



March 2021

# PARENT PERSPECTIVES

This edition of *Parent Perspectives* comes to us from an Australian alumna and evaluator, **Meganne Christian**. Please enjoy this inspiring and powerful article on how Future Problem Solving can impact our students' lives, and how they later can apply the skills they have learned through FPS in real-world applications!

## Extreme Problem Solving



*Left: Concordia Station in winter with a rare aurora, right: me reaching for the sun*

Standing on an icy plateau, immersed in the stunning star scape of the polar night, I reach out to the pale glow on the horizon that tells me it's nearly midday. My many fleecy layers and the outer feathery down protect me from the extreme temperatures...today it's  $-80^{\circ}\text{C}$ , but with the wind chill that's  $-104^{\circ}\text{C}$ . Nothing can survive down here: no plant, no animal, no virus, and no human without the technology developed over more than 100 years of polar exploration. I can't help but ask myself, for the thousandth time, how did I get here?

20 years ago, I had no idea that one day I would find myself spending a year working in Antarctica, at Concordia Station, one of the most remote places on Earth...let alone that I would go back again only one year later. But I already knew that I wanted to do something big, exciting and unique. Without knowing exactly where I wanted to end up, at school I studied languages because I wanted to explore the world, science because I cared deeply for the environment, and many extra-curricular activities ranging from music and martial arts to Future Problem Solving because I enjoyed them and I knew that they would provide me with skills and confidence that I could carry with me forever. I am not exaggerating when I say that they made me who I am today.



*My FPS (GIPS) team in 2002 in Connecticut. We were shocked to have just become the second ever Australian team to win the International Finals!*

My path to Antarctica meandered through a PhD in Industrial Chemistry, a move to Bologna, Italy, and exciting, unexpected experiences like performing experiments in zero gravity on-board a parabolic flight. Finally, in 2018, came the big opportunity that I did not realise I had been waiting for: a call for interest in spending a year at Concordia Station in Antarctica as the scientist responsible for the atmospheric physics and meteorology observatories. It was not my field but meteorology had always fascinated me and I was eager to do more about climate change. After thorough medical testing and lots of training, I became part of the 13-person team that would call a lonely base in the middle of the Antarctic plateau home from November 2018 to November 2019.



*Left: experiments in zero gravity, right: fire-fighting training for the Concordia crew*

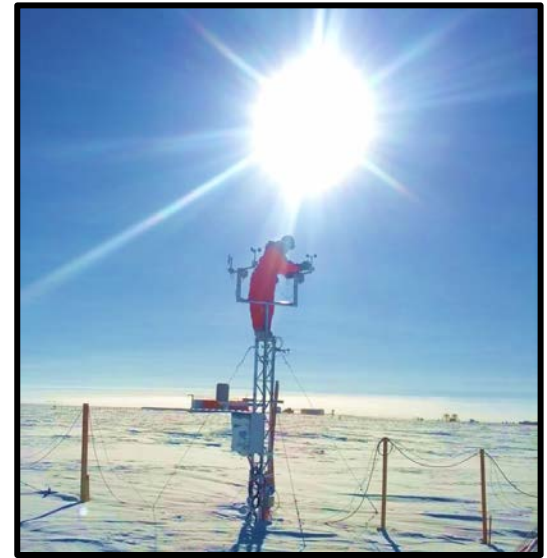
The year at Concordia was not easy. Aside from the extreme temperatures, the location at an altitude of 3300 metres (an equivalent of nearly 4000m since the air is thinner at the poles) meant that even breathing was challenging. We were completely isolated for nine months of the year: if anything happened during that time it would have been impossible to come and rescue us because no vehicle can operate under those conditions. We had to go everywhere by foot, even to the shelters over a kilometre away, and several of us had to work outside every single day. Every problem, small or large, had to be solved by us. My FPS skills certainly came in handy: for instance, during rescue training exercises, which we performed regularly to be ready for any eventuality, I was able to quickly analyse the situation, prioritise and plan, taking into account the hostile conditions and without being flustered by the pressure of the situation.



Effective teamwork was of tantamount importance. There were only 13 of us, forced to live and work together 24/7 whether we got along or not; fortunately, we got along pretty well most of the time. We were far from our families and friends for the whole year, relying on a tenuous satellite connection to hear news from them. In fact, Concordia is also known as “White Mars” because being there is the closest thing on Earth to a space expedition to Mars. The European Space Agency performed tests on us before, during and after our time at Concordia to gather information for future astronauts.

*Summer is relatively “warm”, with an average temperature of around -30 °C*

While I had some difficult moments, I did not mind them. I was doing something big, exciting and unique. My work was helping us to better understand the world's climate because what happens in Antarctica, where the human presence is minimal, is a marker for the entire globe. I was exercising both brain and body all day, every day, looking for the most efficient and effective ways to maintain weather stations, fix malfunctioning radiometers and measure atmospheric pollution. Working in an international team, on the only base in Antarctica that is managed by more than one country, convinced me that learning to respect other cultures and work together is the best, and the only, way forward. As an evaluator for Mentored Regions, I am delighted that FPSPi continues to grow in this way, becoming more multicultural every year.



***Routine cleaning of a weather station***

FPS taught me that we *can* come up with creative ways to solve the problems that humans have created. I love the idea of using the underlying problem structure to clearly define a challenging situation: it can be particularly useful in posing a research question, which I do frequently in my work. Using the FPS categories as inspiration for innovative perspectives can lead to a refreshing approach but they also remind me of small steps that can be taken in nearly every scenario. At Concordia we placed a lot of emphasis on Communication, both within the group and towards the outside. During the year we held around 70 videoconferences with schools and public events to explain our research, why it is important, and what people can do to help in their everyday lives. We realized that we were in a privileged position to catch the attention of the public, so we performed small acts of activism, using messages on weather balloons and banners.



**Activism from afar. Left: a weather balloon promoting women in science, right: raising awareness about climate change**

Returning to the “real world” after such a unique experience provoked mixed emotions, but I was ready to seek new challenges. In late 2020, I was asked to return to Concordia for the summer season and was thrilled to do so, despite the obstacles of a month-long quarantine in Hobart, many COVID19 tests, and a significantly reduced cohort due to the complicated logistics of conducting an Antarctic campaign in the middle of a pandemic. But I have been training all my life to solve challenges and I do not intend to stop now. On to the next adventure...

**Thank you Meganne!** What a moving article! We also find it appropriate for International Women's Day that occurred this earlier week, March 8, 2021!

Do you have a testimonial you would like to share or know an FPS-er with an inspiring story? Our annual testimonial issue is coming in May, and we would like to publish as many testimonials about our FPSer's journeys as we can! Please send each testimonial as a Word document, with a photo of the author!

Email your submission to: [cyd.rogers@txfsp.org](mailto:cyd.rogers@txfsp.org) or [april@fpspi.org](mailto:april@fpspi.org).

If you're not familiar with it, International Women's Day began in the early 1900s and is "a global day celebrating the social, economic, cultural and political achievements of women. The day also marks a call to action for accelerating women's equality," according to the official International Women's Day website.

<https://www.internationalwomensday.com>

"Here's to strong women: May we know them. May we be them. May we raise them."  
~Unknown~

