to meet the strains of flight and walking, birds need a powerful, rigid skeleton. However in order to make flight possible the skeleton needs to be much lighter than that of other vertebrates. Because of this birds have hollow bones and have also fused several smaller bones together for greater rigidity. The presence of air cavities within the bone is known as pneumatisation.

One of the many adaptations a bird's skeleton has made for flight is a deep keel (see diagram below) on the breastbone to support the huge muscles needed for flight. Birds also have a wishbone, which are two clavicles (collar bones) joined together, providing additional support for the breast muscles. The loss of forelimbs to provide wings also means that bird's beaks need to be able to reach much further. Birds as a result have a much longer neck.



Diet: Birds can be carnivores (meat-eaters), herbivores (plant-eaters) or omnivores (plant and meat-eaters). Birds use up an enormous amount of energy in flight and spend most of their time looking for food to replace it. A sand grouse needs to find several seeds every second to get enough food to survive. Each bird will consume between 5,000 and 80,000 seeds a day. Some seeds are so small that it takes 5,000 to make up just one gram.

Modern birds don’t have teeth as the muscles needed for chewing are too heavy. Instead of teeth, birds have an inbuilt mill, or gizzard, for grinding up their food. The gizzard is a part of the bird’s stomach which consists of strong muscular walls which are greatly toughened by a lining made of a substance called kaolin. Between these walls food is ground up. Some birds also swallow stones to help with this process. In hunting birds the gizzard also works to help trap indigestible fur, feathers and bones of prey, which is then regurgitated as a pellet.

Nests and Eggs: In order to fly birds are unable to carry the weight of growing offspring about in their body. As a result birds don’t give birth to live young, but quickly form and lay an egg covered in a protective shell that is then incubated outside the body. Although birds' eggs appear to be fragile, they are in fact extremely robust. The oval shape applies the same rules of engineering as an arched bridge; the convex surface can withstand considerable pressure without breaking. This is essential if the egg is not to crack under the weight of the sitting bird. The egg is filled with nutrients (yolk and white) for the developing bird and as a result is a valuable prize to predators. Therefore birds must build or find a secure nest to hatch their eggs. There are some birds that dispense with the need to build their own nests. These are the ‘brood parasites’, birds which lay their eggs in the nest of another species, leaving those parents to care for its young. The cuckoo is the best-known brood parasite and carefully mimics the colour and pattern of its own eggs to match that of its hosts. Each female cuckoo pursues one particular host species.

While in the nest young birds must be cared for and fed by one or both of their parents, but there is a great deal of variation in how independent the young are once they hatch from the egg. Among most perching birds, seabirds and birds of prey, the chicks hatch after fairly short periods of incubation and need to be fed for a long time. In other species, such as geese, swans, ducks and waders, the young develop for a long time within the egg and are fully feathered and ready to run about and feed by themselves almost as soon as they leave the egg. Some can even fly.

The hammerkopf builds a huge, domed nest up to six feet high and across, made of sticks, reeds and grass and weighing up to 50 kg. The nest is placed in a tree fork, on a cliff or on the ground. The whole structure may take 6 weeks to build. There is so much room that many other species, such as weaver birds, mynas and pigeons, attach their own nests to this ample frame.

The largest egg of any living bird today is that of the ostrich, another flightless species, whose egg weighs three pounds. The egg of the largest flying bird, the mute swan, in comparison weighs a mere six ounces – the demands of flight greatly limit the size of a bird's egg. The brown kiwi of New Zealand lays 2-3 huge eggs, each nearly a quarter of its own body weight. It is able to produce such large eggs only because it is flightless and spends all it's time on the ground.

Song and Plumage: Because birds can escape most predators by flying, they are able to be both noisy and colourful. Birds use song to attract a mate, to mark their territory and sometimes just to release excess energy. Songbirds have a vocal organ called the syrinx located in the throat. The muscular syrinx has two halves that each vibrate to produce songs, so the bird can sing two notes at a time. To sing, a bird blows air from the lungs through the syrinx.

Some birds (usually the male of the species) also use beautiful plumage to attract mates or to show off to rivals.

One of the most far-carrying songs of any bird is the deep boom of the male kakapo, which reverberates through the night air in New Zealand and can be heard as far as four miles away.

Flight: In order to fly, birds' wings have evolved a special shape which gives them 'lift'. This shape is called an aerofoil (see diagram below). By making the air above the wing travel further, and therefore faster than the air below the wing, the aerofoil creates an area of pressure below the wing higher than that above, creating 'lift' Some birds also use currents of air to help them stay aloft longer.

As well as creating lift, wings are also used by birds to propel themselves forward and to manoeuvre. The way the wings function is extraordinarily complex – each feather is able to be moved separately. While humans have copied the shape of birds' wings (the aerofoil is the basis of modern aviation) our planes have fixed wings and use propeller engines to move forward.

The ability of a bird to fly depends on the size of their wings in relation to their weight. Large flying birds like the albatross have enormous wingspans (up to 2m), larger birds like the ostrich or emu are unable to fly, as they would be unable to support wings large enough to lift their body weight. Alternatively some birds can fly exceptionally fast. The peregrine falcon can swoop on an intended victim at 180 mph.

COD-LIVER OIL

A pale yellow fatty oil obtained from the liver of the cod. It is a rich source of vitamins A and D and has been used for many years to treat many common ailments including those related to bones such as rickets and arthritis.

DREAMS and SLEEPWALKING

Dreams are ideas and images experienced during sleep. They take place at any stage of sleep, but are particularly associated with the 'paradoxical' stage, where the eyes move about rapidly. Dreams in this stage of sleep are the most vivid in their imagery and the farthest removed from waking thoughts. Everyone has dreams and if a person is repeatedly deprived of the opportunity to dream, he/she becomes irritable, inefficient and eventually suffers hallucinations. Dreams are often thought of as ways of processing the day's thoughts and experiences; they can create new combinations of ideas that can be useful and an invaluable aid to creativity. Some people think dreams foretell our future, others that they are windows into our subconscious thoughts. Sometimes they are so realistic and intense that we confuse them with events that actually happened. Mina says "I dream. I walk in my sleep. Sometimes I do things really and I think they're just dreams. Sometimes I dream them and think they're real." Mina also says she sleepwalks. Sleepwalking (also known as somnambulism) is when a person walks and performs complex activities in their sleep without gaining consciousness. It is quite common in children, less so in adults.

EVOLUTION

In the eighteenth and nineteenth century scientists began to develop theories of evolution. These theories suggested that all species of living creatures, rather than being created at the same time, evolved from simpler organisms over many millennia. They did so in order to adapt to their environment. The vast diversity of species found on earth represents the many different solutions to survival that are possible, along with the many different challenges created by earth's various habitats.

In 1859 Charles Darwin published *The Origin of the Species* which provided an explanation for *how* evolution may have occurred. He describes a process called natural selection where the pressures of an environment (for example not much grass) allow only the best suited to survive (i.e. those with necks long enough to graze leaves from trees). Only those who survive will be able to breed and, because many traits are hereditary, they will pass their survival advantage (i.e. a long neck) on to their children. In this way, over many generations, an animal like the giraffe evolves with a long neck. Over time Darwin's theory of natural selection and how it enables evolution has been supported by modern scientific discoveries and has become widely accepted.

Evolutionary Timeline: The following timeline traces the development of simple single-cell organisms into the many species that populate the earth today.

