



# Teaching Notes & Resources

Key Stage 2/3

Themes: The Amazon Rainforest | Amazon Amphibians | Deforestation

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# Toxic by Mitch Johnson

A rainforest adventure that might just be deadly . . .

AGES 9+ / UKS2 NOTES FOR TEACHERS

Explore themes of: The Amazon Rainforest | Amazon Amphibians | Deforestation

Subject checklist: PSHE | Citizenship | Art, Design and Technology | Geography | Science

The activities included here are suitable for the classroom or library sessions. They are based on the environmental themes in *Toxic* by Mitch Johnson.

## About the book:

Hidden in the heart of the rainforest lies a secret... can three friends survive long enough to find it?

Billionaire beauty mogul Anura Hegarty has pledged to acquire as much of the rainforest as possible to preserve it. But when armed guards appear and bring in portable terrariums to capture wildlife, Jessica and her friend Renata realise something much more sinister is going on.

The rainforest holds a frog with a secret to staying young forever, and Jessica and Renata know they must find and save it first! Together with Briony-Rose, the girls journey deeper into the rainforest.

Danger and betrayal lurk in every corner, and soon they're running for their lives, dodging blow darts and falling into traps. Will the children make it out of the forest alive?

An action-packed jungle adventure, perfect for fans of Katherine Rundell's *The Explorer* and M.G. Leonard's *Twitch*.



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# Toxic by Mitch Johnson

## BOOK COVER PROMPTS:

- How does the cover grab your attention? What do you like about it?
- What different elements do you see on the cover? Pick out any key words or imagery.
- For each element, make a note of what clues it gives you about the story.
- What do you predict might happen to the characters in this rainforest adventure? What sort of challenges might they face?
- What does the word 'toxic' mean? How might it be relevant in the context of a rainforest?



# FUN ACTIVITIES!

## ACTIVITY 1: AMAZON AMPHIBIANS

In the story, the rainforest holds a frog with a secret to staying young forever, and Jessica and Renata know they must find and save it. In this extract from Chapter 1, Jessica first meets some of the frog species native to the Amazon Rainforest.

*Jessica frowned. 'The frogs...?'*

*And then she began to see them: poison dart frogs in a rainbow of riotous colours; guilty-looking tree frogs with skin so clear their beating hearts were visible. In the largest tank, which ran along the length of one wall, lived a gargantuan toad as big as a hamburger. In another, a golden frog no bigger than a thumbnail rested on a leaf. She saw frogs waddling, leaping, clinging and climbing.*

*'There are so many,' she said.*

*Tom nodded, but his lips settled into a grim smile.*

*'And yet nowhere near enough. We should have collected ten times as many specimens for the number of trips we've made into the forest. But they're just... gone.'*

## DISCUSSION QUESTIONS:

- What is an amphibian? What do you know about amphibians?
- How do you think Jessica feels when she sees the frogs? What makes you think this?
- Which words give you the sense that the frogs are rare or exotic? How are the frogs different to the ones you might see at home?
- Why do Tom's lips [settle] into a grim smile'?
- What reason does Tom give for not having 'ten times as many specimens'?
- Why do you think Tom is collecting the frogs?



## EXTRACT TASK 1:

Can you match the different frog species mentioned in the extract to their descriptors?

Frog Species	Descriptor
1. Poison Dart Frog	a. A group of tree frogs, some species of which have translucent bellies and chests. In glass frogs the observer can see the heart pumping blood into the arteries and food moving through the gut. The translucency is a type of camouflage in which the edges of the frog blend with the relative brightness or darkness of its surroundings.
2. Tree Frog	b. The common name for a group of many different species known for their bright colours, which warn predators about their toxicity. They are diurnal, meaning they are active during the day, often hopping around the forest floor in search of prey (ants, termites and other small invertebrates). Not all the 170 species in the family are poisonous. Most are very small in size, with the largest being just 5.5 cm.
3. Giant Cane Toad	c. A diverse family of amphibians that includes over 800 species, typically found in trees or other high-growing vegetation. Tree frogs are usually tiny as their weight must be carried by the branches and twigs in their habitats. While some reach 10cm or more, they are typically smaller and more slender than terrestrial frogs.
4. Glass Frog	d. A large frog species. Its skin secretes an irritating fluid, so potent that dogs and cats die just from picking up the frog in their mouth. From its back, it can discharge white venom, which contains bufotoxin. Bufotoxin can cause temporary paralysis or even death of small predators.



## EXTRACT TASK 2:

Use the description in the extract and anything else you have learned to draw a gallery of the Amazon Amphibians you meet in the story. What amazing amphibians do the characters come across in the rainforest? Label your drawings with any unique facts or features of each amphibian. You can add more boxes to your gallery if you want to add more amphibians!

Notes:	Notes:
Notes:	Notes:

How have these amphibians adapted to survive in their habitat?



