

### **Should we interfere with nature?**

Many organisms in our environment can cause us discomfort, pain or even death (for example, funnel-web and red-back spiders, poisonous snakes, sharks and crocodiles). From our point of view it may seem that these animals should be eradicated - perhaps through biotechnology, which can make the organisms sterile and prevent them from breeding. But what about the organisms that use them for food or the other pests that they control? Would the balance of an ecosystem be upset if these animals disappeared? Perhaps biotechnology could offer a solution by making the organisms less toxic or less aggressive. But what about the organism's ability to catch the prey it needs for food? Perhaps biotechnology could provide humans with a permanent immunity to the toxin of the dangerous organism.

In this activity you will be working in groups, pairs and individually to research the problem and present advantages and disadvantages of using biotechnology to deal with the problems of various poisonous or dangerous organisms. You will also consider the implications of releasing a genetically altered organism into the environment.

#### **You will need:**

- internet access or library resources to find information about a poisonous or dangerous organism and possible biotechnological or other control methods.

#### **What to do:**

1. Form a group of four to six students.
2. Choose one of the animals listed above or some other organism that is a danger to you in your environment.
3. Work as a group to find out as much as you can about the organism, its relationships with other animals and plants in the environment, the danger it creates for humans and any work that may have been done to control or eradicate this organism.

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*Increasing the public's general awareness of biotechnology and its uses, through the provision of balanced and factual information explaining the technology, its applications, and regulations to safeguard people and the environment.*

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4. Assign some or all of the following roles to people in your group:
  - camper/hiker/surfer;
  - biotechnologist;
  - environmentalist/conservationist;
  - indigenous person living in a homeland community in a remote area;
  - a home owner;
  - a parent of a small child;
  - an owner of a camping park near waters where there are crocodiles or sharks; and
  - an owner of a theme park that has some of the organisms on display.
5. Working in the role you have been given, write down as many reasons as you can think of for or against using some form of biotechnology to change the organism your group has chosen.
6. Present your arguments to the group.
7. Work with the person in the role whose ideas seem most different from yours and discuss why the differences in opinion have come about.
8. Discuss all these points of view as a group. Are there any views that every one agrees on?
9. As a group, decide on an answer to the question 'Should we use biotechnology to solve this problem?' and provide a reason or reasons for your answer. Remember to consider all the risks versus the benefits associated with making changes to the organism and releasing it into the environment before deciding your answer.
10. Select a group representative to present the view of your group to the other members of the class.

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