

OPERATION CAT-DROP



Seriously?

This is an activity that demonstrates the importance of the connections among the different components (both biotic and abiotic) in an ecosystem. It also illustrates how difficult it is for humans to identify all these components and their relationships. **Work in groups of 3 to arrange the following events in chronological order. We used to do a little of real life cut and paste, but I have altered the activity so that the phrases are images that can be shifted around the page. When you think you have the correct sequence, let me know and I'll come into your breakout group to take a look... By the way, this is based on a real-life situation. Seriously.**

- A. Rats started moving in from the forests surrounding Borneo.
- B. Geckos suffered nerve-damage and caused their reflexes to become slower.
- C. Caterpillars ate thatch roofs causing houses to cave in.
- D. Geckos ate cockroaches and got DDT-poisoning.
- E. Cats were later parachuted in by the WHO, in coordination with the Royal Air Force, to combat the rat infestation.
- F. DDT wiped out mosquitoes.
- G. Cats died from DDT ingestion.
- H. Parasitic wasps were also wiped out by DDT.
- I. The World Health Organization (WHO) sent DDT (a chemical pesticide) to Borneo to kill malaria-ridden mosquitoes.
- J. DDT also fell on cockroaches and got stored in their bodies.
- K. On the rats came fleas which carried the bacteria that cause the plague.
- L. The number of "thatch-eating" caterpillars that are preyed upon by wasps increased.
- M. Cats caught the slower-moving geckos containing DDT.
- N. There was a serious outbreak of malaria in Borneo.

Summary Questions: (You will have to do a little Internet research ...)

1. Perform a search for "Operation Cat Drop" to see what the web has to offer up in terms of information...
Based on your findings, what are your thoughts concerning some of the validity of this story?

2. Is this an environmental science story or a story about ecology? Support your answer.

3. What are 3 key biotic factors and 3 key abiotic factors that are involved in the development of this story?

4. Give a little background about the chemical DDT.

5. a. What is the term used to describe the process by which toxins build up in an individual organism?

- b. What is the term used to describe the process by which toxins get passed on to higher levels in a food chain or web?

** The answers to parts a and b are different – you might have been taught just one of these terms in biology and applied it to both scenarios. **

6. The "Operation Cat Drop" activity is used to demonstrate how everything in the environment can be interconnected – even in the most odd and unforeseen ways. How do you think agencies (such as the WHO) decide when and how to take action versus choosing to not intervene?

Group Members _____
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Date _____
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OPERATION CAT-DROP



ORDER OF EVENTS:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.