



Canine Life Savers

For many dog owners, their four-legged friend is practically a member of the family. It's no wonder dogs have been called 'man's best friend'. However, for those with some medical conditions or disabilities, assistance dogs can be even more than that. With the right training, they help people to live independent, happy and safe lives.

For those with sight loss, having a guide dog opens up the world around them. Dogs assist them in finding their way around, in avoiding obstacles and in feeling more confident. Puppies are carefully checked for their suitability. If a dog is easily distracted, quickly spooked or unmotivated, they won't make a good guide dog. After selection, the puppies are trained for many months. Then they are matched with an owner. Dogs can also be trained as hearing dogs for those who are deaf. They help alert their owner to important sounds such as alarm clocks or doorbells. They also help with lifesaving sounds such as fire alarms and other sirens. Those with physical disabilities can likewise benefit from a canine sidekick. A dog can help with physical tasks such as opening doors, helping with shopping or laundry and getting dressed. They even tidy up their own toys and put their own bowl in the sink when they have eaten: now that is a well-trained dog!

As well as being their owner's eyes, ears or hands, dogs are of course known for their amazing sense of smell. Believe it or not, dogs can use their sensitive noses to detect certain illnesses. Medical alert dogs can be used for those with uncontrolled type 1 diabetes for example. This condition occurs when the body cannot control the level of sugar in the blood and can be life-threatening. Talented dogs can be trained to sniff out signs of low blood sugar. They alert the person that they need to take action. They bring medical supplies and also get help in an emergency. Other dogs assist those who suffer from seizures due to epilepsy. Seizures can result in a person losing control over their body or becoming unconscious. Some dogs appear to sense when a person is about to have a seizure (whether they smell an early sign or notice some slight changes in behaviour is unclear). These dogs are trained to get help when their owner has a seizure by pressing an alarm or alerting someone. Alternatively, they might protect



the person during a seizure by preventing them from hitting the floor or from hurting themselves.

As well as dogs who serve and protect a single owner, there are medical trials involving dogs detecting illnesses or diseases before doctors or tests are able to. Dogs can smell certain types of cancer or bacteria for example. This helps patients get treatment sooner. Saving lives and changing lives is all in a day's work for these dogs.

RETRIEVAL FOCUS

1. Why might a young dog be rejected for guide dog training?
2. In what ways could a dog be a lifesaver for someone who is deaf?
3. What is type 1 diabetes?
4. How can a dog help someone during a seizure?
5. In what ways can bio-detection dogs help with early diagnosis?

VIPERS QUESTIONS

V

What is another word for 'assist'?

V

Find and copy a word which means *frightened*.

E

What alternative words has the writer used to avoid repetition of 'dog'?

E

How can we tell it is somewhat mysterious how dogs detect seizures?

S

Summarise the ways in which dogs help people lead independent lives.

Evelyn Cheesman - Escaping the Web

For most people, getting stuck in an enormous spider's web sounds like their worst nightmare. However, that's just what happened to Evelyn Cheesman when she was exploring a remote island near Colombia in South America. Evelyn was an explorer and entomologist (someone who studies insects). Her love of nature and insects led her to some of the world's most far-flung places in the world.

Lucy Evelyn Cheesman was born in 1881 in Kent. She was fascinated by nature from a young age. She was always having daring adventures and getting into scrapes. Evelyn dreamed of becoming a vet. However, her family couldn't afford it and women weren't allowed to do it anyway. Instead she worked first as a governess and then as a canine nurse. Then she got a job in the insect house at London Zoo. She was the first ever female curator. When she arrived, the insect house was in a terrible state. It had been neglected during the First World War. Evelyn set about improving the exhibition. She caught insects herself and even found exotic species by going to markets to find spiders in the fruit imports. Before long, the insect house was one of the most popular attractions at the zoo.

In 1924, Evelyn got the chance to travel to French Polynesia and the Galapagos Islands to collect insects. This expedition was funded by taking tourists on board too. For Evelyn, this was frustrating. They were forced to keep the tourists happy rather than just focus on the science. Evelyn left the expedition to travel alone instead. A solo female traveller was almost unheard of at that time. It was not an easy life either. Evelyn was bitten by clouds of flies and became ill after eating a poisonous fish. She trekked through jungles, scrambled up rock faces and crossed rivers. She described almost plummeting to her death after she fell over the edge of a cliff. She had to pull her way back to safety by clinging to bracken. She spent time with local tribes including those feared for their blood-thirsty ways. Evelyn was always respectful of the tribes' traditions and culture and in return was treated well. They too were in awe of Evelyn's daring exploits. Evelyn caught tropical diseases such as malaria. Despite all of these challenges, she reported that



the worst of all was finding a leech in her pot of tea!

