



SCIENCE VERSUS NATURE

SHOULD WE EXPERIMENT ON ANIMALS?

- 1 What do lipstick, diabetes and space travel have in common? They have all, at some point in their development, involved experimentation on animals. It is estimated that every year between 50 and 100 million animals are used in research worldwide. These animals include mice, rabbits, dogs and chimpanzees. When you think about the numbers, this means that more animals are used for experiments each year than the human populations of a lot of countries. It is no surprise then, that the treatment of animals being tested is an important issue. So much so, that there are even some people who think that animal experimentation should be banned entirely.
- 2 Animals and medicine have a long history together. Early Greek and Roman surgeons practised on pigs and goats. Open-heart surgery was perfected using a variety of animals. Insulin, a natural chemical needed by a lot of people with diabetes, was first discovered after two scientists removed the pancreas from a healthy dog in

1889. The pancreas is the part of the body that produces insulin, and by 1922 this chemical was being made commercially from the pancreases of cows, pigs and fish. People with diabetes cannot produce enough insulin to survive, so these original experiments have led to the saving of millions of people.

- 3 These are just two examples of how animal experimentation has resulted in life-saving medical treatments. However, modern technology has evolved to the point where animals are not always needed for experiments. It is now possible to produce computerised models of the human body for surgeons to practise on. Scientists are also able to use human tissue samples, such as skin and blood, to test the effects of different medicines. While medicine would not be where it is today without animal experimentation, there are now so many alternatives available that it seems unnecessary to use living creatures for medical testing.
- 4 The cosmetic industry is also famous for its use of animal experimentation. By law, no product can be sold on the market until it is found to be safe for human use. Lipstick, shampoo and deodorants are all items classed as cosmetics. Before any of these are manufactured for humans, they must be tested; until recently, the most popular process was the *Draize test*. This involves applying the cosmetic onto the eye of a white rabbit for up to 24 hours, without having it washed out. If the substance does not cause irritation, it is recorded as being safe for humans. Without such testing, humans could be exposed to dangerous chemicals that might cause disfigurement and death.
- 5 However, the Draize test has some problems. The first, and biggest, is that it causes the rabbit a lot of pain and can severely injure or even kill it. Secondly, there are differences between human eyes and rabbit eyes. For example, rabbit eyes do not produce tears as often as humans do. This

means that Draize test results are not accurate. Thirdly, because cosmetic labs are commercial, they do not share their results with each other — that would mean giving secrets away to their competitors. Less results being shared means more experiments are repeated and animals are unnecessarily used. In some parts of the world this is now being changed, with many labs across the USA sharing their test results with one another. Worldwide, there are now many products that are free of any animal testing, which implies that such experimentation may no longer be required. Regardless, one must wonder if it is worth risking harm to animals, so humans can look good when they go to a party?

- 6 An important point in the debate over animal experimentation involves issues relating to *ethics*. Ethics are the beliefs that a person has about whether an act is good or bad. When a person says they believe that animal experimentation is not ethical, they are saying they believe it is cruel. However, it is possible to say that animal experimentation *is* ethical. People who believe this say that a human life is more important than an animal's. This does not mean they believe a person should be cruel to animals — just that it is all right to use an animal if it saves a human life. The study of germs, such as those that cause influenza plagues, caused a lot of animals to die. But the knowledge gained through their sacrifice has saved millions of human lives, and has given us the understanding necessary to combat new viruses as they emerge.
- 7 On the other hand, there are people who believe that animals have the same rights as human beings; not only should they be treated humanely, but an animal's life is worth the same as a person's. For people who believe this, a scientist who causes the death of an animal during an experiment is a murderer. Already animal cruelty is a criminal offence, as animals are known to feel stress and pain like humans. While scientists can justify the

