

Performance artist Rachel Rosenthal cares deeply about all animals. Here, Rachel shares the story of the love of her life, Tatti Wattles, after his death.

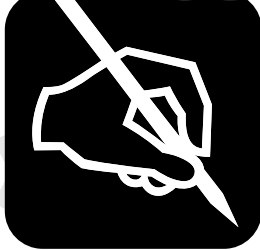
# Autobiography

## teachers

Please cover this section when photocopying for your students.

Either photocopy this sheet for your students or read the piece to them before they write their own essays.

## write



Animals have an amazing impact on our lives. Write an autobiographical piece about an animal who has affected your life. Explain how you feel about this special animal and how knowing him or her has contributed to your life.

## discuss



What emotions do the animals you know share with humans? Can they feel pain, fear, love, anger, embarrassment, happiness and sadness in the same way we do? If they do share these feelings with us and can experience pain and suffering, what justifications are there for not treating them as we would like to be treated?

*Dear Tatti: I love you, and I miss you. Of all the animals who've lived with me, you were physically the closest. You were on my body so much of the time: on my shoulder, my arm, my lap, in my hand. It was an intimacy of touch, of warmth, of the senses. I loved your ratty smell, your delicate pads, always scrupulously groomed. I loved your long tail that freaked out so many people. I loved your profuse whiskers, your round translucent ears, your little black, shiny eyes, your warm white underbelly. I loved to watch you stash and eat and wash. I enjoyed your padding around the house, sometimes kicking up your heels and taking off in a loping gallop. I loved your affection, your little tongue kissing me, your little paws with their tiny pink fingers holding my face. I am grateful for your patience with all the activities I involved you in and the people I exposed you to. Oh Tatti, my little friend, I miss you so. It is an empty shoulder indeed, and my hand searches for the warmth of your little body in vain.*

*You were a beautiful creature, Tatti Wattles. I want to tell this to the world, for the world knows your kind as enemy, vermin, anonymous flesh pool to be used in abominable laboratory experiments or as food for snakes. I have known you as an individual, and I want to open people's eyes to you as an individual—for it is only when we see others as individuals, unique, precious and irreplaceable that we will be ready to assume our full humanity. Only when we are capable of acknowledging that other creatures, human or not, have full rights under the sun—all this for ourselves.*

## read



Jeffery Mason has written three wonderful books about the emotional lives of animals: *When Elephants Weep*, *Dogs Never Lie About Love*, *The Pig Who Sang to the Moon*. All are available from [www.amazon.co.uk](http://www.amazon.co.uk)



Why do dogfighting and cockfighting, which are banned in Britain, remain legal in other countries, such as the Philippines? If it's wrong to kill a dog for 'sport', is it also wrong to kill a deer? A duck? A fish? Take a look at the information below, and discuss why some 'blood sports' are seen as legitimate while others are not.

# Why Are Some 'Blood Sports' Seen as Acceptable While Others Are Not?

## Shooting



Shooting, which may be carried out with an organised party or individually, involves shooting birds – such as grouse, partridges, pheasants or ducks – or other animals – such as foxes, deer and rabbits. Many birds are reared simply so that they can be shot. Pheasants are clumsy flyers, which gives shooters a better chance. Sometimes, shooting is done purely for 'pleasure'; other times, the animals are eaten. After being shot, many animals do not die instantly.

## Badger-Baiting

Badgers are protected in Britain, but although baiting them is illegal, the practice continues in Britain. During badger-baiting, the animals are dug from their setts, bagged and taken to an arena where dogs are encouraged to attack and kill them. The badgers are often crippled first to give the dogs a better chance. Large sums of money are bet on the outcome of each fight. Badger-baiters, when caught, are fined and sometimes sent to prison.



## Fishing



Fishing involves baiting a hook and waiting for fish to take the bait. When they do, they are impaled on the hook and dragged from the water. Studies from around the world have proved that fish feel pain, just like humans, dogs and other animals. Once hooked, fish are either left to suffocate or are hit over the head. Often, those who are thrown back die as a result of stress, internal injuries, exhaustion or the loss of their protective outer coat, which can leave fish susceptible to parasites and disease.

## Dogfighting and Cockfighting

Although illegal in Britain, dogfighting and cockfighting continue. Dogs and cockerels are bred to be aggressive fighters and are often trained with savage methods. Large amounts of money are wagered on the outcome of each fight. The dogs and cocks may be killed during the fight, and those who survive may be so injured that they have to be put down after the fight. However, because these activities are illegal, the animals are rarely taken to a vet to be humanely put to sleep; instead, they are beaten, stamped on, shot or abandoned and left to die.





