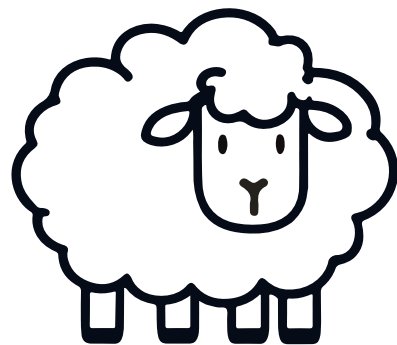
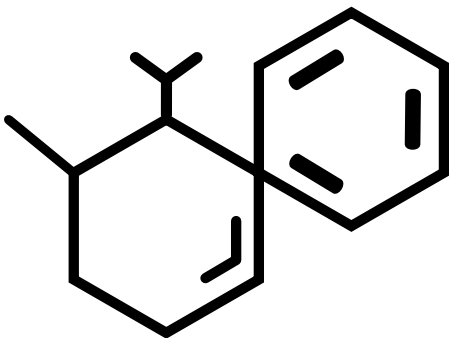
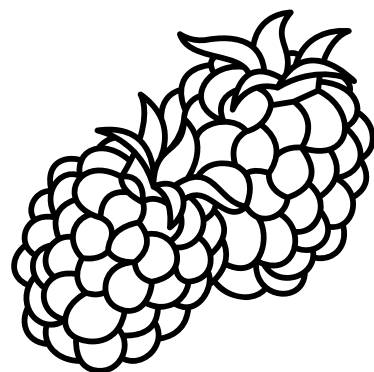
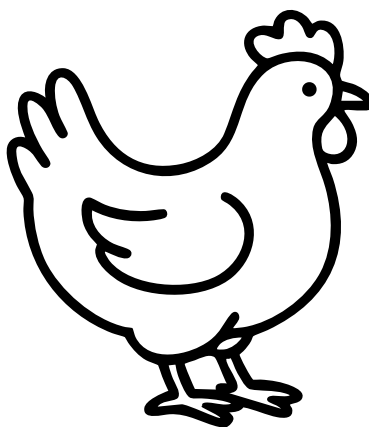
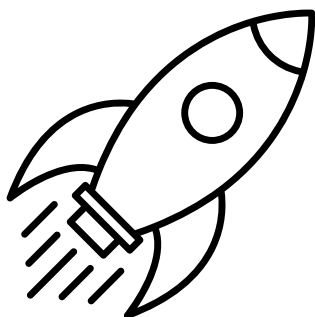
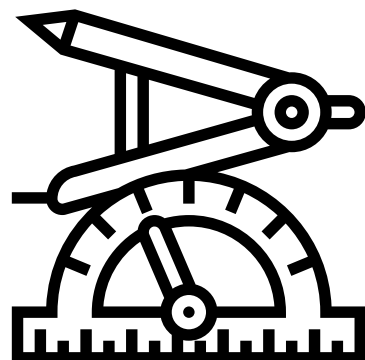
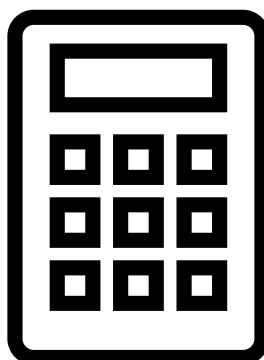
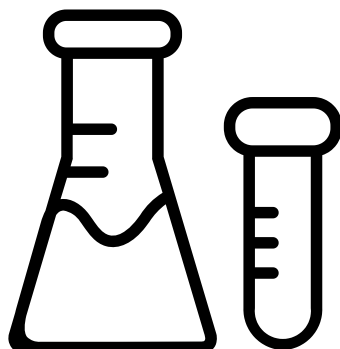


STEM *is for everyone*



Samantha's student activity pack

Imagining the Future

Let us take you on an incredible journey into the world of space exploration with the Callistan Cycle.

The Callistan Cycle is a series of five short stories from our Imagining the Future series that explore STEM areas like robotics, AI, climate change and resource management.

You can read, watch or listen to each story, for free.



Far Out! by Lili Wilkinson

As the seconds count down to the launch of humanity's first family into deep space, young stargazer Stella is sure that today is going to be the most exciting day of her life. But she has no idea of just HOW exciting and terrifying and important it will be. And what it will mean for the future of interstellar travel.