Time (years ago)	**Event**
4600 million	Formation of the Earth
3800 million	The Earth's crust solidifies – formation of the oldest rocks found on Earth
3800 million	Condensation of atmospheric water into oceans
3500-2800 million	Simple one-celled organisms develop
3500-2800 million	Beginning of photosynthesis by blue-green algae, releasing oxygen molecules into the atmosphere
1500-600 million	Rise of multicellular organisms
545 million	Cambrian explosion of organisms with an exoskeleton (such as trilobites)
500-450 million	Rise of the fish, the first vertebrates
420 million	Millipedes have evolved, the first land animals
375 million	Appearance of primitive sharks
350-300 million	Rise of the amphibians
350 million	Primitive insects have evolved
350 million	Primitive ferns evolve – first plants with roots
300-200 million	Rise of the reptiles
300 million	Winged insects have evolved
200 million	Appearance of mammals
145 million	*Archaeopteryx* walks the Earth
136 million	Primitive kangaroos have evolved
100 million	Primitive cranes have evolved
90 million	Modern sharks have evolved
65 million	Extinction of the dinosaurs and beginning of the reign of mammals
60 million	Rats, mice, and squirrels have evolved
60 million	Herons and storks have evolved
55 million	Rabbits and hares have evolved
50 million	Primitive monkeys have evolved

20 million	Parrots and pigeons have evolved
20-12 million	The chimpanzee and hominid lines evolve
10-4 million	*Ramapithecus*, possibly the earliest ancestor of humans after our evolutionary line diverted from the apes
4 million	The ancestors of mankind start to walk upright
4-1 million	*Australopithecus,* another possible ancestor to man evolves
2 million	The ancestors of mankind start to use tools
2 million-10,000	Most recent ice age
1.6 million-200,000	*Homo erectus* exists
1 million – 500,000	*Homo erectus* tames fire
200,000 – 30,000	*Homo sapiens neanderthalensis* exist
50,000-present	*Homo sapiens sapiens* (modern man) exist
40,000-12,000	*Homo sapiens sapiens* enter Australia from south-eastern Asia and North America from north-eastern Asia
25,000 – 10,000	Most recent glaciation – an ice sheet covers much of the northern United States
20,000	*Homo sapiens sapiens* paint the Altamira Cave
12,000	*Homo sapiens sapiens* have domesticated dogs in Kirkuk, Iraq
10,000	First permanent *Homo sapiens sapiens* settlements. *Homo sapiens sapiens* learn to use fire to cast copper and harden pottery
6,000	Writing is developed in Sumeria

The development of writing is often seen as the point at which the prehistory ends and recorded human history begins. Evolution doesn't stop here of course. Species on earth are continuing to evolve all the time. Bacteria evolve within decades to resist antibiotics, other species are engaged in a much slower process of evolving to adapt to their changing environment.

Human Evolution: Opinion on how humans evolved changes constantly as new fossil evidence is discovered. Although fossils have been found of human-like animals, (large skull, walks on two feet, has opposable thumbs etc) palaeontologists are often unable to say for certain whether they are fossils of our direct ancestors. Species such as *Ramapithecus* or *Australopithecus* (see below) may just share a common ancestor with us and are evolutionary offshoots that eventually became extinct. While chimpanzees are *homo sapiens'* closest relative, we are not descended from modern apes, but again share a common ancestor. The evolutionary family trees of apes and man branched apart about 20 million years ago. Mankind belongs to the primate family *Hominidae.* Within this family are several extinct genuses:

Ramapithecus	(lived 10 million years ago) – about the size of a gibbon, walked erect, possibly the earliest ancestor of humuns after our evolutionary line diverted from the apes
Australopithecus	(lived about 4 millions years ago) – small brain, but had a cranial capacity closer to that of modern man than apes. Walked erect and probably hunted and used primitive tools.
Homo	our own genus, includes the species:

Homo erectus (lived up to 1.5 millions years ago), may have been an ancestor to modern man

Homo neanderthalensis (lived up to 200 000 years ago) Neanderthal man walked upright, had a large brain and was a cave-dwelling hunter who used tools. Also buried dead in a manner implying some sort of ritual. Is now thought to be, rather than a separate species, another subspecies of:

Homo sapiens, our own species (appeared about 50 000 years ago and still exists!)

Many of the last developments noted in the evolutionary table above are cultural and social adaptations rather than biological or physiological changes. This is perhaps the point where the story of the evolution of man becomes history.

FOSSILS

Fossils provide us with much of our evidence for evolution. Fossils are the remains or traces of plants or animals that lived a long time ago and have been preserved in rock. This is usually sedimentary rock formed by layers of silt at the bottom of a lake, river or sea-bed gradually building up over many years. When a layer of silt is laid down over the decaying body of an animal or plant, the imprint of the body is left in the rock after the remains have decayed. Carbon dating allows us to accurately tell the age of the remains. Most species discovered in fossil traces can no longer be found on earth (that is they have become extinct) but show similar characteristics to other extinct or existing species. From this palaeontologists (those who study fossils) are able to guess at the evolution of one species to another.

HEART

The heart is a four-chambered muscular organ that pumps blood (and the oxygen it contains) around the body. The left atrium expands to receive oxygen-rich blood from the lungs and the right atrium expands to receive oxygen-poor blood from the rest of the body. Contraction of the heart forces blood into the ventricles. The left ventricle then pumps blood into the aorta which then feeds all the other major arteries of the body. The right ventricle sends blood to the pulmonary artery which leads to the lungs.

Due to its obvious importance to the functioning of the human body, the heart has also been given great significance in human lore. Some ancient cultures believed it to be the source of emotions and intelligence, others that the heart embodied a man's truth, strength and nobility. The ancient Egyptians thought that the heart held the mind and soul of the individual, they would say of the dead that their hearts had ‘departed’ because it was believed that the heart was the centre of a man's life force. They believed the heart was weighed against the feather of truth in the hall of Ma'at during the divine judgement of the deceased. A heart unburdened with the weight of sin and corruption would balance with the feather and its possessor would enjoy eternal afterlife. The heart is also the most common

symbol of romantic love. The ancient Greeks believed it was the target of Eros the god of love (known as Cupid to the Romans). Anyone shot in the heart by one of Cupid's arrows would fall hopelessly in love.

HOME EDUCATION

Many parents feel that the National Curriculum and the teaching methods of many schools do not offer their children the best education and choose to have them taught at home. Under British law home schooling is legal (the law makes education compulsory not school attendance) although parents need to deregister their child from the local school and may have to submit evidence to a local board that the child is being educated properly. At present it is estimated that there are 50-90,000 children being educated at home. That equates to 1% of children of compulsory education age.

OSSIFICATION

"Dry and cold. Calcification. The process by which the bones harden and become inflexible. The process by which the body turns to stone.... It's linked to another process, by which the mind, too, becomes inflexible. It stops thinking and imagining. It becomes hard as bone. It is no longer a mind. It is a lump of bone wrapped in a wall of stone. This process is ossification." (Mina on ossification)

Ossification means the formation of bone. As we grow, some areas of the body that were previously cartilage (a bone-like, but far more flexible substance) will become bone quite naturally. The body will also mend through ossification when bones are broken or fractured. In old age an unnatural process of ossification often takes place in parts of the body which should remain cartilaginous, for example, parts of the larynx and in the ribs. Calcification is the conversion of something into lime, or the hardening of something by the deposit of lime salts. This can occur in our own bodies, for example, in old scars.

PERSEPHONE

This ancient Greek myth tells of the story of Persephone, the beautiful daughter of Demeter, the goddess of fertility, and Zeus, the chief of the gods. Trouble starts when Hades, the god of the underworld and of the dead, falls in love with Persephone. She rejects him and he abducts her taking her to his underground realm. At first Persephone resists all offers of comfort and food, grieving for the world above, but eventually relents and eats a few pomegranate seeds.

The rules of the underworld state that if anyone consumes food there, they have to stay in the world of the dead forever. Persephone’s meal of a few pomegranate seeds condemns her to stay underground, where she becomes Hades’ queen.

Persephone comes to love her husband, but Demeter is consumed with sorrow at the loss of her beloved daughter. The goddess of fertility lets loose her grief upon the world: crops wither, herds perish and the earth’s inhabitants are afflicted with cold and famine.

Versions of the story vary as to what happens next. Some say Hercules, some say Zeus, comes to the rescue and negotiates a compromise between Hades and Demeter: Persephone spends half the year with her husband and half the year with her mother.

This myth was used by the ancient Greeks to explain the seasons of the year. During winter, Persephone is with Hades and Demeter's sorrow results in a cold and barren earth. But, when Persephone returns to the world above, Demeter bestows the fertility of spring upon the earth to welcome her daughter home.

PREMATURE BIRTH

About five or six out of every 100 births in this country are premature. Because these babies are born before they are physically ready to leave the womb, they often have problems. The earlier premature babies arrive, the smaller they will be, the larger their head will seem in relation to the rest of their body, and the less fat they will have. With so little fat, their skin will seem thinner and more transparent, so that blood vessels can be seen beneath the skin. Many of the problems associated with premature birth will mean that the baby is kept in a neonatal (literally 'new birth') intensive care unit. These are transparent cases where the environment can be rigorously controlled and the baby monitored. Because a premature baby has no protective fat, it will get cold in normal room temperatures so the intensive care unit will regulate the temperature and keep the baby warm. Premature babies will have trouble breathing, as their respiratory system is still developing. They may be given extra oxygen, or special equipment may be used temporarily to do some of their breathing for them. They are also extremely vulnerable to infection so the intensive care unit will maintain a sterile environment.