## Bullfighting

Although long-condemned as inhumane in the UK, bullfighting is still legal in most parts of Spain and Mexico. Bulls are injured – often by being stabbed several times – to ensure a ‘fair fight’ with the matadors (Spanish for ‘killer’), who tease and torment the bulls before attempting to kill them with a sword. If the matador fails to kill the animal, an executioner is called in to stab the bull to death. The animal’s ears and tail may be cut off as a ‘trophy’ while he is still conscious.

## Bear-Baiting

Although banned worldwide, bear-baiting continues in rural areas of Pakistan. The bears, whose teeth and claws are often removed, are chained by rings through their noses, and pairs of pit bull terriers are set upon them. The dogs are bred to be savage, and the bear has no means of escape. As many as eight dogs may be set upon the same bear in one day. Both bears and dogs receive serious injuries. Despite the fact that bear-baiting is illegal in Pakistan, campaigners say that police officers still protect the events and that politicians and local dignitaries support and attend them.



## Horse Racing



Not usually thought of as a ‘blood sport’, horse racing causes the deaths of hundreds of animals every year, including 300 who die on the course. Exercise-induced pulmonary haemorrhage (EIPH) is ‘extremely common in racehorses’ and is a constant threat to a race horse’s life. In simple terms, EIPH causes the animal’s lungs to bleed as a result of the exertion needed for the race. Horses may be shot if they break a leg in a fall. When their winning days are over, many are killed or abandoned and left to die of starvation or thirst.

### teachers

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Photocopy this sheet and hand out the copies. Read through the sections with your students. Then steer a group discussion.

Pointers for the discussion are given below and should also be covered when photocopying.

### discuss



Ask, “Why do we accept some blood sports and condemn others?”

- How do you feel about hunting, which is perhaps the most famous ‘blood sport’?
- Certain ‘blood sports’ are banned because of their cruelty. Should they all be?
- Do you think that, in time, sport fishing and shooting will be banned in Britain?
- Do you believe that all cruelty to animals in the name of sport is wrong?
- Do you believe that all cruelty to animals is wrong?
- Is it hypocritical to think that one of the above ‘sports’ is ethically wrong, but that another is acceptable?

### think about



- Cultural differences
- The ‘sports’ themselves
- Different animals and society’s view of them
- People who take part in blood sports
- The difference between legality and morality

After the discussion, ask your students which of the above-named practices they find acceptable. Take a vote on each ‘sport’. Then, set a written component for homework.

Based on today’s discussion, research and write one of the following:

- A piece of persuasive writing to encourage readers to share your views about one or more of the above-named ‘sports’.
- A report exploring how culture affects our acceptance or condemnation of different ‘blood sports’.
- A formal report to a government department detailing why one of the ‘sports’ above should be banned, re-instated or allowed to continue.
- A newspaper report about hunting with hounds and whether you feel it should be legal or not and why.

# Magazine Article: Fishing

Research the subject of fishing and write a balanced magazine article titled 'Is Fishing a Blood Sport?' Use the following resources as possible starting points for your research:

Web site/E-mail	Against Fishing: Campaign for the Abolition of Angling	For Fishing: Countryside Alliance
Literature	PETA leaflets	Angling Times
Interview	A fishing opponent	An angler
Addresses		
Campaign for the Abolition of Angling	The Countryside Alliance	PETA (People for the Ethical Treatment of Animals)
BM FISH	The Old Town Hall	PO Box 36668
London WC1N 3XX	367 Kennington Road	London SE1 1WA
<a href="mailto:pisces@pisces.demon.co.uk">pisces@pisces.demon.co.uk</a>	London SE11 4PT	<a href="mailto:info@peta.org.uk">info@peta.org.uk</a>
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Angling Times can be found at newsagents.

## You may want to consider the following points of view:

Pete says there is no excuse for causing pain to any animal. Read some of the other things that Pete says about fishing:

- 'Fish do feel pain. There is no doubt about it. They have a central nervous system and pain receptors.'
- 'Many fish who are thrown back into the water die as a result of internal injuries, exhaustion and loss of their protective outer coat.'
- 'Every fish who gets caught suffers, whether he or she dies or not. Just imagine being dragged along by a hook in your throat, mouth or stomach.'
- 'Fishing is also harmful to birds and other animals who get caught in discarded fishing line or become impaled on hooks.'
- 'There are loads of great ways to enjoy the countryside without causing suffering to animals – hiking, canoeing, rock climbing, swimming, bird-watching, picnicking, tree-climbing or just reading a good book in the sun.'



