VARIATIONS

The importance of a good education.

BY WILLIAM MEIKLE

hey took Johnny Green from class 3a at ten o'clock on Tuesday morning. He was the last to go. They thought I hadn't noticed, but I'd been onto them for a while now.

Everything went normally, just the usual daily grind in the classroom. Until 3a came round to biology last month. Jack Doyle asked me about cloning, and that got us into a discussion on ethics and Frankenstein foods that actually had most of the class interested for once ... apart from Jack, and Mary Brown. She had taken on a quizzical look.

"Sir," she said. "Can you explain parthenogenesis to us?"

"Certainly," I said. "Parthenogenesis is a form of asexual reproduction found in females where growth and development of embryos or seeds occurs without fertilization by males. It happens a lot in simple plants, and has also been shown in some snakes and amphibians."

Mary put her hand up.

"Sir. Is it true that the offspring produced by parthenogenesis almost always are female?"

I nodded.

She put her hand up once more.

And it happened.

Mary Brown flickered. I was looking at a gnarled green thing. Instead of a hand, it waved a shoot above the main body of a squat trunk, a shoot with five thin branches, each tipped with a hard thorny edge.

"I want to learn," she said.

"We want to learn," Jack Doyle added.

"Teach us. Teach us now."

I managed to hold myself together till the end of the class, but by the time I got to the washroom I felt ready to scream. I splashed cold water on my face, and gave myself a long hard stare in the mirror. I didn't look crazy, but it felt as if reality was slowly draining away.

I had 3a again the next day.

By now I knew what I was looking for. Three more had been taken, and had moved to the left side of the room to sit with Jack Doyle and Mary Brown.

I started the day's lesson ... one on speciation, but that wasn't enough for them. Their hands shot up almost as soon as I began.

"Tell us about mutation," they said as one. "How has punctuated equilibrium been



a driver for the selection of intelligence?" they asked.

Whatever they ultimately wanted to know, they were learning fast.

I taught them. And while I did so, I learned more about them. By looking out of the corner of my eyes and letting my vision go slightly out of focus I could see them ... not clearly, but enough. They were still the same gnarled mass of green plant-like matter. But as they listened to me, small shoots rose and wafted in the air. Tiny nodules on the fleshy trunks swelled and pulsed. Some looked ready to burst.

The other children ... the human children, knew something was wrong. They kept looking at me, and back at the small group of what seemed like their classmates.

I wouldn't acknowledge their fears. I couldn't — to do so would give away the fact that I knew them for what they were.

So I kept teaching, and they kept asking questions.

"Tell us about morphic resonance," they said.

And at that they had me stumped. The words had some meaning to me, but I couldn't quite place it. It was near the end

NATURE.COM Follow Futures:

@NatureFutures
go.nature.com/mtoodm

of the lesson though, and I was able to talk my way through to the bell.

I could tell they

were frustrated, but so was I. I read up on it that night to be ready for them. I also hatched a plan.

By the time 3a came round for biology again, Johnny Green was the last one

left. He entered the classroom like a whipped dog, and slunk into a seat near the front.

The rest were so confident that they took him, right in front of me. I watched out of the corner of my eye as I talked, telling them what I'd learned of morphic fields, explaining how it wasn't a recognized scientific paradigm. Even as I spoke, tendrils crept across the room.

Young Johnny never saw it coming. A pustule on one of the green shoots burst, and Johnny's face was covered in a thin film of spores.

He breathed in, coughed once, and flickered.

They had him.

"Tell us about forced mutation," they

"Tell us about genetic manipulation," they demanded.

"We need variation," they said.

I gave them a new word. I taught them about chemomute, a chemical reagent used to bring about targeted genetic mutation.

"Variation," they said. "Teach us."

I showed them a vessel full of a thick liquid.

"Building variation into populations has been something scientists have known how to do for some time," I said. "And it is best demonstrated by an experiment. I think it's time we did some practical work."

Tendrils waved in excitement.

I taught them about the importance of hypothesis, experiment and results gathering.

I taught them how to make chemomute.

I taught them how it would bring about natural, spontaneous beneficial variation in any species that used it.

Then they drank it.

There are two things I didn't teach them.

The first is that even teachers can lie.

The second is that biology teachers know how to make weed killer. ■

William Meikle is a Scottish writer, now living in Canada, with 20 novels published in the genre press and more than 300 short-story credits in 13 countries.