Evelyn carried on exploring until she was in her 70s. She collected some 70,000 species and these are now part of the collection at The Natural History Museum. Many are even named after her. She did what nobody at the time thought a woman could or should do. Her impressive life is an inspiration to us all to follow our passions wherever they take us – although maybe not into a giant spider’s web!

EXPLANATION FOCUS

1. How has the writer aimed to capture the reader’s interest at the start of the text?
2. What words has the writer chosen to add drama to the story about Evelyn Cheesman nearly falling over the cliff edge?
3. What is the purpose of including the story of the leech in the pot of tea?
4. What is the writer’s view of Evelyn Cheesman?
5. In your opinion, what is Evelyn Cheesman’s most impressive achievement?

VIPERS QUESTIONS

V

Which two words in the opening paragraph tell us that Evelyn Cheesman travelled to distant places?

R

How was Evelyn Cheesman’s first expedition paid for?

R

What two reasons are given for Evelyn Cheesman not being threatened by local tribes?

V

What are *exploits*?

S

In what ways did Evelyn Cheesman overcome the limitations that women experienced at the time?



Extreme Survivors

Animals have made homes in the world's most challenging places. Here we meet some of the planet's success stories.

Highest

Life at high altitude holds many challenges. There isn't much oxygen and it's cold and windy. Despite this, animals survive on the roof of the Earth. Snow leopards spend the summers at heights of up to 20,000 feet above sea level. Their thick spotted fur keeps them warm and allows them to stay camouflaged. Their big paws help them grip on the rough ground. Yaks have thick coats to keep them warm. Their large lungs and hearts help them take in oxygen and pump it around the body. Insects have found ways of making the mountains their home too. The Himalayan jumping spider has to feed on insects blown up the mountain from lower down.

Deepest

Creatures of the deep ocean are amongst the weirdest and most wonderful species on Earth. They have to cope with enormous pressure. It was described in Blue Planet 2 as being the "equivalent of 50 jumbo jets stacked on top of one another". The Mariana snailfish is the deepest fish yet discovered. It has soft bones and special chemicals that help it withstand the pressure. It only needs very small eyes because there isn't much light. Some animals live deep underground too. There are worms living an amazing 3.6km beneath the Earth's crust. They thrive despite the heat, low oxygen and crushing conditions. Scientists previously believed it was impossible for anything to live so far below the surface.

Coldest

Polar bears are an icon of the Arctic extremes. Their white coats camouflage them against the snow. Their enormous feet spread their weight on the ice and give them better grip. They have a layer of fat and thick fur to keep them warm. Emperor penguins in Antarctica use an extra strategy to protect themselves from the cold. They huddle in groups taking turns to be on the outside before then warming up on the inside of the huddle. Wood frogs however have yet another method: in the coldest weather they freeze and their heart stops! When the warmer temperatures return, they defrost and their heart restarts.



Hottest

Animals have found varied ways of coping with extreme heat. Camels have large feet to allow them to walk on hot sand, long eyelashes to protect their eyes from sand and nostrils that they can close to keep the sand out. They store fat in their hump rather than spread around their whole body where it might keep them too hot. Other species, including a rodent called a jerboa, sleep in cool burrows during the heat of the day and come out at night when it's cooler. The fennec fox loses heat through the blood vessels in its over-sized ears. However, it's a worm which yet again takes the crown for extreme survivor. The Pompeii worm lives in 80°C hydrothermal vents in the ocean. Nobody is yet sure how they cope with the heat – the worms die when removed from their habitats in the deep ocean.

RETRIEVAL FOCUS

1. Why are large lungs helpful to the yak?
2. What two environments are described as suffering from lack of oxygen?
3. What two extreme environments do worms survive in?
4. What animal survives even though its heart stops?
5. How does the jerboa cope with life in the desert?

VIPERS QUESTIONS

- I** How do you think scientists reacted to the discovery of the nematode worm in the Earth's crust?
- E** What phrase tells us that there may be more animals living in the deep ocean?
- V** What does thriving suggest about how well worms are surviving in the Earth's crust?
- V** What does the word *icon* suggest about the polar bear?
- V** What does *huddle* mean?

Old Foot

“Keep your eyes peeled for The Matriarch,” the park ranger said. “She’s out there somewhere in the forest, watching us I bet.”

I turned towards the voice. He had weathered skin, a scruffy beard and a mischievous glint in his eye. I was small for my age and fed up of being treated like a gullible little girl. It was enough of a pain having to tag along with my parents and little brother on this trip. I’d rather have stayed in Jo’burg and hung out with my friends. But here I was in The Cape, in the middle of nowhere. The only entertainment seemed to be trees. Lots of trees. Stretching as far as the eye could see in every direction.