Dave says there is nothing wrong with fishing. Read some of the other things that Dave says about fishing:

- 'Millions of people enjoy fishing. What could be better than sitting on a riverbank, enjoying the countryside?'
- 'The fish eaten by anglers are killed quickly and humanely, and the others are thrown back, so no harm is done.'
- 'People have been fishing for thousands of years for food and sport. Why is it suddenly wrong now?'
- 'Anglers are often the first people to spot pollution incidents, and many actively help with clean-up projects alongside riverbanks and waterways.'
- 'Isn't it better to involve children in outdoor activities like fishing than to have them sitting indoors all day watching the television or playing computers games?'



## teachers

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Photocopy this sheet for your students. Ask them to do research about fishing and then draft, write and proofread an article on the topic. You can give a word limit if you choose.

# Dear Diary...

You are 16 years old and have just left school. You have lived your whole life in a rural community where most jobs are based on agriculture and farming. In fact, your father raises cows for meat, and your whole family works on the farm at times. Today was your first day working in a slaughterhouse. Now you are home and reflecting on the events of the day. Write your diary entry.

Consider the following:

- How you felt when you arrived at your new job
- The sounds, sights and smells that greeted you
- The people who you worked with
- The animals who were herded in
- How you felt about seeing them killed
- What your own job entailed
- How you felt about the whole day
- How you feel about going back tomorrow
- Whether the day's experiences have changed you in any way

Your diary entry should be as descriptive and honest as possible. This is a private diary, so you can let your feelings out and be as outspoken as you'd like. Try to express all the feelings, thoughts and emotions you felt on your first day in this new job.

## discuss



"If slaughterhouses were made of glass, everyone would be vegetarian."

What does this mean? Is this true?

## teachers

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Teachers: Either photocopy this sheet for your students or read the task to them. The discussion can be held before or after the written component.

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# Poetry Pieces

*The Fly* by William Blake

*Little Fly*

*Thy summer's play  
My thoughtless hand  
Has brush'd away.*

*Am not I*

*A fly like thee?  
Or art not thou  
A man like me?*

*For I dance, a*

*And drink and sing,  
Till some blind hand  
Shall brush my wings*

*If thought is life*

*And strength and breath;  
And the want of thought is death;*

*Then am I*

*A happy fly,  
If I live  
Or if I die.*

Compare the two poems for style and content. Consider the following:

- How do they differ? How are they similar?
- What questions do both poems pose about the meaning of existence?
- Do you share any of the views expressed in these poems?

*'i had a choice to make, between my grandmother & a cockroach' by Coral Hull*

*when my grandmother asked me how i felt about her in relation to a cockroach, i said 'i love you both the same,' she was very offended & went off her head, i told her that i thought she had misunderstood, that i was naturally more attached to her than the cockroach, because she was of my own species, because she was a grandmother & because i liked some things about her personality that made her dear to me, furthermore that i was not particularly partial to cockroaches, & i had no idea what the cockroaches personality would be like, therefore i was not as attached to the cockroach, but that in reality they were both equal in the eyes of life & death, & that they were both the same, in that they were both worthy of my love & respect in the same way, but nanny never heard any of this, in her mind i had chosen the cockroach*



Analyse and discuss interpretations of this poem. Consider the following:

- Did Blake mean to kill the fly? Why do you feel that way?
- Why does he liken himself to the fly?
- How do you think Blake was feeling as he wrote the first four lines?
- Do you think Blake values human and animal life?

Analyse and discuss interpretations of this poem. Consider the following:

- What is the poet's attitude toward life?
- Does she value animal life over human life?
- Why did her grandmother react as she did? Was she justified?
- How does Hull's writing style add to the content of the poem?

## teachers

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Teachers: Photocopy this sheet for your students. This lesson can take the form of an oral or written task.



# A Listening Exercise

teachers

Read this passage aloud to your students, and then ask them to answer the questions from memory.

## From 'The Dragonfly's Gift' by Jane Goodall

(Taken from *Kinship With Animals* edited by Michael Tobias and Kate Solisti-Mattelon)

To begin at the beginning: I think it began when I was about one year old—but I only found out recently when my mother was writing an account of my childhood. She said that I was fascinated by animals from the time I could crawl. Once, aged about eighteen months, I took earthworms to bed. When she found me intently observing as they wriggled around my pillow, she told me that they would soon die if I did not return them to the earth. Quickly I ran back with them to the garden. I don't remember that.