Join the Kaufmanns as they go FAR OUT! in a story that explores space and robotics.



SCAN ME



Calculating Apple Pie by Melissa Keil

Kal and her sister Arche are hurtling through space towards Callisto in a ship shaped like a beluga whale that is the size of a city block. Arche does something a bit (very!) reckless to try to help her sister feel a little less homesick.

Calculating Apple Pie explores future food production and coding and how tampering with it can cause serious real-world problems.



SCAN ME



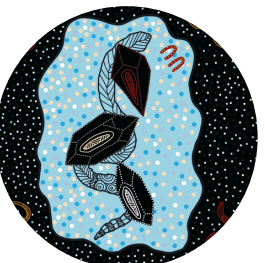
Semper by Rebecca Lim

Shang travelled to Callisto on the Hohmann transfer from Earth, which took almost six years. She sacrificed everything for the chance to explore distant moons for resources and critical minerals, but gets paired with a Drobo called Semper that always wants to play, like a real dog. Shang doesn't have time for games, so why has she been paired with such a useless Drobo?

Semper explores robotics, AI and mineral exploration.



SCAN ME



Proof by Gary Lonesborough

Tanner has been noticing that lots of people in his town on the lunar outpost on Callisto are getting sick. What is causing this mysterious illness plaguing his community? Tanner's sister Rachel thinks she knows what's causing it and takes Tanner on an eye-opening adventure where they discover a lot more than just the cause of the illness.

Proof explores filtration, waste management and environmental science.



SCAN ME



Earthbound by Alison Evans

Pen and their father have arrived on Earth. Pen's comms device isn't working, and when Pen tries to fix it, they hear a strange rhythmic sound coming from it. Determined to figure it out, Pen seeks the help of an android to help decipher the mysterious sound.

Earthbound explores transportation and telecommunication.



SCAN ME

Comprehension Questions

Name two things Samantha is good at.

1.

2.

What does Samantha do for work?

Name two things Samantha isn't good at.

1.

2.

What did Samantha study at university?

What does Samantha enjoy doing outside of work?

How does Samantha use maths in her work?

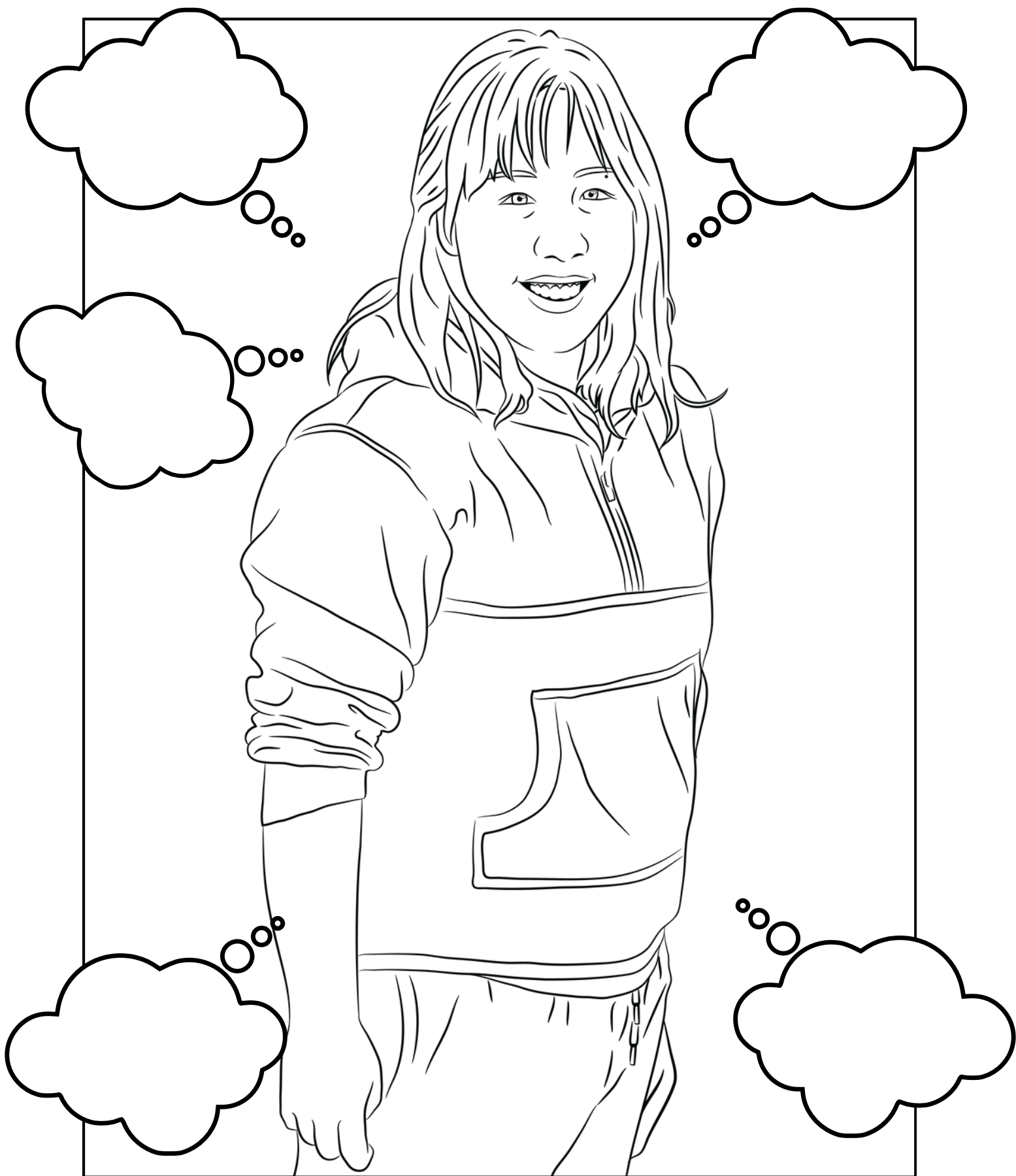
What did Samantha want to do when she was 8?