SONGS AND POEMS

Most of the poetry alluded to in *Skellig* comes from two collections of short poems and songs by William Blake called *Songs of Innocence* and *Songs of Experience*. The first group is full of optimism, faith and hope; the latter is coloured by bitterness and cynicism. Many of the poems in *Songs of Experience* mirror those of the earlier *Songs of Innocence*. For example there is a poem called *Infant Sorrow* from the *Songs of Experience* which is a companion piece to *Infant Joy* (below).

The School Boy was originally part of the *Songs of Innocence*, but Blake later moved it to *Songs of Experience*. Mina's motto that hangs above her bed comes from this poem and is highlighted in bold below.

The School Boy	Mina uses lines from the poem to criticise class room based learning.
The Angel	Mrs McKee sings some lines from the poem as she is observing the new born chicks in her garden Infant Joy is sung by the cast at the end of the play
English Encouragement of Art	Mina quotes from the poem when criticising Michael's friends Leakey and Coot

The sections of poems quoted are in bold.

The School Boy

I love to rise in a summer morn,

When the birds sing on every tree;

The distant huntsman winds his horn,

And the sky-lark sings with me.

O! what sweet company.

But to go to school in a summer morn,

O! it drives all joy away;

Under a cruel eye outworn,

The little ones spend the day,

In sighing and dismay.

Ah! then at times I drooping sit,

And spend many an anxious hour,

Nor in my book can I take delight,

Nor sit in learnings bower,

Worn thro' with the dreary shower.

How can the bird that is born for joy,

Sit in a cage and sing,

How can a child when fears annoy.

But droop his tender wing.

And forget his youthful spring.

O! father & mother, if buds are nip'd,

And blossoms blown away,

And if the tender plants are strip'd

Of their joy in the springing day,

By sorrow and cares dismay.

How shall the summer arise in joy.

Or the summer fruits appear,

Or how shall we gather what griefs destroy

Or bless the mellowing year.

When the blasts of winter appear.

The Angel

I dreamt a dream! What can it mean?

And that I was a maiden queen

Guarded by an angel mild:

Witless woe was ne'er beguiled!

And I wept both night and day

And he wiped my tears away,

And I wept both day and night,

And hid from him my heart's delight.

So he took his wings and fled,

Then the morn blushed rosy red;

I dried my tears and armed my fears

With ten thousand shields and spears.

Soon my angel came again:

I was armed, he came in vain-

For the time of youth was fled,

And grey hairs were on my head.

(from Songs of Experience*)*

Infant Joy

I have no name

I am but two days old.-

What shall I call thee?

I happy am

Joy is my name,-

Sweet joy befall thee!

Pretty joy!

Sweet joy but two days old,

Sweet joy I call thee;

Thou dost smile.

I sing the while

Sweet joy befall thee.

(from Songs of Innocence*)*

English Encouragement of Art

If you mean to Please Every body you will

Menny wouver both Bunglishness & skill

For a great Conquest are Bunglery

And Jenous looks to ham like mad Rantery

Like displaying oil & water into a lamp

Twill hold forth a huge splutter with smoke & damp

For its all sheer loss as it seems to me

Of displaying up a light when we want not to see

When you look at a picture you always can see

If a Man of Sense has Painted he

Then never flinch but keep up a Jaw

About freedom & jenny suck awa'

And when it smells of the Lamp we can

Say all was owing to the Skilful Man

For the smell of water is but small

So een let Ignorance do it all

The Cunning sures & the Aim at yours

All Pictures thats Panted with Sense & with Thought

Are Painted by Madmen as sure as a Groat

For the Greater the Fool in the Pencil more blest

And when they are drunk they always pant best

Thy never can Rafael it Fuseli it nor Blake it

If they cant see an outline pray how can they make it

When Men will draw outlines begin you to jaw them

Madmen see outlines & therefore they draw them

You say their Pictures well Painted be

And yet they are Blockheads you all agree

Thank God I never was sent to school

To be Flogd into following the Style of a Fool

The Errors of a Wise Man make your Rule

Rather than the Perfections of a Fool

Great things are done when Men & Mountains meet

This is not Done by jostling in the Street

If you play a Game of Chance know before you begin

If you are benevolent you will never win

No real Style of Colouring ever appears

But advertising in the News Papers

Look there you'll see Sr Joshuas Colouring

Look at his Pictures All has taken Wing

Can there be any thing more mean

More Malice in disguise

Than Praise a Man for doing what

That Man does most despise

Reynolds Lectures Exactly so

When he praises Michael Angelo

Sir Joshua Praises Michael Angelo

Tis Christian Mildness when Knaves Praise a Foe

But Twould be Madness all the World would say

Should Michael Angelo praise Sir Joshua

Christ usd the Pharisees in a rougher way

Sir Jo[s]hua praised Rubens with a Smile

By Calling his the ornamental Style

And yet his praise of Flaxman was the smartest

When he calld him the Ornamental Artist

But sure such ornaments we well may spare

As Crooked limbs & louzy heads of hair

(from S*atiric Verses and Epigrams*)

TAWNY OWLS

Tawny Owls are about 38 cm in length with a small but sharp bill. They possess large, black and very sensitive eyes and have under their wings soft feathers allowing them to fly quietly when hunting. Their colour varies from grey to the common red-brown found in Britain with darker bars and streaks. Tawny Owls are common throughout Europe, except in Ireland, and Northern Scandinavia. In Britain they are found over farmland and living in deciduous and mixed woodland. They also live in parks, churchyards and even cities on rooftops. Owls select their mate and a nest site in the autumn. They breed where there are conifer trees, where the trees are mature enough to provide nesting holes. Sometimes they use a disused nest, a crevice in a rock, or a building. Females lay between 2-5 eggs at the beginning of April and the male brings the food. Owlets can fly at 5 weeks but they are fed by their parents for about 2-3 months. At 5 months their parents send them away. After leaving their parents, many young owls have difficulty in finding territory of their own and many die as a result of this. The oldest recorded Tawny Owl was 19 years old. Tawny Owls wait on a perch and when they spot prey they swoops down with silent flight. They can hunt in the dark because they have very sharp hearing. They eat small rodents, birds (such as sparrows and starlings), worms, beetles and even fish from garden ponds!

WINGED GODS AND MONSTERS

Nearly all ancient cultures contain myths about winged beings. Flying is usually a divine ability – there is something quite literally unearthly about wings. They allow the possibility of leaving the mortal, tangible earth and soaring into the heavens. They are also linked to the spirit rather than the body: in many cultures the soul is thought to wing its way to the afterlife and is often depicted as having wings.

Angels (from Jewish, Christian and Islamic mythology): Angels are supernatural beings whose main role is to praise and serve God, and in many stories they act as messengers to mankind. They were created with free will and, led by Satan, many chose evil and were cast into hell. These angels became demons and devils. The ancient Hebrews had traditions of placing wings on the seraphim and on the cherubim represented on the Ark of the Covenant, but wings weren't seen as an absolute necessity for angelic flight and biblical descriptions of angels (such as those who visited Abraham or the one who wrestled with Jacob) do not mention wings. It wasn't until well into the Middle Ages that depictions of angels with wings became standard, probably influenced by winged figures of classical antiquity such as Eros.

Classical mythology: There are countless winged gods and personages in Ancient Greek and Roman mythology. The god of love and son of Aphrodite, Eros (or Cupid) is depicted as a naked winged boy, sometimes with a bow and arrows. Psyche, the lover of Cupid and a representation of the human soul, is also often depicted with bird or butterfly wings. Nike, the goddess of military victory, is usually, though not always, equipped with wings as are classical representations of the figure of Genius. There are also monsters with wings, such as Sirens, part women, part birds who lure sailors to their death with song and Harpies, malicious spirits who carry their victims off to their deaths (or souls of the dead off to the underworld), are portrayed as rapacious birds with hideous female human faces.

Garuda (India): A story in the Indian epic the *Mahabharata* tells of Vinita, the wife of Kashyap, the progenitor of gods and men, who lays an egg that hatches into the bird-god Garuda. Garuda had great strength and surmounted many dangers. One day he seized the moon and concealed it under his wings, worrying the other gods so much that they attacked in en masse. Garuda overcame all of them but could not conquer Vishnu. However, Vishnu relented and made the bird-god his carrier.

Horus (Ancient Egypt): The Egyptian sun-god Horus is often depicted as a falcon or with a falcon's head.

Garuda

Horus

Kibaga (Africa): This fierce warrior flew invisibly over his enemies and dropped rocks on them (the first mention of the possibility of aerial bombardment). He was finally killed when his adversaries simply shot their arrows blindly in the air.