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## ACTIVITY 2: DEFORESTATION

The story of *Toxic* examines the ways that humans destroy the environment. In the extract from Chapter 8 below, Jessica and Renata see the devastating effects of deforestation:

*Renata had reached the curtain of leaves, but she did not seem able to push them aside and confront the evil thing on the other side. It was Jessica who stretched out her hand. The tangle of growth was heavy, and it moved as one piece, revealing what lay beyond like a door opening on to a nightmare world.*

*The trees were gone. Stumps and splinters, like driftwood from a shipwreck, lay scattered across the red mud. It reminded Jessica of the tortured landscape Anura Hegarty had chosen as the backdrop for her pledge. This had to have been the place; the thought that there could be others like it sent a cold shock of despair down Jessica's spine.*

*She saw what had been growling, what was now cackling in a steady rhythm: on the far side of the unnatural expanse stood a man in a hard hat, an idling chainsaw held by his side. A large excavator sat nearby. Its huge wheels – taller than the men around it – were clogged with ruddy mud. There was a large truck further on, at the head of a straight road that cut through the forest, its trailer stacked with logs. The trees around the perimeter of the cleared land looked oddly naked and vulnerable, shivering as though conscious of the vicious fate that awaited them.*

*Jessica and Renata watched as the scoop of the excavator lifted and pressed against the trunk of a tall, isolated tree. A confetti of pale shavings lay around its base where the chainsaw had gnawed into its bark, fatally weakening it. As the arm of the scoop extended, the tree began to bend. A cracking sound echoed across the broken earth. Jessica flinched as though it were one of her own bones snapping. The tree toppled, crashing to the ground in a crunch of branches. Its leaves rustled, sighed and then were still.*

*Other trees awaited their executioner, and Jessica and Renata watched as the machine moved from one to the next, administering the final blow.*



## DISCUSSION QUESTIONS:

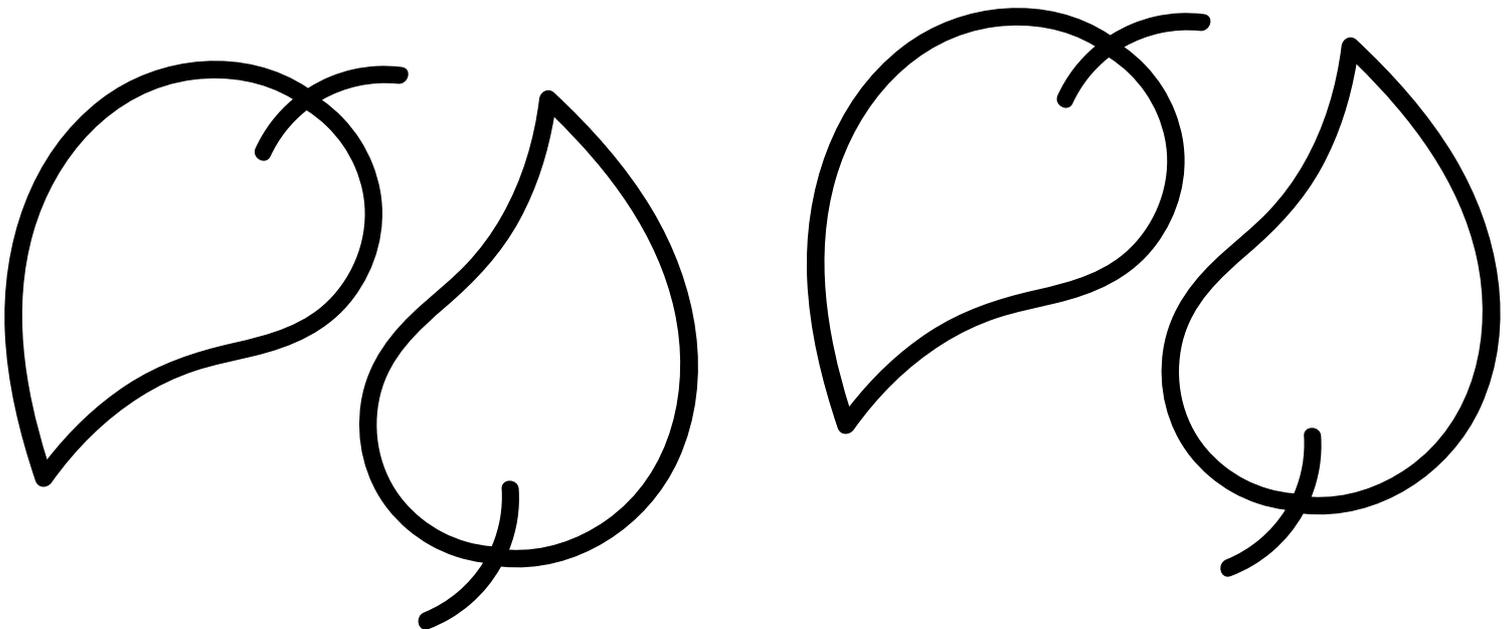
- What is the 'evil thing on the other side'?
- How does the author create a nightmarish scene? Pick out key words and phrases.
- How does Jessica feel when she sees this place? How do you know?
- What is making the 'growling' noise that Jessica first assumed to be a predator?
- How are the trees described in this extract?
- How do you feel reading this? Do you understand why Jessica '[flinches]' when she hears the 'cracking sound [echoing] across the broken earth'?

## EXTRACT TASK 1:

In a group, use musical instruments, props and your own voices to create a soundscape for this scene. Consider the different noises that the characters hear. How can you portray the nightmarish atmosphere of the scene?

## EXTRACT TASK 1:

Imagine you are designing a pitch to present to billionaire beauty mogul Anura Hegarty to persuade her to stop acquiring the rainforest. Come up with as many 'Rainforest Reasons' as you can; on each of the blank leaves below write one good reason why we should protect the rainforest. You might want to consider the impacts on local people, animals and plants described in the story.



Q: How does deforestation contribute to the following problems: soil erosion; climate change; and lack of biodiversity?



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**ANSWERS: 1b; 2c; 3d; 4a.**

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