“The Matriarch,” I said, a sceptical eyebrow raised in a way I hoped made me seem grown up, “what sort of bogeyman is that then?”

“Ahhh a city girl? Not from round here are you?”

I shook my head. He was trying to make me feel stupid but I was proud to be marked out as separate to this place.

“Some people call her Oupoot. It means Old Foot. Of course, she’s got another twenty years left in her yet they reckon. She’s the last of her kind: a lonely bush elephant hiding out in the forest now that all her herd are gone. No one’s actually seen her but there are photos from camera traps we’ve got out there.” He gazed hopefully out across the landscape. His weathered skin suddenly struck me as almost like the hide of an elephant.

“Isn’t an elephant a bit big to stay hidden?”

He chuckled and I bristled at being laughed at. “It’s a vast forest and she’s had years of practice. The cape elephants had no choice but to retreat into the trees when the Europeans first arrived. It was the only way of escaping the hunters. Somehow they adapted and settled into a life as bush elephants. Now there’s only one left. Poor old girl.”



I didn't want to let on that the story fired my imagination, so didn't ask any more. However, as we drove on, I scanned the bush wondering where this hidden creature could be. I couldn't help it.

At the lodge, my parents busied themselves unpacking. My brother scampered from room to room opening every cupboard and drawer, exclaiming at everything he found. I was alone at last and drifted out into the sticky air. The sun was low in the sky. It set the trees on fire with shades of orange and pink. A chorus of chirps, pips and trills sung through the trees. The forest was alive and as noisy as any city street.

I stepped into the trees. Darkness spread like ink. Branches broke under my feet and sent birds flying into the sky. Then, another branch cracked up ahead. There was something there. The leaves quivered. I peered into the tangle of trees and bushes. There was a shape. I was sure of it. Piece by piece I put it together: a sloping back, a long swaying trunk, curved tusks. Was this Old Foot? Then as my eyes watched, the sloping back melted until it was no more than a leaning tree trunk. The elephant's trunk became a swinging vine, the tusks nothing but broken branches. My mind was playing tricks on me. And yet, as I turned, I felt sure that I saw two gleaming pinpricks in the darkness, like a lonely pair of eyes watching me go.

INFERENCE FOCUS

1. At the start of the story, what is the narrator's opinion of the forest?
2. Find and copy a group of words which suggest that the ranger dreams of seeing the elephant.
3. How does the narrator's brother feel about the trip? How do you know?
4. How does the narrator's attitude to the trip change at the end of the story?
5. How old do you think the narrator is? Give justification from the text.

VIPERS QUESTIONS

R

Where do the narrator and her family live?

R

What two names have been given for the elephant?

V

What does gullible mean?

E

How does the writer build up suspense in the final paragraph?

P

What do you think will happen next?



Rewilding Britain

Is it time to bring back our lost species?

Britain used to be a very different place. It was a land of forests and wilderness. Wolves, lynx and bears roamed. They preyed on elk and wild cows called aurochs. Then humans came. They cut down the forests for farming and they hunted these wild creatures for food and fur. The last wolf was hunted a few hundred years ago. Britain had lost its great predators. However, there are those who want to bring extinct species back. The capercaillie, the sea eagle and the beaver are three species which 'rewilders' have already brought back to this country. Further to this, there are people who want to bring back predators such as wolves and lynx too. The debate about whether this is a good idea has passionate views on both sides.

Wolves and lynx are apex predators. This means that they are the top of the food chain. Supporters of rewilding point out that apex predators keep populations of other species under control. For example, they hunt on herbivores such as deer. Too many deer cause problems such as damaging woodland and crops due to overgrazing. This, in turn, means that some birds lose their habitats. Did you know that over 100,000 deer are shot in Scotland each year to help prevent this? This would not be needed if apex predators were there to do the job naturally. To add to their arguments, supporters of rewilding state that these species would not have disappeared at all if not for man. Therefore, they claim that it is right to reverse this harm. Finally, having these impressive wild animals back would bring tourism to these areas. Safaris and nature-spotting tours would raise much-needed money for rural areas.

On the other side of the argument, there are concerns about how these predators would threaten farm animals and even humans. Lynx do not attack humans and they have not caused problems to farm animals in Europe where they already live. They are shy and mysterious creatures. In Norway however, higher numbers of sheep have been killed by lynx. This seems to be because in Norway the sheep graze in and close to the lynx's forest home. Wolves on the other hand could pose a bigger threat. They would have to be kept in fenced reserves. This



would mean that parts of the countryside would be out of bounds for walkers and nature-lovers. There is the worry that the reserves would become visitor attractions for rich tourists and off-limits to anyone else. Another concern is that introducing these animals is a rather unpredictable experiment. The habitats have changed since wolves and lynx were last here. Could they still support these species? No one can be totally sure if it would even work. Of course, if the rewilders have their way, we will find out soon enough.