Swan maidens (Fairy stories from around the world): A popular theme of fairy stories is that of beautiful maids or handsome young men who have been transformed into birds by an evil curse. Quite often they are released from this curse by true love, but in the famous ballet *Swan Lake* the Swan Maiden is shot in her enchanted swan form and dies.

WINGED MEN

Part 1 – myths and legends

Humans often have dreams of flying of soaring through the air without restraint or danger. Wings have always been thought to be a ticket to freedom and perhaps a way of becoming a step (or a flap?) closer to the divine. There are many stories and myths of men who have attempted to fly, however these tales usually end in disaster. Perhaps they were meant as a warning against the dangers of aspiring too high...

Emperor Shun (China): In 2200 BC, the emperor Shun was reported to have escaped a burning tower and later to have flown over his dominion with the aid of two large reed hats. Such hats are still worn in areas of China today and can be as much as three feet wide. Shun may well have been the first parachutist in history.

Icarus (Ancient Greece): Daedalus was a skilled craftsman who had been exiled to Crete for a past crime. He was placed in the service of King Minos and eventually had a son, Icarus, with Naucrate, a slave of the King.

Minos called on Daedalus to build the famous Labyrinth in order to imprison the dreaded Minotaur, a monster with the head of a bull and the body of a man. Many neighbouring cities were forced to sacrifice their children to the Minotaur as tribute to Minos. Daedalus revealed the mystery of the Labyrinth to Ariadne (Mino's daughter), who in turn told Theseus (the heroic King of Athens) thereby enabling him to slay the Minotaur and escape from the Labyrinth. When Minos found out he was so enraged that he imprisoned Daedalus and his son Icarus in the Labyrinth themselves.

Daedalus came up with a plan to escape from the Labyrinth: he would construct two sets of wings, enabling himself and Icarus to fly to safety. He built the wings from feathers and wax, and before the two set off he warned Icarus not to fly too low lest his wings touch the waves and get wet, and not too high lest the sun melt the wax. But the young Icarus, overwhelmed by the thrill of flying, ignored his father's warning and flew too close to the sun. The wax in his wings melted and he fell into the sea and drowned.

Kai Kawus

Icarus

Kai Kawus (Persia): According to Persian fable, King Kai Kawus, who was said to have ruled around 1500 BC, was tempted by evil spirits to invade heaven with the help of a flying craft. This craft consisted of a throne to the corners of which were attached four long poles pointing upward. Pieces of meat were placed at the top of each pole and ravenous eagles were chained to the feet. As the eagles attempted to fly up to the meat, they carried the throne aloft. Inevitably, however, the eagles grew tired and the throne came crashing down.

King Bladud (Britain): Bladud (the supposed father of Shakespeare's King Lear) is supposed to have ruled about 850 BC. The king, who as legend has it, was an enthusiastic practitioner of magic and wizardry, donned large wings made of feathers and took flight over the city of Trinavantum (present-day London). As he twisted in the air, he lost his balance in mid-flight and came crashing down into the Temple of Apollo, in full view of his horrified subjects.

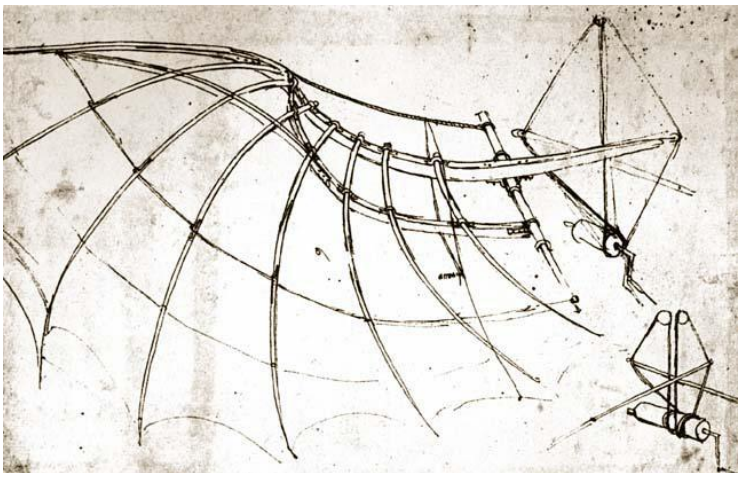
WINGED MEN

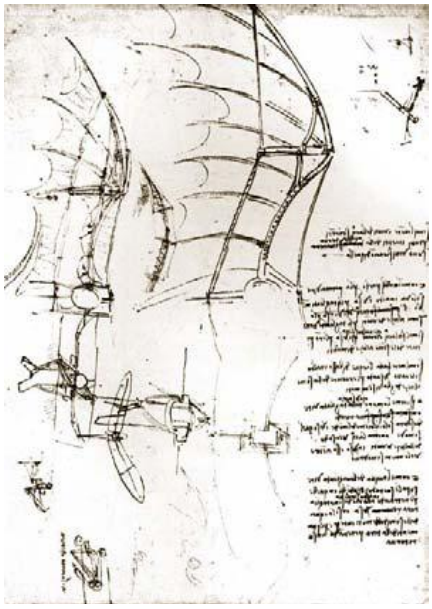
Part 2 – a history of manned flight

December 17, 2003 is the 100th anniversary of powered human flight but man has been trying for thousands of years to find ways of travelling above the ground.

Since before 1000 BC the Chinese used enormous kites to carry men above the battleground to scout for enemy troops. In 1010, Oliver of Malmesbury, a Benedictine monk, was the first man to fly for some distance with the aid of wings. He jumped from Malmesbury Abbey and alighted 125 paces before falling and breaking his legs. A hundred years later a man in Constantinople, Turkey, fashioned sail-like wings from a fabric gathered into pleats and folds. He plummeted from the top of a tower and died.

In the Renaissance, the birth of scientific method brought with it a slightly more practical attitude to the problem of flight. Artist, scientist and visionary, Leonardo de Vinci was the first to make designs for complex flying machines, using bird wings for models (see diagrams below). In 1536, a Frenchman called Denis Bolor, tried to fly using wings flapped by a spring mechanism. He fell to his death when the spring broke.





Many similar attempts followed. In the 1600s Hezarfen Celebi leapt from a tower at Galata, in Italy and flew some distance before landing safely. In 1678 a French locksmith named Besnier tried to fly with wings modelled after the webbed feet of a duck. He was lucky to survive the attempt.

At the start of the eighteenth century the idea of flying by using wings was eclipsed by the development of another means of flight – the balloon. In 1783 the French Montgolfier brothers made a huge paper balloon and filled it with hot air. As hot air is lighter than cool air, the balloon floated. After several unmanned attempts, including one carrying a rooster, a duck, and a sheep, the brothers constructed a balloon that rose 84 feet (25 m) into the air with the first human fliers, Jean-François Pilâtre de Rozier and François Laurent. The balloon stayed aloft for almost four minutes. Within a fortnight a second historic balloon flight was made, this time using hydrogen gas. In 1852, Henri Giffard made a cigar-

shaped balloon and used a steam engine to power it and steerable. By the 1920s people were flying across the Atlantic in passenger airships. However a series of huge disasters caused by the flammability of the hydrogen gas spelled the end for airships.

Alongside the development of the balloon, men were also discovering the possibilities of gliders. At the start of the nineteenth century a British engineer called Sir George Cayley experimented with kites to develop a version large enough to carry a man into the air. By the 1890s a German called Otto Lilienthal had built a series of small gliders that could be controlled in the air. He is considered the first true aviator. He died in 1896 when a gust of wind threw his glider out of control.

However, to cover any real distance an engine was needed and it wasn't until compact petrol engines were invented that the American Wright Brothers flew the first aeroplane in 1903. Aeroplanes used a fixed wing shaped in an aerofoil design (based on a bird's wing) which when propelled forward lifted the craft. Since then humans have invented helicopters, which use a whirling rotar blade to enable it to shoot straight up into the air and sophisticated panes that can travel faster than sound. We have also flown out of the atmosphere, into space and landed on the moon.However, all planes use a fixed wing that lifts the aircraft while turbine engines propel the craft through the air. Humans still haven't managed to find a way of using wings to propel and manoeuvre the craft in the same way that birds do. The challenge to invent an 'ornithopter' (a craft which uses wings in this way) large enough to carry a human has still not been met (although small models have been built).

An Otto Lilienthal Glider

A Wright Brothers Kitty Hawk Flyer

6. ACTIVITIES

STORIES

Below are some writing exercises to try with a group.