I do remember going to stay in the country, where my father's family owned a farm—what a treat for a little girl from London who loved animals. Cows, pigs and horses. And hens. I collected the eggs each day from the little henhouses—no battery units in those days. Apparently I kept asking where the eggs came out—I could not see a hole big enough! As no one explained, I hid inside one of the stuffy henhouses, and I waited and waited and waited. For more than four hours! And then, as dusk was falling, and my family was searching everywhere, my frantic mother saw a small figure, covered in straw, rushing back towards the house. How lucky I am that, instead of scolding me for making everyone so worried, going off without telling anyone, my mother saw the excitement in my eyes and sat down to hear the story of how a hen laid an egg.

...  
All through my childhood I learnt about animals and wrote down my observations. ... I had dreams of living with animals in Africa. My teacher was Rusty, my childhood companion, my best friend.

...  
Rusty was my first real mentor in my ongoing effort to understand, ever more clearly, the true nature of nonhuman animals. He provided me with an intuitive awareness of the subtleties of animal behaviour, very different from what I would have learned during a conventional undergraduate education. In fact, I had not been to university when, in 1960, the late Louis Leakey gave me the chance to observe wild chimpanzees in Tanzania's Gombe National Park. Thus I set off unbiased by the ethological thinking of the time. And so, as I learned to identify various chimpanzees, I named

them, rather than giving them numbers which would, I was told, have been more scientific.

As I realized how they differed from one another, I described their vivid personalities, even though in those days nonhuman animals were not supposed to have personalities. I referred to them as 'he' or 'she' rather than 'it'. I also credited them with the ability to reason, and I described their emotions. After all, Rusty had demonstrated those things, and the brain of a chimpanzee is more similar to our own than that of a dog.

Rusty was a dog among dogs. His counterpart, I the chimpanzee world, was David Greybeard. ...

When I arrived at Gombe, the chimpanzees were terrified of the peculiar white ape who had invaded their territory. But David Greybeard, for some reason, was less terrified of me than were his companions. When they fled, he often stayed, provided I was not too close. Not surprisingly, then, he was in the small group on the very first occasion that I was able to get really close. David, and his closest friend, Goliath, just looked up as I emerged from the bushes. And instead of running off, they continued to groom each other. I had been accepted! The sheer ecstasy of that moment is as pure today as it was all those long years ago.

So often it was from David Greybeard that I learned new and exciting facts about the Gombe chimpanzees way of life. It was David who gave me the first thrilling observation of tool use, as he fished termites from their underground nest with a piece of grass. And I watched in disbelief as he picked leafy twigs and stripped the leaves or trimmed wide blades of grass. He was modifying objects, making them suitable for his purpose. He was making tools. At that time, humans and only humans were supposed to be able to make tools—it was the most important distinction between ourselves and the rest of the animal kingdom. When I sent a telegram to my mentor, Louis Leakey, he beamed and said, 'Now we must redefine Man, redefine tool, or accept chimpanzees as humans!' ...

Chimpanzees are too much like us. They share some 99 percent of our genetic makeup, their blood composition and immune responses are amazingly like ours, and the anatomy of the chimpanzee brain and central nervous system is more like ours than any other living creature. This is why they are imprisoned in medical research laboratories to serve as living test tubes for the investigation of certain diseases that other primates, less like us, cannot catch or be infected with. Hundreds of chimpanzees are confined in steel-barred cages that are no more than five-by-five feet and seven feet high. Highly sociable, they are alone in their confinement—and usually their sentence is for life.

The first adult male I met in an American laboratory was named Jojo. I knelt, looking into his eyes, while he looked back, not in hatred, which I could have endured, but with what seemed like bewilderment and utter resignation. Already he had spent at least ten years in his little prison. I thought of the chimpanzees at Gombe and their lives filled with excitement, stimulation, and variety, enjoying the freedom of the forest, the siestas in the shade while stretched out on the leafy ground or on their soft, springy beds in the treetops. Very gently Jojo reached toward me through the bars, touched the tear that was trickling down under my mask and then stared intently at my face. Today, Jojo is infected with the HIV virus.