What do you think? Do you like the idea of lynx stalking in our forests again. Does the thought of wolves howling in the night give you a tingle of excitement or send shivers down your spine?

RETRIEVAL FOCUS

1. Which word in the introduction is closest in meaning to 'wandered about'?
2. What do you think *overgrazing* means?
3. What are *rural* areas?
4. What does it mean if an area is *out of bounds*?
5. What does *stalking* mean?

VIPERS QUESTIONS

R

When did wolves become extinct in Britain?

S

In your own words summarise how apex predators help the environment.

R

Why would reintroducing these species bring economic advantages?

E

How does the writer create a positive impression of the predators?

P

Which predator do you think should be the main candidate for reintroduction and why?

Answers - Canine Life Savers:

1. If the puppies show signs of being too easily distracted, quickly spooked or unmotivated.
2. Alerting them to warning alarms such as fire alarms and sirens.
3. A condition where the body cannot control the level of sugar in the blood.
4. By getting help or helping to prevent them hitting the floor or hurting themselves.
5. They smell cancers or bacteria before doctors or other tests detect them.

V: help, aid

V: spooked

E: Canine life-savers, canine sidekick, four-legged friend, superheroes

E: The text says they 'appear' to sense seizures and that it is 'unclear' whether it is due to a smell or a behaviour change.

S: They help with day to day tasks which people may otherwise not be able to do without someone helping them. For example, dogs help them navigating obstacles when walking in the streets, hearing the doorbell and getting dressed or doing household chores. They also help those with medical conditions manage their conditions so that they can live more normal lives.

Answers - Evelyn Cheesman - Escaping the Web:

1. The text opens with the startling incident of Evelyn Cheesman stuck in a spider's web (rather than simply starting with her early life). The reader straight away has a sense of her adventurous, daring and unusual life.
2. Plummeting, clinging
3. It is meant to be funny – Evelyn experienced far worse so it's funny that she's most worried about her cup of tea. It also gives a sense of how tough she was since she was not phased by the other ordeals.
4. She admires Evelyn's passion and achievements.
5. Various answers related to the text.

V: remote, far-flung

R: By taking paying tourists on board.

R: She was respectful of them and they were in awe of her.

V: Brave or daring actions

S: She was the first female curator at London Zoo. She travelled independently to rough, remote and challenging places when this was not something expected of women. She made important discoveries and had species names after her.

Answers - Extreme Survivors:

1. They help it take in oxygen in the low oxygen atmosphere of the high-altitude environment.
2. High altitude environments and deep in the Earth's crust.
3. Deep in the Earth's crust and in the deep ocean living at a hot hydrothermal vent.
4. Wood frog
5. It sleeps in a cool burrow during the day and only comes out at night when it's cooler.

I: They were shocked and surprised because they didn't think life was possible there.

E: The Mariana snailfish is described as being the deepest animal 'yet discovered'.

V: They are doing well and their numbers are growing.

V: It's famous, it's a symbol of the Arctic.

V: Crowd together

Answers - Old Foot:

1. She finds it boring, uninteresting and she doesn't want to be there.
2. 'He gazed hopefully out across the landscape'
3. He seems excited as he scampers around the lodge, looking in all the cupboards and drawers and exclaiming at everything he found.
4. She becomes interested and curious. She wants to explore and see the elephant.
5. She is probably in her early to mid teens (13-16). She still looks young and goes on holiday with her parents but she wants to be seen as grown up and she is more interested in hanging out with her friends.

R: Jo'burg

R: The matriarch, Oupoot (Old Foot)

V: Easily persuaded of something, believes everything

E: By making it unclear whether there was an elephant or whether it was only shapes in the trees.

P: Various answers in keeping with the text. For example, the narrator explores the forest and grows to love it. She finally comes face to face with the elephant.

Answers - Rewilding Britain:

1. Roamed
2. Eating too much of the grass and plant-life.
3. The countryside
4. You are not allowed to go there.
5. Trailing, tracking, following prey

R: A few hundred years ago

S: Predators help to keep populations of herbivores such as deer under control and therefore stops damage to plants such as growing trees through overgrazing.

R: It would bring tourism to rural areas.

E: Calling them 'great' predators, 'impressive wild animals'

P: Accept either answer with justification from text. Possible answers: lynx because they are less dangerous to humans, they wouldn't require the creation of fenced reserves and therefore wouldn't impact access to the countryside; wolves because they could be contained safely within a reserve and charging rich tourists means that rural areas can make money. In addition, since lynx are shy and mysterious, they presumably wouldn't be as appealing for tourists on safari.