1. Strange creature

"Something like you, something like a beast, something like a bird, something like an angel" (Skellig's description of himself)

Using pictures from magazines, the web or books (photocopy first!) and some of the pictures included in the Resource Pack, ask the class to create a collage of a strange creature. It might have the tail of a fish, the head of a bird and the arms of a chimpanzee. Also invite them to think about other aspects of the natural world such as cobwebs, grass, leaves, stone etc. These elements could also influence the creature they create. They might also choose to draw in some elements.

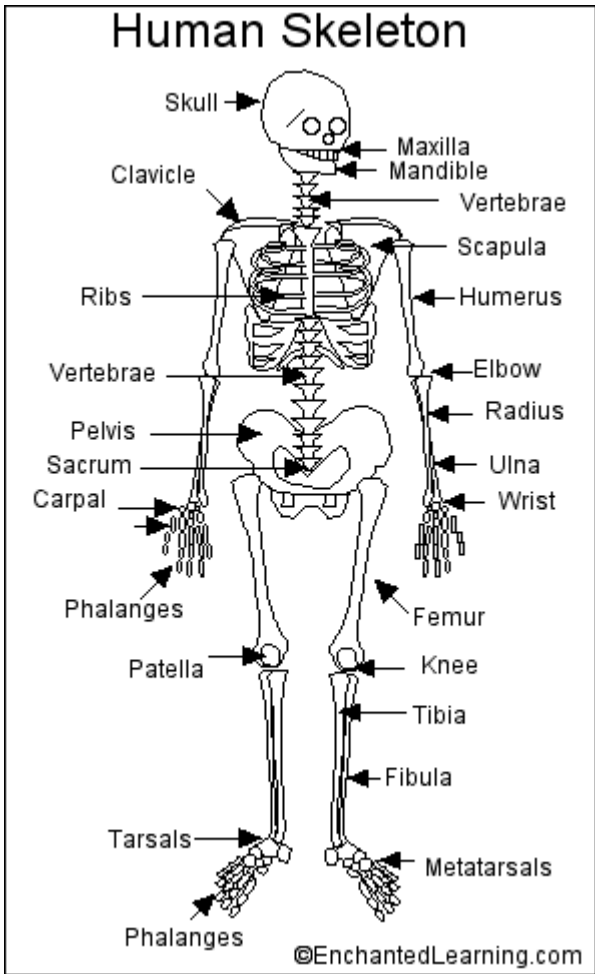
Using the creature they now have in front of them, ask them to write a story about the day they come across this creature. Where are they when they discover it? What are their feelings when they find it? Do they tell anyone about their discovery? What is the creature like? Is it young or old? Frightening or pathetic? Powerful or weak? Does it speak?

2. Digging up bones

Using the picture of the bird skeleton and Archaeopteryx fossil in the Resource Pack, along with the human skeleton overleaf, ask your students to draw a fossilised skeleton of an unusual creature. It should have something about it that other known creatures (living and extinct) don't have...

Ask them to swap their sketches with someone else in the class. Then ask the class to imagine they are playing about on the cliffs one day and they come across this extraordinary fossil of a creature previously unknown to scientists. Ask them to imagine from the bones what sort of creature it used to be. Then ask them to write about their exciting find and the quest to find out more about the creature it used to be. A palaeontologist needs to slowly piece together information, much like a detective, in order to reconstruct the original creature. Their stories might follow a similar pattern. Each class member should also try and draw the creature as it was with all its fur, scales, teeth etc. ‘

Once the stories have been written ask the class to give the story to the person who sketched the original fossil/skeleton. Is it what they imagined? Did the palaeontologist reconstruct the original creature as imagined by the drawer of the fossil? How easy is this to do?



3. Moving house

Michael's dad asks him to think about moving house as an adventure. Ask the class whether any of them have moved house. How did they find it? Was it fun or difficult? They should think about why they are moving – they've won the lottery, Mum has a new job, there has been a tragedy in the family. They should also consider what they are leaving behind – a favourite tree, friends, a bully at school, a place where they feel they belong. What do they find in their new home – a bigger bedroom, new friends, a new language to learn, family? Then ask the group to write two stories about moving house. The first one is about a fun moving experience and the second story should be about an unhappy experience. What might go wrong? What might be lost... or even found....?

4. Piecing Together a Story

As a group, remember the performance of *Skellig* at the Young Vic. On small pieces of paper, write down some words from the play. Ask the class: What images do you remember? What sounds and words? How did the play make you feel? Try to keep it to one word per piece of paper and write down nouns, verbs, adverbs and adjectives. Use words that create a strong feeling or image. Possible words might be secret, incubator, fear, bones, feeding, baby, found etc.

When the class have written down as many words as they can place them all in a bag. Each member of the group then needs to pull out three words. (Ideally there should be enough words for everyone to have the chance to replace one of their words from the bag if they wish to).

Invite each student to use their three words as a starting point for a story, a picture, a poem or a scene. For example if the three words are 'bones', 'scared', 'school', the pupil might write a story about discovering some bones in the cellar of their school and being extremely frightened.

5. Dream Story

Similarly the group can create a set of words from their dreams. Each member of the group closes their eyes and remembers a dream they have had either recently or some time ago. Ask everyone to write a description of the dream. It is important to assure everyone that these dream essays will remain private. Ask everyone to choose 4 or 5 words from their dream essay (again choosing words that evoke strong images or feelings) and write them down on a piece of paper. Place the pieces of paper in a bag and then allow each member of the group to draw out someone else's 'dream words'. The words can then be used as a starting point for a story, a picture, a poem or a scene.

DRAMA

David Almond was asked by the Young Vic to turn his novel Skellig *into a stage play. In his interview, included in the Resource Pack above, he talks about this process. It might be interesting to start the following activity by reading the interview and asking the class to discuss how a book and a play differ. How do readers experience a story compared with an audience member? How does the role of the imagination change?*

Choose a selection of books that the class has read recently – either individually or as a group. Each pupil should choose a story they would like to adapt for the theatre and then write the first scene of a play, adapting the story to the stage.

Some pages from the *Skellig* script are included later in the pack.

Here are some pointers to get everyone started.

- Ask the class to start by writing a cast list, naming and describing each of the characters in your scene. They might like to give some clues to the director, such as age, profession etc. (See the cast list earlier in the pack.)
- At the start of their scene, they need to tell the actors where and when the scene is set, who is on stage and any other information that might be useful. eg: *A bus shelter. Midnight. The bus shelter is empty apart from litter and broken glass.*
- The script will consist of *dialogue* which consists of the words spoken by the actors and *stage directions* which give actors instructions, such as entrances, exits, important actions or descriptions of how to say their line.

- Show them the example of the *Skellig* script so the class can see how a script is presented. The character speaking dialogue is named (often in capitals, or followed by a colon), then their line follows. Stage directions are usually in brackets and in italics.

Here are some things for the class to think about and remember.

- A script is essentially a 'set of instructions' for the actors. What do they need to know to recreate the scene?
- However, it is important not to give too many instructions, the actors and director will want room to imagine and create their own version of the scene. Help them out only when they might get confused as to what is going on. (Note how few instructions David Almond gives in his script.)
- You may want to think about using a *narrator* (someone who tells the story) in your scene. A narrator stands outside the action and describes to the audience elements of the play they may not be able to see or understand. They may also offer opinions about what is happening on stage. The Young Vic's production of *Skellig* uses a narrator. HOWEVER:
- Don't forget the audience is watching the play, not reading it. Your characters don't need to tell the audience anything they can already see. For example:

Instead of:

Ruth: Natasha! You have spilt chocolate sauce all over your favourite pink dress! You only bought it yesterday you must be very upset!

Natasha: I am very upset. Now you are laughing at me!

You could write:

(Natasha enters. She is wearing a pink dress covered in chocolate sauce)

Ruth: Natasha, what have you done?

Natasha: (*almost in tears*) I know!

(Ruth starts to laugh)

Natasha: Stop it!

Attached are a page of the book and a page of the script. Compare and contrast the two versions. Note what David Almond has decided to keep in and what he has cut. He has split the story between moments of dialogue between the characters and actors delivering the narration.

***Skellig*: The Book**

Chapter 3

The garden was another place that was supposed to be wonderful. There were going to be benches and a table and a swing. There were going to be goalposts painted on one of the walls by the house. There was going to be a pond with fish and frogs in it. But there was none of that. There were just nettles and thistles and weeds and half-bricks and lumps of stone. I stood there kicking the heads off a million dandelions.

After a while, Mum shouted was I coming in for lunch and I said no, I was staying out in the garden. She brought me a sandwich and a can of Coke.

"Sorry it's all so rotten and we're all in such rotten moods," she said.

She touched my arm.