What is the name of the machines that work in the wool handling facility?

What was the biggest inspiration for Samantha's career pathway?

What industry did Samantha think she would work in?

Meet Samantha. She's a wool broker who lives in Melbourne. She's passionate about sustainability and wants more people to wear wool. Fill in the bubbles with 5 STEM (Science, Technology, Engineering, and Mathematics) skills she uses in her job. Which of these skills do you think is most important? Which do you think would be the hardest to develop? When you've thought of the skills, colour in the rest of the image.



Pathfinder Workwords

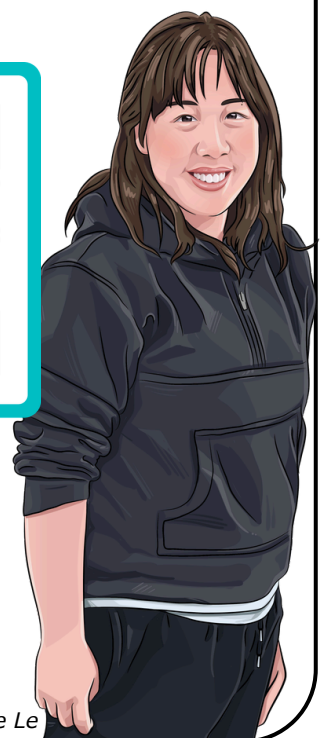
Wool Broker / Auctioneer

A F I M S D X U X L M R F A R M E R S Y A A A
R G F J E Y H U R A B E S R O C G C N Y I T Q
E K R W F E A P T K E E D N A N J K C N Y H R
L Q S I C Y T H H U L N Q D B C N W I W O O U
A R B E C S S I G G V O U I N P E J W C O Z M
T A E L I U S O N V O I A S I T L R P E E H S
I T A S X R L E R G Q T L C L E A Z A X Y G C
O I R N U A R T L U S C I O S E S J C G S E A
N M B P T O T E U L V U T U B K I S O V A M Y
S M B A L E H G B R I A Y N H E Q L S M E J M
H X C O A V U E G P E N F T V I O F E M H N O
I R Y C O A R T R W S B G S Q N H F L F D X X
P A H C G R X Y I A Z A T M H O R F A K V L G
S E V A U A J J Q S W H R C N X Q B B Y S X U
R Y T I N U T R O P P O E E V K O P Q F F T Q
V W Q A G W O O L R G T R A V E L Z H B P T J

