

# Engaging students in STEM through storytelling

*By Becky Laurence*

## Snapshot

Becky Laurence, Digital Content Officer for the Office of the Women in STEM Ambassador, describes the wonderful *Imagining the Future* fiction developed as part of the Future You – STEM careers Education initiative.

**Future You**, the STEM careers education initiative from Australia's Women in STEM Ambassador, continues its exploration of careers in deep space with the launch of two new stories by leading Australian authors as part of their new fiction program, **Imagining the Future**.

Research has found that children make important career choices before they finish primary school (Hooley, 2021) – to the detriment of themselves, our workforce, and our economy.

Children's early career thinking is influenced at home and by the media. They start assigning gender roles to careers and make assumptions about the type of person who works in a specific field.

Persistent stereotypes are one of the fundamental causes of this problem. Future You aims to break down these stereotypes and biases to ensure gendered misconceptions do not limit children's career choices.

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During the planning phase of this program, the Future You team identified the involvement of librarians as integral to helping students unlock and realise their STEM potential. Research shows that schools with qualified teacher librarians and well-resourced libraries increase student achievement. The role of librarians in shaping the future of young people's lives and, through them, the future of Australia and the world is essential.

## Imagining the future

Hot on the gravity-booted heels of story one, *Far Out!* by Lili Wilkinson, lead writer for the *Imagining the Future* program, come stories two and three from the first series, set in the interlinked future story world of The Callistan Cycle, named after the moon of Jupiter around which the stories unfold.



Artwork by Cassandre Collins

In the five short stories that make up *The Callistan Cycle* readers join diverse young protagonists as they grapple with the technological, ecological and societal challenges that space travel and life on the distant moon present.



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[Calculating Apple Pie](#) by Melissa Keil and [Semper](#) by Rebecca Lim, available now, incorporate various STEM elements into the heart of their plots, adding a unique and exciting aspect to the stories.

*Calculating Apple Pie* explores future food production and coding and how tampering with it can cause serious real-world problems. *Semper* delves into the world of artificial intelligence and raises important questions about its impact on our lives.

Stories four and five, *Proof* by Gary Lonesborough and *Earthbound* by Alison Evans, will be launching shortly. *Proof* is about a young Indigenous boy and his sister investigating a sickness overcoming their remote lunar community. *Earthbound* features a family returning from their lunar post on Callisto, confused by a mysterious signal interrupting Earth's communications.

In each story, the main character comes up with an inspired and surprising solution to their STEM problem. They draw on their character's understanding of science, computing, engineering and mathematics. But there is also a strong emotional core to each story, with the young protagonists coming to terms with growing up, taking responsibility, self-doubt, fear and loss. Connection, family and friendship underpin each story.

The scenario and storylines of *The Callistan Cycle* were developed at a workshop in Melbourne in May 2022, led by the program's lead writer, Lili Wilkinson, editor Kate Whitfield and Future You producer Dan Prichard.

We agreed that we wanted our future to be a positive one – no bleak dystopian nightmares, thank you! Our future is inclusive, diverse and kind, where we are well on the way to solving the problems of climate change, said Lili.



A vital aspect of the Imagining the Future program is the diversity of the cast, which aims to reflect Australia's multicultural identity in its storytelling, and across its range of resources to address the current and future inequity in the STEM workforce in terms of gender, ethnicity, disability, sexuality, and location.

The authors of stories two and three, Melissa and Rebecca, were big fans of science fiction. Still, neither of them ever saw themselves in the characters, which is why they were so excited to be involved in Imagining the Future.

Young me didn't need to see any particular 'diversity' angle explored – I just wanted to see someone with my hair and skin colour flying in a spaceship, said Melissa.

However, once Melissa sat down to write her story, she realised more was needed for the characters to look like her. They also needed to think and feel like her, so she began to think about the more minor, more personal impacts one might experience on an interstellar journey. Melissa wanted readers to reflect on basic human emotions, such as homesickness, nostalgia, and fear of the unknown, that guide the human experience.

She drew upon her own family's stories about how exciting it was when family and friends from Sri Lanka would visit because their suitcases would be full of delicious foods unavailable in Australia. This meaningful act would bring the family a small taste of home across the ocean to enjoy and reminisce.

Food is such a fundamental part of everyone's life experience – and even though my family loved their adopted country and were making a very happy life here, it was hard to imagine them leaving behind a whole world of foods for a totally foreign, unknown one.

Growing up in the '70s and '80s, Rebecca said Sci-Fi and Fantasy books were more diverse than other genres, but they were awash with harmful tropes; the colonisers versus the colonised, the high-born versus the savages, the heroic men saving the dainty women.

I never saw people like me in the children's books I was told to read, or that were available in the 70s and 80s, and I only saw suggestions of people like me as 'baddies', the colonised, or the exotic 'other', all written by people outside my lived experience, said Rebecca.

A guiding principle for Rebecca's writing is empathy. At the heart of Rebecca's story is a fraught relationship between the main character and her AI robotic animal built to protect her and keep her going through the challenging terrains of outer space.

I wanted readers to explore the boundaries of what it means to be human if the non-human thing you're dealing with is 'nicer' and more selfless than you are, and would literally destroy itself to protect you.

Melissa and Rebecca's contributions to the Future You program have been invaluable. Their stories provide a fresh take on the STEM genre and encompass the rich diversity of people who can study and work in STEM, inspiring more young people to consider and explore the possibilities of science, technology, engineering and mathematics in the future.

## Get involved

Encourage your students to read the *Imagining the Future* stories and delve into the bespoke resources developed to support engagement with the STEM sector explored in each tale.

These resources are great for use in schools, the library, and the home. Beautiful posters, student activity packs, teaching resources, and career information are coming soon, free to download and use.



Artwork is from Cassandre Collins.

From L to R: Melissa Keil, Alison Evans, Rebecca Lim, Lili Wilkinson and Gary Lonesborough.

Stories four and five from *The Callistan Cycle* will launch later this year – keep an eye out for *Proof* by Gary Lonesborough and *EarthBound* by Alison Evans. Follow Future You on [Facebook](#), [Twitter](#), [Instagram](#), or [subscribe to the Future You newsletter](#), to be one of the first to know when these new stories and new resources to support comprehensive delivery in a school or library setting are available launch.

To explore *Imagining the Future*, head to the [Future You website](#). See YOU in the future.

## References

Hooley, T. (2021). *Career Education in Primary School*. myfuture Insights series. Melbourne, Education Services Australia

**Becky Laurence** is the Digital Content Officer for the Office of the Women in STEM Ambassador. Becky communicates the work of the Office through written and visual content, to diverse audiences such as parents, educators, and professionals in business, government and academia.