

THE DAY THEY PARACHUTED CATS INTO BORNEO VIDEO QUESTIONS

This video demonstrates the importance of the connections among the different components (both abiotic and biotic) in an ecosystem. It also illustrates how difficult it is for humans to identify all these components and their relationships. *Work in pairs and try to arrange the following events in chronological order. When you think you have the correct sequence, ask me for the answer- By the way, this is based on a real situation.*

Rats brought the plague.

Rats increased.

Cats died.

Caterpillar numbers went up.

WHO (World Health Organization) sent DDT to Borneo.

Mosquitoes were wiped out.

Caterpillars ate grass roots.

Cats were parachuted in.

Cats caught lizards containing DDT.

Roaches stored DDT in their bodies.

Lizards disappeared.

Lizards slowed down.

Lizards ate roaches and got DDT

Class discussion questions:

- 1: How does the story of Borneo exemplify the idea of ecosystems and the interaction of organisms (specifically the importance of all organisms in that ecosystem)?**
- 2: How does the story exemplify how humans (in our attempt to fix one thing), cause unforeseeable problems in ecosystems?**
- 3: Explain how a toxin in a food web will harm some while killing others- why did the mosquitos and cats die while other things lived? (hint: research bioaccumulation & biomagnification)**
- 4: Explain why you think DDT has been banned in the U.S. but is still in production and used in countries all over the world.**
- 5: If DDT is still being used around the world, but not in the U.S.- are we still exposed to it? (Discuss).**

6: Do you think scientists should have sprayed the island with DDT? If not, what should they have done about the Malaria issue?

In the early 1950s, there was an outbreak of a serious disease called malaria amongst the Dayak people in Borneo. The World Health Organization tried to solve the problem. They sprayed large amounts of a chemical called DDT to kill the mosquitoes that carried the malaria. The mosquitoes died and there was less malaria. That was good. However, there were side effects. One of the first effects was that the roofs of people's houses began to fall down on their heads. It turned out that the DDT was also killing a parasitic wasp that ate thatch-eating caterpillars. Without the wasps to eat them, there were more and more thatch-eating caterpillars. Worse than that, the insects that died from being poisoned by DDT were eaten by gecko lizards, which were then eaten by cats. The cats started to die, the rats flourished, and the people were threatened by outbreaks of two new serious diseases carried by the rats, Sylvatic plague and Typhus. To cope with these problems, which it had itself created, the World Health Organization had to parachute live cats into Borneo to eat the rats.

Correct Sequence of Events:

WHO sent DDT to Borneo

Mosquitoes were wiped out

Caterpillar numbers went up

Caterpillars ate grass roofs

Roaches stored DDT in their bodies

Lizards ate roaches and got DDT

Lizards slowed down

Cats caught lizards containing DDT

Lizards disappeared

Cats died

Rats increased

Rats brought the plague

Cats were parachuted in