Find 20 words connected to Samantha

Scan this QR code to find out more about Samantha

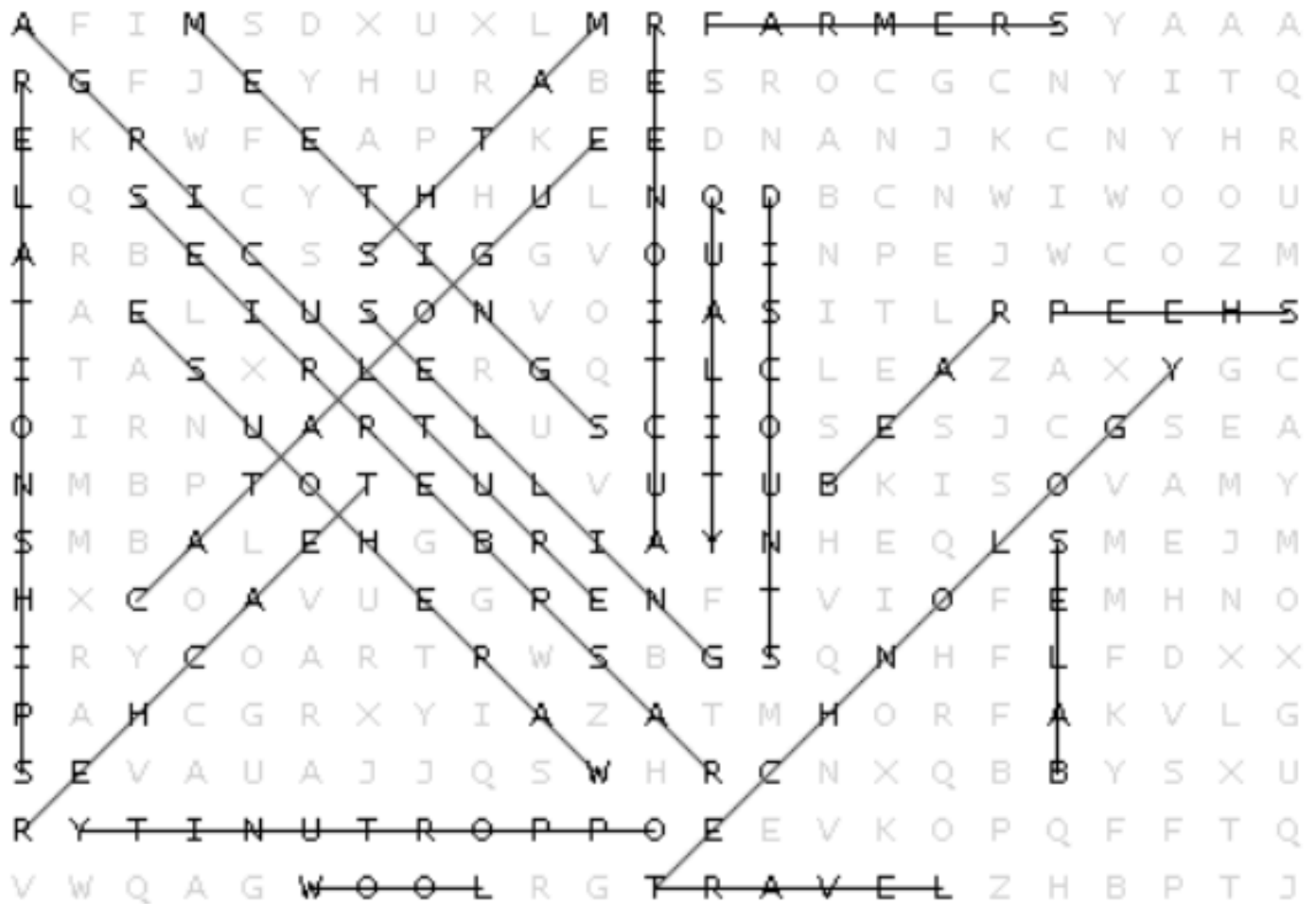
- | | |
|----------------|-------------------|
| 1. BEAR | 11. SELLING |
| 2. WOOL | 12. QUALITY |
| 3. AGRICULTURE | 13. TEACHER |
| 4. DISCOUNTS | 14. OPPORTUNITY |
| 5. MATHS | 15. WAREHOUSE |
| 6. SHEEP | 16. BALES |
| 7. RASPBERRIES | 17. CATALOGUE |
| 8. AUCTIONEER | 18. TRAVEL |
| 9. TECHNOLOGY | 19. MEETINGS |
| 10. FARMERS | 20. RELATIONSHIPS |



Artwork by Christine Le

Pathfinder Workwords

Answers



Let's reflect

Were any of these words new to you? Look them up and find out what they mean.