"You understand, though. Don't you, Michael? Don't you?"

I shrugged.

"Yes," I said.

She touched me again and sighed.

"It'll be great again when everything's sorted out," she said.

I sat on a pile of bricks against the house wall. I ate the sandwich and drank the Coke. I thought of Random Road where we'd come from, and all my old mates like Leakey and Coot. They'd be up on the top field now, playing a match that'd last all day.

Then I heard the doorbell ringing, and heard Doctor Death coming in. I called him Doctor Death because his face was grey and there were black spots on his hands and he didn't now how to smile. I'd seen him lighting up a fag in his car one day as he drove away from our door. They told me to call him Doctor Dan, and I did when I had to speak to him, but inside he was Doctor Death to me, and it fitted him much better.

I finished the Coke, I waited a minute, then I went down to the garage again. I didn't have time to dare myself or to stand there listening to the scratching. I switched the torch on, took a deep breath, and tiptoed straight inside.

Something little and black scuttled across the floor. The door creaked and cracked for a moment before it was still. Dust poured through the torch beam. Something scratched and scratched in a corner. I tiptoed further in and felt spider webs breaking on my brow. Everything was packed in tight – ancient furniture, kitchen units, rolled-up carpets, pipes and crates and planks. I kept ducking down under the

hose-pipes and ropes and kitbags that hung from the roof. More cobwebs snapped on my clothes and skin. The floor was broken and crumbly. I opened a cupboard an inch, shone the torch in and saw a million woodlice scattering away. I peered down into a great stone jar and saw the bones of some little animal that had died in there. Dead blue bottles were everywhere. There were ancient newspapers and magazines. I shone the torch on to one and saw that it came from nearly fifty years ago. I moved so carefully. I was scared every moment that the whole thing was going to collapse. There was dust clogging my throat and nose. I knew I'd better get out. I leaned across a heap of tea chests and shone the torch into the space behind and that's when I saw him.

I thought he was dead. He was sitting with his legs stretched out, and his head tipped back against the wall. He was covered in dust and webs like everything else and his face was thin and pale. Dead blue bottles were scattered on his hair and shoulders. I shone the torch on his white face and his black suit.

"What do you want?" he said.

He opened his eyes and looked up at me.

His voice squeaked like he hadn't used it in years.

"What do you want?"

My heart thudded and thundered.

"I said, what do you want?"

Then I heard them yelling for me from the house.

"Michael! Michael! Michael!"

I shuffled out again. I backed out through the door.

It was Dad. He came down the path to me.

"Didn't we tell you-" he started.

"Yes," I said. "Yes. Yes"

I started to brush the dust off of myself. A spider dropped away from my chin on a long string.

He put his arms around me.

"It's for your own good," he said.

He picked a dead bluebottle out of my hair.

He thumped the side of the garage and the whole thing shuddered.

“See?” he said. “Imagine what might happen.”

I grabbed his arm to stop him thumping it again.

“Don’t,” I said. “It’s all right. I understand.”

He squeezed my shoulder and said everything would be better soon.

He laughed.

“Get all that dust off before your mother sees, eh?”

Skellig: The Script

MUM *(off)* Michael, are you coming in for lunch?

MICHAEL No, I’m staying in the garden.

The garden. There’s going to be benches and a table and a swing and a goalpost painted on the wall of the house.

But there was none of that.

I stood there, kicking the heads of a million dandelions.

(Mum brings Michael a can of coke.)

MUM Oh, Michael. Sorry it's all so rotten and we're all in such rotten moods. You understand, though, don't you? Don't you?

MICHAEL *(Shrugging)* Yes.

MUM It’ll be great when everything’s sorted out.

(Mum goes back inside)

MICHAEL I finished the coke, waited a minute, then I went back to the garage. I didn’t have time to dare myself or to stand there listening to the scratching. I switched the torch on, took a deep breath, and tiptoed inside.

Ashley The door creaked and cracked for a moment before it was still.

Sarah Something little and black scuttled across the floor.

Mo Dust poured through the torch beam.

Akiya He felt spider webs breaking on his brow.

Noma Everything was packed in tight

William Ancient furniture.

Mo Kitchen units,

Ash Rolled-up carpets.

Sarah Pipes

Akiya and crates

Noma and planks.

He kept ducking down under the hose pipes and ropes and kitbags that hung from the roof.

Mo The floor was broken and crumbly.

He opened a cupboard an inch, shone the torch in and..

MICHAEL Saw a million woodlice scattering away.

Sarah He peered down into a great stone jar and saw

MICHAEL The bones of some little animal that had died in there.

Akiya Dead bluebottles were everywhere.

Noma There were ancient newspapers and magazines.

Ashley He shone the torch on one and saw it came from nearly…

… 50 years ago.

He was scared every moment that the whole thing was going to collapse.

Akiya There was dust clogging his throat and nose.

Ashley He knew they'd be yelling for him soon..

Mo and he knew he'd better get out.

Sarah He leaned across a heap of tea chests

Noma and as he moved an old tarpaulin…

(Michael shines the torch onto Skellig)

SKELLIG What do you want?

What do you want?

I said, What do you want?

DAD Michael! Michael!

(Michael backs out.)

DAD Michael, man!

MICHAEL I know. I know.

DAD It's for your own damn good.

(Dad thumps the side of the trembling garage.)

DAD Imagine what might happen.

(Dad thumps the side of the trembling garage again.)

DAD Imagine.

(MICHAEL grabs his arm, stops him.)

MICHAEL Don't. I understand...

Is she going to die, Dad?

DAD Die? What do you mean, die? Dr Dan's just told us - she's doing fine. They'd have her in hospital if she wasn't. Wouldn't they? Well, wouldn't they? Come on, get that dust off before your mother sees.

Rehearsing a play

Using the scenes they have written in the previous exercise, the class wil work through various stages of production, including rehearsal, design and performance.

1. Choosing a script

Divide the class into groups of four or five and distribute the scenes that have been written. There may not be time for all scenes to be rehearsed, so perhaps each group can read all of the scripts they have produced and agree on one to stage.

2. Casting

The group can decide on who would like to direct the piece and who will play each role, or perhaps take it in turns to direct. Depending on cast sizes, some actors can play more than one part, or take it in turns to play a role.

3. Warm-up

In order to warm-up the body and voice, or even just to help everyone relax and have fun together, casts often play warm-up games to start the day. The warm-ups also help everyone to work together as a team.

See Rehearsal Activity Sheet 1 for a few suggestions.

4. Rehearsal

When even the most experienced directors and actors rehearse a script, they are 'reading the instructions' that the writer has given them in the characters lines. As they work through a scene they establish what is happening in the scene, how each character is feeling and behaving and where the actors are on stage.

There is no right or wrong way to rehearse a play and students should be encouraged to discover their own way of working through their scripts.

However, here are a few useful ideas:

- Start with a sit-down read-through of the script. It is useful to clear up any confusions or questions about the script before actors get on their feet. Professional casts often spend an entire week on this stage of rehearsals.
- Once everyone is up on their feet, the director and cast might start by sketching out the stage area. Where are the audience going to be sitting? How large is the stage? Where are the exits/entrances? Is there any furniture on stage? It is a good idea to do this physically by marking out on the floor in chalk or tape the stage space. The actors then become very clear

when they are on and off stage, where they enter and exit etc. Often the practicalities can get lost in the creative whirl e.g. if a chair is coming on where does it come from, who brings it on, how does it get off the stage if it isn't needed in the next scene and so on.

- Groups should compile a set of rehearsal props to use while working on the play. Although everything that eventually appears on stage should be thought about during the design process (see below), during rehearsals actors use a stand-in prop that is roughly the right size and practical to use. It is useful to get the rehearsal props as soon as possible to ensure that the actors can practically achieve what is asked of them. If they have a glass of milk one minute and then need to fight a monster the next they need to work out where to put the milk down that is practical and safe. If these props are mimed with the intention of filling them in later these practicalities are often only considered too late in the process. (Obviously you might decide to mime every object as part of the style of the piece!)
- When the cast start working on the scene, suggest they concentrate on half a page at a time. This will help them slow down enough to give each section of the script the attention it needs.
- Initially the cast and director might want to focus on the practical issue of where each actor is on stage throughout the scene. Complicated moves might need to be choreographed carefully.
- Encourage the directors to let the actors try different things. Remind them that the director's job is not to tell the actors what to do, but to help them find their way through the script. Suggest that the directors do not use the terms 'good' and 'bad'. Encourage them to speak to the actors using positive language and where possible asking them suggest the actor does something rather than telling them not to do something. For example if you can't hear an actor the instruction might be to 'use their voice more' rather than to 'stop mumbling we can't hear you'.
- A little way into rehearsals, when the cast and director have a better hold on the play, suggest that the groups do some work on their characters. See Rehearsal Activity Sheet 2 for some suggestions.