...  
In Africa—where ever-increasing human populations compete for ever-shrinking limited resources and struggle to survive—chimpanzees are disappearing across their range, either from the destruction of their forests, from hunting, or both. Sometimes female chimpanzees are shot deliberately and their infants sold to dealers who ship them out of Africa for the entertainment and medical-research industries. Infants sold on the marketplace are usually by-products of the bushmeat trade. Their mothers have been shot (usually illegally) for food. They have been killed not just to feed family and friends in the village, as in the old days, but to be chopped up,

smoked, and trucked to the towns.

Little Jay was the first infant whom I saw with my own eyes offered for sale in a big tourist market in central Africa. Tied to the top of a tiny cage in the hot sun, surrounded by a noisy crowd, Jay, dehydrated with dull and glazed eyes, seemed close to death. Yet when I knelt and made the small panting sound of greeting, he sat up, stared at me, then reached to touch my face. If you buy one of these pathetic infants you perpetuate the trade. Yet how could I abandon him? Luckily, we were able to persuade a government official to confiscate him.

...  
Neither shall I forget my first sight of Gregoire. When I met him he was an emaciated skeleton. His bones were held together by the skin, and he was almost hairless. Gregoire had been in his bleak, dark cage in the Brazzaville zoo since 1944. How was he still alive—and why? I looked into his old eyes, and he reached out, and mumbling his jaws like an old man, tried to undo a button on my sleeve.

...  
Should we continue accepting the challenge of caring for the Little Jays and Gregoires of Africa? Many conservationists suggest that it is irresponsible to 'waste' money on a few individuals; rather we should use our limited resources to protect the species in the wild.

...  
... I cannot turn my back on individuals. My research has always focused on the importance and value of the individual. Once we are prepared to accept that not only humans have personalities and are capable of reason, and above all, not only humans have emotions and can feel pain, our attitude towards many of the nonhuman beings we share the planet with will change. This new understanding will lead to a new respect, which, in turn will raise many ethical questions relating to the way we use and abuse so many animals in our daily lives (human as well as nonhuman, incidentally). These are questions for each one of us to answer for ourselves.

## questions



- What events in Dr Goodall's childhood shaped her views of animals?
- In what ways did Dr Goodall behave differently from other scientists of the time?
- What dangers does a chimpanzee face in the wild, according to Dr Goodall?
- Why are chimpanzees captured? What are they used for?
- How did David Greybeard enhance Dr Goodall's (and therefore the world's) understanding of chimpanzees?
- How much of our DNA do we share with chimpanzees?
- Why does Dr Goodall believe that we should care about individual animals?
- What do you think about Dr Goodall's work?
- What do you think was her reason for writing this essay?



## An Exercise in Researching and Speaking

# Factory Farming

Prepare a two-minute talk on the subject of factory farming. Choose one of the titles below, paying particular attention to the aims of each. Illustrate your talk with visual aids and back up any claims with references. Think about the way you present the talk, including the tone, pace and use of visual aids.

### 1. What Is Factory Farming?

Aim: To explain, describe and narrate

### 2. The Rights and Wrongs of Factory Farming

Aim: To explore, analyse and imagine

### 3. Why Factory Farming Must End or Why Factory Farming Must Continue

Aim: To discuss, argue and persuade

The following articles appeared side-by-side in *The Times* on 30 April 1996. They may provide useful starting points for your research:

### 'Short Lives in the Broiler House'

Extracted from *The Silent Ark* by Juliet Gellatley, Viva!, 8 York Court, Wilder Street, Bristol BS2 8QH, [www.viva.org.uk](http://www.viva.org.uk)

#### Factory Farming

The broiler unit was like all modern agricultural structures windowless, soulless and airless. The floor was covered with a thick layer of litter which looked like a combination of wood shavings, sawdust and chopped straw. It still had that fresh, pleasant odour of outdoors part timber yard, part stack yard.

Running from end to end of the shed, across the floor and equidistant from each other, were three automated feeding lines, each conveyor carrying a slowly moving cargo of high-protein food pellets through the myriad of yellow chicks which carpeted the floor. The air was filled with their high-pitched tweetings as they wandered around, from conveyor belt to water dispenser and back again. There were 20,000 chicks under this one roof. Although crowded, there was sufficient room for them to move around.

The second shed presented an entirely different scene. It was identical in structure to the first but the floor was almost completely taken up with full-grown chickens and the light was significantly dimmer. In only six weeks, the 20,000 little chicks had been transformed into "fully-grown birds with a live weight of 1.8kg ideal for the dining table". And that's where they were headed the next day.