Which of these skills do you think you are best at, or would like to get better at?

1. _____

2. _____

3. _____

Can you think of anything else Samantha might need to do her job?

Artwork by Christine Le

A day in the life of a Wool Broker

- 5.00am** Beep! Beep! Beep! My alarm goes off while it's still dark outside. Before I even think about breakfast, it's time to feed everyone else! First is Bear, our farm dog, then I let the chickens out of their safe coop for the day. I also stop to say hello to Dave and Jack, our Merino rams. Now it's my turn. Breakfast is scrambled eggs on toast, made with eggs collected from our own chickens.
- 6.00am** Time to jump in the car and drive to work. Today is wool auction day! I put on some upbeat music to get me ready because auctioneering is all about speaking clearly and keeping a steady rhythm. On the drive, I answer a call from Wendy, a woolgrower who has wool selling today. We talk about what prices she's hoping for and what the wool market has been doing this week. Every decision is based on information, market trends and data.
- 7.30am** At the wool selling centre, I head straight to the showfloor where hundreds of wool samples are on display. I find Wendy's wool and inspect it carefully. Then I chat with Billy, one of the wool buyers, to find out if anything has changed since yesterday. Looking at wool isn't just about seeing if it looks nice. We use science to understand fibre diameter, strength, length and yield so buyers know exactly what they're purchasing.
- 11.00am** Auction time! I stand in front of buyers representing mills from all over the world and begin calling the sale. Maths wasn't always my favourite subject, but being an auctioneer means I need to think quickly. I calculate price changes in my head, keep track of bids and make sure every sale is correct. Clear communication is just as important as maths because everyone needs to hear every bid.
- 2.00pm** Once the auction finishes, there's still plenty to do. Our wool sale team checks that every catalogue is accurate and that all the wool has been sold correctly. I also request that some wool bales are inspected. Inside the woolstore, computer-controlled machines called Automated Guided Vehicles (AGVs) collect the heavy bales from giant storage racks and bring them to the inspection area. Technology helps make the job safer and more efficient.
- 4.30pm** Time for the drive home. Along the way, I notice how the paddocks change with the seasons. Rain, sunshine and temperature all affect how grass grows and how sheep produce wool. Back on the farm, I sneak a few raspberries from the greenhouse before checking that the sheep have enough feed and seeing if any new lambs have arrived. Every day is different, and that's one of my favourite things about being a wool broker. I get to use science, technology, engineering and maths while working with animals, farmers and people from all around the world.

Wool Broker and Auctioneer

Samantha is a wool broker and auctioneer who lives in Melbourne. Samantha grew up in Sydney, but was encouraged by her teacher to sign-up for some hands-on farm experience. When she's not selling wool, she's farming it. Sam and her husband own farm on the outskirts of Melbourne and raise their own flock of merino sheep

unsw.edu.au/future-you/pathfinders/samantha-wan



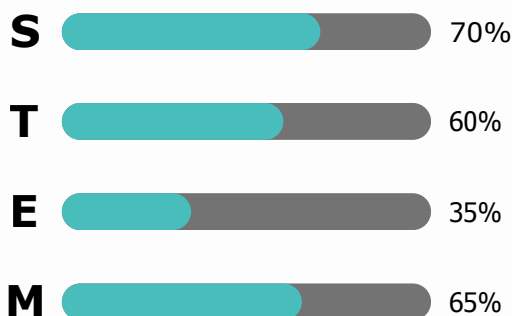
Artwork by Christine Le

"Agriculture might take you somewhere you never expected."



STEM Meter

How much Science, Technology, Engineering and Mathematics (STEM) does this job use?



Source: jobsandskills.gov.au

5 reasons why you should do this job

- 1 Travel Australia and the world
- 2 Work with all kinds of people
- 3 Use cutting-edge tech in your job
- 4 It's very hands-on
- 5 Make a positive difference in the world

3 STEM skills required for this job

Data analysis

Mathematics

Communication

Subjects to develop these skills

Science, Mathematics

Mathematics

English, Digital Technologies, HASS, Mathematics, Science, The Arts