5. Design

Unlike a novel, where the reader uses the writer's descriptions and their own imagination to decide what objects and places in the story look like, in staging a play the director and their designer need to make clear decisions about how each element on stage looks.

For example if a script specifies that a character sits on a chair, a designer needs to decide what sort of chair it is. Is it a beautiful, old antique or a glossy, modern chair? Their choice of chair can tell the audience a lot about the house where the chair is found and the owner who chose it.

In a professional production this process is often embarked upon well before rehearsals, so that the director can be clear with the cast about how the stage and costumes will look when they are performing. However for this project, it may be best to wait until you are some time into the groups' rehearsals, when they are more familiar with the play, before asking them to think about the visual aspect of the production.

See Rehearsal Activity Sheet 3 for some activities to get the class thinking about the design of their productions.

6. Work in Progress

Once the class have rehearsed their scenes they may wish to present their scenes to the other groups. Rather than being seen as an end result, the presentations might be used as part of the rehearsal process. During rehearsals for *Skellig*, the director and cast often asked people from outside the production to watch a run-through of the play. They would then ask for feedback. They also went through a preview period of performing in front of audiences before the play officially opened. Gaining feedback is a very important part of the rehearsal process as it may lead to important changes back in the rehearsal room.

After watching the run-through the rest of the class can be invited to offer creative feedback to the group performing. Remind the class to be specific, helpful and constructive.

It might be useful to discuss with the class the difference between negative criticism (which might just hurt someone's feelings) and creative feedback. Creative feedback is something the cast can usefully act on. "I thought the character of the old woman was stupid" isn't very useful, but "I found the character of the old woman confusing. I wasn't sure why she wanted to burn the photograph" is a problem the cast, director and writer can work on.

It can be useful to start everyone off with a few questions:

- What was happening in the scene?
- Which character did you find the most moving/funny/surprising?
- Was there any bit of the story you didn't understand?
- Are there any elements of the scene you think might be improved? How might that be done?

Once each of the groups have had their feedback they should be given more time to develop their scenes. They may not want to take on board all the suggestions given but they should be encouraged to carefully consider the audience's reaction to their performance. It may be that the script needs slight changes, more character work needs to be done, the actors need to consider the clarity of their delivery.

7. Performance

Even though this is the final showing of the work it is important to emphasise that this is just another stage in the process. If too much pressure is put on this final showing the fun can evaporate from the performance.

The director of each group might want to start by showing the rest of the class their design collage or costume sketches so that the audience has a picture of the final design in their head when they are watching the performance. The director might also want to read in some stage directions that might not be clear to the audience.

The final stage in the process is for the group to evaluate their own involvement in creating this scene. What would they do differently next time, what challenges didn't they completely solve, what surprised them about the process, what was the hardest/easier aspect, did they learn anything about themselves?

Rehearsal Activity Sheet 1

Some Warm-up Games and Exercises

Following are some games and exercises based on the themes of *Skellig* that might be used as warm-ups before any rehearsal sessions.

1. Flying

The group stands in a circle with linked hands. Starting slowly and quietly gently swing your linked hands forwards and backwards whispering "flying", "flying" with each forward sweep of your hands. Gradually your voices can get louder and your hand swings more vigorous, eventually you should be shouting "FLYING, FLYING", jumping in the air with each forward sweep of your hands.

2. Cat and Bird

For this game you will need an object, like a ball, small enough to fit in your hand. This will be the 'egg'. Nominate one of the group to be the 'cat'. The rest of the group will all be 'birds'. The birds have to pass the egg around the room without the cat finding it. The trick is to distract the cat by pretending to pass the egg while the real egg is smuggled away on the other side of the room. If the cat thinks they have found the egg they tap the shoulder of the bird they think is holding it. They can only use three taps before the birds have won. To make the game harder there can be two or even three cats (or you could try other predators such as hawks or snakes).

3. Arthur Itis (Grandmother's Footsteps)

One of the group is 'Arthur' and stands at the front of the room with their back turned. The rest of the group, starting at the opposite end of the room, try to creep up to Arthur and tap him or her on the shoulder. However, if Arthur turns around everyone has to freeze as if their bones are stiff and swollen with arthritis. If Arthur spots anyone moving they have to move back to the starting line. (The more twisted and stiff those with arthritis are, the better.)

4. Tall Tales

Sitting in a circle, the group tells a 'tall story' together. One member of the group begins by describing an ordinary event that occurred that morning. The next person in the group has to continue the story; again it can be as ordinary as they wish to make it. However, as each member of the group adds to the story the tale can get stranger and stranger.

For example:

This morning I got up and got dressed…
I put on my school uniform…
There was something in the pocket…
I took it out to look at it…

It was a small, blue disc…
Which made a humming noise…

Here are a few guidelines will make the game more effective.

- Remind the group they are all telling the SAME story. The story should build from the last person's contribution.
- Try not to make the story veer off in a different direction, but follow the lead of the person before you.
- Each line doesn't need to be spectacular. Build the story gradually, line by line.

Rehearsal Activity Sheet 2

Character Work

Following are some exercises the class might find useful in developing the characters they are playing in their scenes. For the directors or other class members who are not acting in the scene, ask them to choose a character from the scene they are working on.

In creating a character actors often have only a few details from the script to work on. In order to create a fully rounded character they often have to fill in a few of the details themselves. Using the character sheet below ask the class to fill in any details they know about their character and imagine the rest. However anything they make up should be compatible with what they know from the script.

1. A Day In The Life Of…

Ask the class to lie on the floor and close their eyes. Tell them to imagine they are their character asleep in bed and get them to picture the room around them. How is it decorated? How big is it? You could also ask them to leave the room in their mind's eye and explore the rest of the house and outside. Once they have done that, ask them to slowly come awake and think about what the first thought in their character's head would be when they wake up. How would they face the day? Get them to sit up in bed and walk over to a sink in the corner of the room. How easy is it for their character to move? Are they old and stiff in the mornings? Do they leap out of bed with agility? Ask them to wash their faces and then to look into the mirror that sits above the sink. What face do they see in the mirror? How old is it? What does it look like? Do they like what they see? Then ask them to walk over to a chair by the bed and start to put on the clothes that are draped there. As they put on each item of clothing ask them to think about how the clothing affects the movement of the character. How comfortable/attractive/expensive is the clothing?

2. Physicalising a Character

Start by getting the group to walk around the room. Ask them to walk faster and then slower, faster and then slower, then ask them to think about their character – do they move quickly or slowly? Each member of the group should find the right pace for their character. Then try other opposites: does their character slouch or walk with their head up? Are they timid or bold, relaxed or fidgety, clumsy or graceful?

Character sheet	
Name of character:	
Age:	Occupation:
Family:	Friends:
Hobbies:	What is their favourite colour?
Likes:	Dislikes:
Where do they live?	
Appearance Hair colour: Eye colour: Height: Weight: What are wearing in the scene:	
How do they feel at the beginning of the scene?	
How do they feel at the end of the scene?	
How have they changed during the scene? What have they learnt?	

Rehearsal Activity Sheet 3

Designing a Play

Ask the pupils, in their groups, to design a set for their play. Groups can use a large sheet of paper or their own notebooks, to note down ideas as they go through the following stages. Ask each group to think very clearly *where* the play is set. Is it contemporary or historical? Interior or exterior? Ask them to be very specific. For example what sort of house is it? What might the house tell us about the people that live there?

Then ask them to write a list of exactly what is on stage. First of all what is *needed* on stage; furniture the cast might need to use, objects discussed or used in the scene. This list should also include any props (objects that the actors use e.g. glasses, telephones), that are used in the scene. The group might then choose to add objects as *dressing* to the set. Dressing objects might tell the audience a little more about where the play is set. (e.g. If the play is set in a house owned by an old pensioner who lives in the past, you might want to have lots of furniture that's slightly shabby and old fashioned, and the house might be full of photographs and mementos from her past).

Finally ask them to think about the *atmosphere* of the play they are staging. How do they want their set to make the audience feel? Scared? Safe? Is the design familiar or strange? Bright or subdued? Ask each group what colours might best create that atmosphere. How else might they get the effect they want? For example, how might the stage *space* affect the audience? Is the acting area wide and open or closed and claustrophobic? Where will the audience sit? Around the stage? In front of the stage? How might this decision affect the audience's experience of the play?