As I looked around at the milling mass in its almost permanent twilight, each bird allocated a space smaller than that taken up by a telephone directory, I felt something was wrong. Then the answer came to me. I was looking at a carpet of fat, fully-formed chickens but I was listening to the tweeting of chicks.

The reason is simple. Selective breeding and dietary control have produced a bird which grows twice as quickly as it did only 25 to 30 years ago. On the basis that the more a bird can be encouraged to eat the more quickly it will gain weight, sleep becomes an intrusion. So the lights are kept on for more than 23 hours in every 24.

Feed for broiler chickens consists of some 70 per cent cereals, the remainder being comprised of protein in the form of soya, meat, fish and bone, and oils, vitamins and minerals. The "meat" content can be the chickens themselves. There isn't a great demand for chicken heads, necks, blood, feathers, feet or offal in the high street and so it's not uncommon for these "by-products" to be recycled into low-grade chicken feed.

For the six weeks of the broilers' almost non-stop eating spree the litter remains unchanged, coagulating with the accumulated droppings of 20,000 chickens.

In several places I noticed obviously dead chickens, mostly on the margins of the shed, furthest from the food and water. Many others, again apart from the mainstream activity, sat motionless, eyes hooded, seeming almost to

Please cover this section when photocopying for your students.

Photocopy this sheet for your students. The articles provide a starting point, but pupils should be encouraged to research further on the title of their choice and then prepare a talk on that topic. You may want to ask students to hand in their talks so that you can choose six of the best to be presented in class. Their written submissions should include notes on visual aids or other tools that they plan to use should they be chosen to give the talk.

pant. Still others hobbled around on deformed feet, barely capable of movement. The cause is a direct result of the birds' rapid growth rate. The chickens are unable to form bones properly. What should be hard, calcified bone is frequently nothing more than soft cartilage. Their skeletons fail to grow properly and their legs bend or break under their weight. One university study found that of 1,000 broilers from four growers, 70 per cent had something wrong with the way they walked; and 5 per cent were virtually incapable of walking. Turkeys suffer acutely too. One of the reasons why turkeys waddle, if they walk at all, is degeneration of the hip joints. Under the stress of carrying a body that can reach 27kg (the weight of an eight or nine-year-old child) in the largest breeding males, the joint breaks down.

Even that isn't the end for the poor broiler chicken, however. It seems incredible that a creature less than 42 days old could suffer from heart disease but it does. With so much rapidly growing muscle there is an increased demand for oxygen.

Unfortunately the heart muscle isn't strong enough to cope and the cardiovascular system comes under enormous stress.

The vast majority of the 500-670 million broilers killed annually in Britain endure their six-week lives with broken bones, deformities, heart disease and ammonia burns. We have turned a beautiful wild creature into a travesty of a living thing. Then we have the audacity to market the flesh as a health product.

## 'Why Caged Birds May Be Happier' by Michael Hornsby

From The Farmers' Defence

MAD COWS aside, any reasonable person must conclude that the farming revolution has done far more good than harm. If we are living longer and healthier lives than ever before it is in large part because of the huge increase in the supply of high-quality and relatively inexpensive food made possible by modern fertilisers and pesticides.

Keeping pesticide residues in food to a minimum is important. But the risk from such chemicals has been exaggerated, and is vastly smaller than the danger from many of the naturally occurring toxins that they destroy. The cooking and handling of food is a far bigger cause of food poisoning than farming.

That said, some illnesses can be linked to farming practice. Salmonella in chickens was probably made

worse by feeding them infected poultry remains. Spread of the infection has also been helped by the tightly packed conditions in which many of the birds are kept. Cattle feed containing the remains of scrapie-infected sheep may well have been the cause of BSE and, possibly, of some cases of CJD.

Few of us, when we think about it, feel no qualms at all at the thought of hens packed six into battery cages, turkeys and broiler chickens crammed into windowless sheds, and dairy cows made to yield up to 16 times the amount of milk they would need to suckle their young. Yet there is much that is inconsistent in our attitudes.

The public that is shocked by graphic television footage of modern poultry factories has happily increased its consumption of chicken by more than 30 per cent over the past ten years because the meat produced in such systems is cheap. Intensive indoor rearing of pigs has similarly boosted sales of pork, while consumption of prime beef and lamb, raised in ways that do far less violence to nature, is in long-term decline.

All the evidence is that most consumers will still go for cheapness. By 1999 British farmers, alone in Europe, will no longer be using the most intensive method of pig rearing. This will add up to 3 per cent to their production costs. Will British shoppers reward them by paying more? Farmers doubt it.