Working from their notes, each group will now research visual material that will help them put together a picture of where their play is set. They could use magazines, photocopies from books, swatches of fabric, sketches, photographs and postcards. This material can either be a direct representation of an element of the set (a picture of a chair) or something more general (a photograph that makes them feel the same way that the play does). Ask them to think carefully about colours and textures. Each group should assemble all their visual research on a piece of cardboard or paper. This can be shown and discussed as part of the final presentation. A designer would then go on to use these research materials to design a set. He or she would create a set model (a very small version of the set in three dimensions) which would include the shapes, colours and textures of their design. This would be used to discuss his or her ideas with the director and changes may be suggested. Sometimes designers go through several set models before settling on a design. From the model box, the designer would then produce a set of plans for the set builders and stage management to work from.

Rehearsal Activity Sheet 4

Costume Design

Ask the class to create a costume design for Skellig's wings, alternatively however, they could work on a costume design for a character from their own play.

David Almond describes Skellig's wings as: "twisted and uneven", "covered in cracked and crooked feathers", "they clicked and trembled as they opened". This was only a starting point for the designer and director of the Young Vic's production of *Skellig*, who needed to decide exactly how Skellig's wings looked and moved. Ask the class to imagine how else a man with wings might look. (The pictures of winged creatures or the diagram of a bird's wing in this Resource Pack might be a useful starting point, along with other pictures of birds, bats, butterflies etc) Ask them to draw a picture of a pair of wings.

From these drawings ask them to create a costume design for Skellig's wings. Costume designs need to be very clear and detailed so that someone else can make the costume from it.

The design will need to detail:

- The dimensions (height and width).
- Materials (They need to be strong enough to hold together as well as having the finished texture desired).
- Colours.
- How the wings attach to the actor's back.
- Whether the actor can move the wings and if so, how.

Alternatively the class could work on a costume design for their own play. Again get them to draw a sketch of how they think the costume looks and from it create a costume design. Get them to add to the sketch specific written details of the costume that might be hard to tell from the sketch (ie 'old, cracked, leather shoes'). They could also add swatches of fabric or other materials to the design. Please find examples of costume drawings for *Skellig* (overleaf).

OBSERVATION

"Drawing makes you look at the world more closely. It helps you to see what you're looking at more clearly." Mina

"He said if we just opened our eyes a little wider, looked a little harder we'd see that we are surrounded by angels and spirits" Mrs McKee on Blake

The following activities will encourage the class to look at the world in more detail and possibly in a different way. It is easy to begin to take the things around us for granted and not look at them for all their small and surprising qualities.

1. Bird watching

Take the class out into the school playground or nature area. Working in pairs, ask them to count how many birds they can see in the space of five minutes.

Next ask them to draw up a table with the headings: approximate size, colour of beak, colour of tail, colour of wings, colour of body, markings, call, activity. Ask them to fill in the table for as many species of bird as they can see. One person could take down notes while the other watches.

Then ask them to choose one bird and sketch it. Ask them to take close note of all the markings on the wings, head and tail as well as the shape of the bird.

Then ask them, again in pairs, to watch the bird for as long as they can. While one person takes notes the other in the pair should describe everything the bird does. Ask them to be detailed and specific. Rather than 'sitting', they should write something like 'sits on branch, cocks head to one side, seems to be listening etc'.

Attached is a sheet with the outlines of some common British birds. Following on from the group's observation in the 'field' ask them to try and identify the birds on the sheet. Some they may have seen others probably not. Can they draw their own silhouettes of birds they have seen which are not included on the sheet?

2. Drawing

Below are a few suggested starting points for developing observation and drawing.

- Obtain a stuffed animal (available for loan by local museums and some libraries). Ask the children to begin by observing the animal from every angle. Suggest that they look at it from their normal height but also get lower, higher, look from an angle etc to ensure that they really have explored the animal from every angle and not just from one specific view point.
- Observe an object for a limited amount of time (for example a minute) and ask the class to remember as much detail as they can. They are then asked to draw the object from memory.

Once they have done this ask the class to compare their drawing and the object. What did they remember, forget, interpret, reduce?

- Think of a friend or member of the family that is not in the room. Begin by asking the group to shut their eyes and begin to think about the person they wish to draw. Thinking of colouring, age, characteristics, emotional state that best represents them.
- Begin by observing an object, picture, person from an unfamiliar view point; e.g. looking at the top of someone's head, sitting at the base of a tree looking up, a picture or paint upside down. How does this affect the drawing that is created?
- Find something from nature that is in its rawest state e.g. a leaf that has only the veins left, the skeleton of an animal, the inside of an orange. Look at the minute detail and how everything fits together. Note the intricacy that is hidden by the outside shell.

3. Clay Models

Give each class member a generous lump of clay (providing a mat to work from) and ask the group to initially spend some moments just playing with the clay. Encourage them to keep the clay as one big lump rather than breaking it down into seemingly manageable chunks. It is important that they begin to see this as their starting point rather than breaking it down into smaller parts and then attempting to stick them together. Provide a selection of tools such as gauze, paper clips, buttons or household utensils (for example a garlic press can make great stringy hair and beards). If available, clay-making tools can also help to provide texture and distinct qualities to the clay.

In the preparation for making their own models it is important to impress upon the children the difficulties that can arise when they try and join things together. Once the clay dries it is very likely that the attached pieces will drop off. This is why they need to see the clay as a large piece that they knead, pinch and mould into their end result. If the class do wish to join sections to each other they should first score the area that is to be attached and then wet the area very lightly. This will help adhesion. But if they use too much water the dough will become sticky and hard to handle.

Once the group have explored the clay then pictures, stuffed animals, plastic replicas can act as a starting point for their own models. Like Mina they can create their own clay models of birds, reptiles, dinosaurs and other animals like hedgehogs, snakes, foxes etc. The group can create the texture of scales, feathers, fur through using tools, fingers, nails objects etc.

7. **RESOURCES**

DAVID ALMOND

www.davidalmond.com
David's own site, with autobiography, FAQs and information about his books
www.teenreads.com/authors/au-almond-david.asp
An interview with David Almond, excerpts from his books, and a mini-biography of the author.
falcon.jmu.edu/~ramseyil/almond.htm
David Almond Teacher Resource File
www.janmag.com/profiles/almond.html
another interview with David Almond
www.sffworld.com/authors/a/almond_david/reviews/skelig.html
Reader reviews of the book *Skellig*

BIRDS

www.enchantedlearning.com/subjects/birds/
a site full of facts and information about birds
www.kidwings.com
includes a Virtual Owl Pellet Dissection
www.osweb.com/kidzkorner/feeder.htm
has directions for creating your own bird feeder
www.inhs.uiuc.edu/chf/pub/virtualbird/student/les8.html
includes information about how birds migrate and why
aviary.owls.com
read about different kinds of birds, see their pictures, and hear the sounds they make
www.rspb.org.uk/
site of the Royal Society for the Protection of Birds
birding.about.com/library/weekly/aa041997.htm
a description of how birds fly
www.nurseminerva.co.uk/adapt/bird.htm
another site about bird flight, includes a slow motion movie of a bird in flight
Birds
by Robert Bateman, Pantheon Books (2002)

EVOLUTION

www.bbc.co.uk/education/darwin/
the bbc's excellent website on evolution and Charles Darwin
www.becominghuman.org/
site about human evolution, includes pictures of fossil evidence
www.talkorigins.org/faqs/homs/
another overview of human evolution, describing the fossil evidence
www.handprint.com/LS/ANC/evol.html
provides an interactive graph that maps the journey of our hominid ancestors from 5 million years ago to the present
www.birding.com/birdsdino.asp
provides several links to pages discussing the "are birds dinosaurs" controversy
Taking Wing: Archaeopteryx and the Evolution of Bird Flight
by Pat Shipman, DIANE Publishing (1998)
Life on Earth: The Story of Evolution
by Steve Jenkins, Houghton Mifflin Co (2002)

WILLIAM BLAKE

www.tate.org.uk/britain/exhibitions/blakeinteractive/
Tate Britain's excellent site on Blake's work and life. Includes a "gallery" of the personages and creatures depicted in Blake's engravings.
www.online-literature.com/blake/
includes a biography of Blake and a searchable collection of his works
Songs of Innocence and of Experience
by William Blake, Oxford Paperbacks (1970)
The Cambridge Companion to William Blake (Cambridge Companions to Literature)
by Morris Eaves (Editor), Cambridge University Press (2003)
Blake
by Peter Ackroyd, Minerva Paperback (1996)