Animal welfare is far from straightforward. It is natural to assume that living on a hillside must be better than imprisonment, or that an animal chewing the bars of a cage must be stressed. Yet research into animal behaviour does not always confirm such assumptions.

Take the domestic hen. To assume that the behavioural requirements of a battery hen laying several hundred eggs a year are the same as its ancestral jungle fowl which roosted in trees and laid 50 would, it has been suggested, be like basing nutritional guidelines for modern human being on the diet of palaeolithic hunter-gatherers.

Cruel as very small cages may seem, and perhaps are, there is ample research to show that mortality rates are typically at least five times higher in conditions where birds are kept in large colonies either on the ground indoors, in tiered perches or with access to "free range" out of doors. Most deaths are associated with the stress induced by exposure to such an uncontrolled environment.

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# Newspaper Articles: Evaluate and Debate

Vivisection is an emotive subject that lends itself to ethical and scientific scrutiny. Read the following newspaper articles, and answer the questions at the end:

## We should give a monkey's

The government is backing research on non-human primates for economic reasons, to the detriment of public health.

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Experimenting on monkeys in the hope of unlocking the secrets of the human brain is an exercise in futility. The most dramatic differences between humans and other primates are in the brain. Our brain is four times larger than that of a chimpanzee, which is four times larger than that of a macaque. Biochemical pathways in the human brain are unique. Gene expression in our brain is dramatically different from that of the chimpanzee.

Yet at British universities, including Oxford, Cambridge, Manchester and London, macaques and marmosets are still used as models of human brain function. This is despite the fact that human brains can now be studied non-invasively using high-tech scanners. These enable the conscious brain (of patients and volunteers) to be observed while engaged in a variety of cognitive tasks, such as talking, singing, reading and writing, of which monkeys are not even capable.

Scientists trying to discover details of human neural networks by studying a different species are very likely to be led astray, wasting time and money. Worse still, treatments that have worked well in monkeys have frequently failed when tried on people, sometimes with tragic consequences.

Countless drugs for strokes have been developed and tested in primates and other animals, yet all of them have failed and harmed patients in clinical trials. An Alzheimer's vaccine was withdrawn in 2001 when it caused serious brain inflammation in patients after proving safe and effective in tests on monkeys. The track record of primates in predicting drugs' dangerous side-effects is abysmal.

Experimentation on chimpanzees and other primates continues to frustrate the development of an Aids vaccine, just as it delayed the polio vaccine by 30 years. Instead of learning from these mistakes, we are gearing up for an increase in British primate use (the UK is already the largest user in Europe) in order to study the growing problems of neurodegenerative disease.

Monkeys do not suffer from Alzheimer's, Parkinson's, multiple sclerosis or Huntington's diseases, and when these are artificially induced they manifest themselves very differently from the real human versions. Creating "models" of disease by destroying or removing parts of the

## teachers

Please cover this section when photocopying for your students.

Read through the articles with your pupils and discuss any issues and queries that they bring up. Then assign the questions as a written exercise. If you would like further information about the subject of animal experimentation before you begin addressing the subject with your class, contact Europeans for Medical Advancement ([www.curedisease.com](http://www.curedisease.com)) and The Research Defence Society ([www.rds-online.org.uk](http://www.rds-online.org.uk)) or search the Internet.

brain will not reveal why these brain regions die, and will therefore not contribute to stopping the disease process.

Future advances in our understanding and treatment of neurodegenerative diseases will come from where they always have: human-based observation and ethical clinical research, aided by advances in technology. Everything we know about these diseases has been learned from studying patients while they are alive and after they have died, as well as from population research and studies using human tissues cultured from biopsies or autopsies.

Decades of research have focused on animal (including primate) "models" of MS without finding causes or cures. Patients have waited in vain for effective treatments. Now, a safe new method called MR spectroscopy has revolutionised understanding of the condition through studies of patients themselves.

A new brain-imaging probe has allowed the visualisation of Alzheimer's plaques in the brains of living patients for the first time. This will enable earlier diagnosis and accurate monitoring of the effects of treatment on patients. New drugs can be given in very small, safe doses and tracked through the body using scanners.

Furthermore, population studies have revealed links between dementia and high-cholesterol diets, as well as smoking and the inadequate intake of vitamin B12 and folate. Clearly, it is through human studies that we will find the answers to these diseases. Yet John Prescott has just given permission for Cambridge University to build a new primate brain research centre, even though the inspector who conducted the public inquiry concluded that no national need for brain research on primates had been demonstrated. An appeal to the high court will soon be lodged.

Mr Prescott admits that he did not feel it necessary for the value of research on primates to be demonstrated. He defers to Lord Sainsbury - science minister and Labour donor - who has made it clear that it is government policy to promote an internationally competitive



Photo: BUAV

knowledge economy in Britain. In effect, the government is influencing the direction of British science for economic motives, even though they conflict with public health interests. A knowledge economy based on erroneous knowledge is doomed to fail.

Prior to Darwin and DNA, scientists could and did learn things from animals that were applicable to humans. But the cutting edge of science today is focused on variation between individual people at the level of "snips" (single nucleotide polymorphisms). The age of personalised medicine could be realised very soon if we started funding the necessary research instead of wasting precious resources studying monkeys.

Dr Ray Greek is medical director of Europeans for Medical Advancement

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## 'Junk Medicine: Ethical Stance versus Evidence'

Mark Henderson

Just 15 years ago, polio was endemic in 125 countries. Today it survives in just seven, and the World Health Organisation hopes to announce its eradication by the end of 2005. At least five million people who would otherwise be paralysed are walking today, thanks to the global vaccination programme. Polio has essentially been beaten, in one of humankind's most successful struggles against infectious disease.

It will probably come as something of a shock, therefore, to learn that almost one in five MPs wants to outlaw the branch of research that has made this triumph possible. Yet that is precisely what 122 of our elected representatives have declared, by supporting a ban on experiments involving monkeys.

The parliamentary motion tabled by Norman Baker, a Liberal Democrat, argues that primate research inflicts intense and inexcusable suffering on our closest animal relatives. And in line with the latest tactics of the animal rights lobby, it also contends that such experiments are useless.

Physiological differences, Baker says, mean that the results of monkey studies are at best irrelevant, and at worst misleading for human medicine. A ban is not only a moral imperative, but would also benefit research.

This is nonsense, and dangerous nonsense at that. It is one thing to take the ethical position that no benefit to human health, however great, can ever justify harming a monkey -though poll after poll has shown that the public disagrees. It is quite another to argue, against all the evidence, that such research is worthless.

Scientists do not choose to work on marmosets or macaques for the sake of

it. The biological and behavioural similarities to human beings that make primate research so controversial are also what make it so valuable. To suggest otherwise flies in the face of both medical history and current practice.

The polio vaccine is only the most conspicuous example of a medical breakthrough that would never have been made without primate research. As well as leading directly to a vaccine that has saved millions from death and paralysis, monkey experiments have played a vital part in advances as diverse as chemotherapy, eye surgery, kidney dialysis and incubators for premature babies.

More recently, primate work has allowed the development of "pacemaker" brain implants, used to treat Parkinson's disease, and combination drug therapy for HIV patients.

These conditions, in fact, are all but impossible to study in any other animal model. You simply cannot test HIV drugs or vaccines on rodents, as they cannot contract the virus or anything like it. To simulate the devastating effects of Parkinson's, you need a two-legged animal with a complex brain and fine hand movements.

Monkeys are by far the most valuable models for studying malaria and Alzheimer's. They are also indispensable for assessing the toxicity of certain new drugs.

Without experiments on primates, the prospect of an Aids vaccine or a Parkinson's cure will all but dry up. To claim that such work has no scientific value is not just wrong. It is an insult to the millions of patients whose life and health depends on it.

This valuable research does not even require the use of many monkeys.

Britain's strict laws, quite rightly, require scientists to show that there is no alternative. As a result, fewer than 4,000 procedures were conducted in 2002, accounting for less than 0.15 per cent of animal experiments.

Baker's wrongheaded proposal, thankfully, is nothing more than an early day motion -a glorified petition that stands no chance of becoming law.

But the muddled ethics that prompted so many MPs to sign it are threatening to inflict real damage on medical science.

Cambridge University has already been denied planning permission for a Pounds 24 million, world-class primate research centre, after an orchestrated campaign by anti-vivisectionists. Any day now, John Prescott will rule on the university's appeal. His choice is pretty simple. He can choose pseudoscience and emotion, or a chance to do for Aids what a previous generation did for polio.

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## questions



(Additional research will be required.)

- Who wrote these articles? Why?
- Examine their use of language. How do they portray their views?
- How do these two articles differ in style and content?
- Are both accounts equally plausible?
- Why do they differ so much in their views on the development of a polio vaccine?
- What do you think about animal experiments? Are they morally acceptable? Scientifically valid?