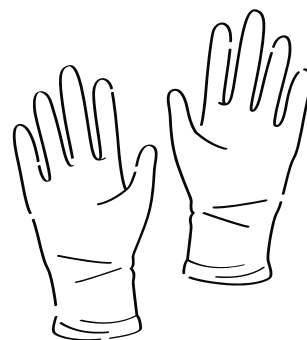
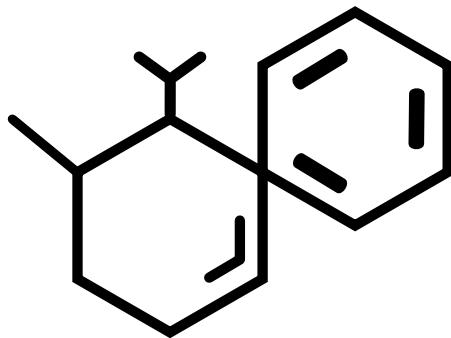
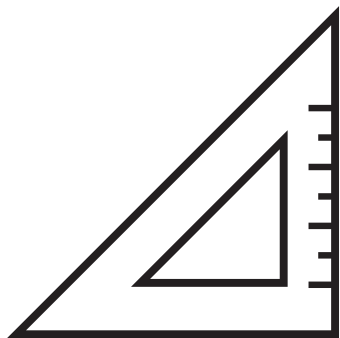
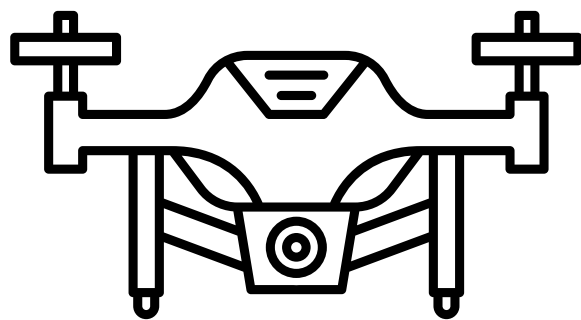
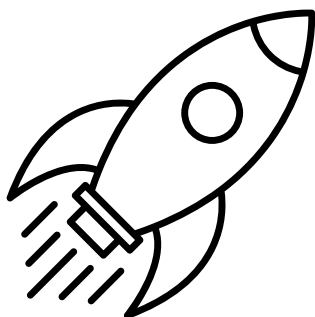
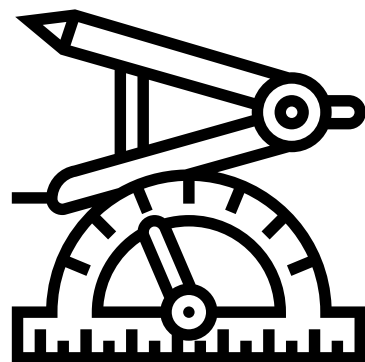
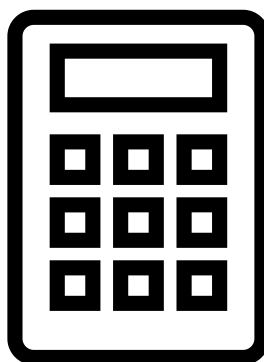
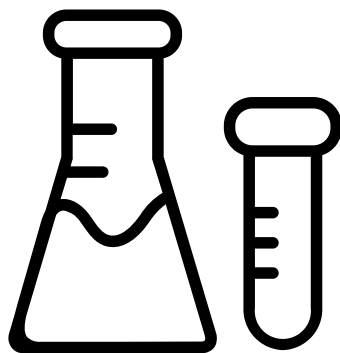


STEM *is for everyone*



Tessa'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



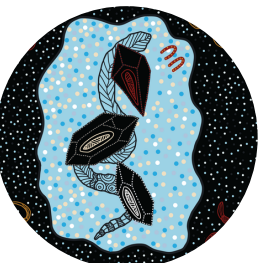
Semper by Rebecca Lim

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 Tessa is good at.

1.

2.

Name two things Tessa isn't good at.

1.

2.

What does Tessa do for work?

Who was Tessa's biggest inspiration for her career pathway? And what was their job?

What did Tessa want to be when she was 8?

What does Tessa enjoy doing outside of work?

1.

2.

3.

4.

What subject does Tessa say there's a lot of in her job?

What does Tessa say you need to be in order to be an engineer?

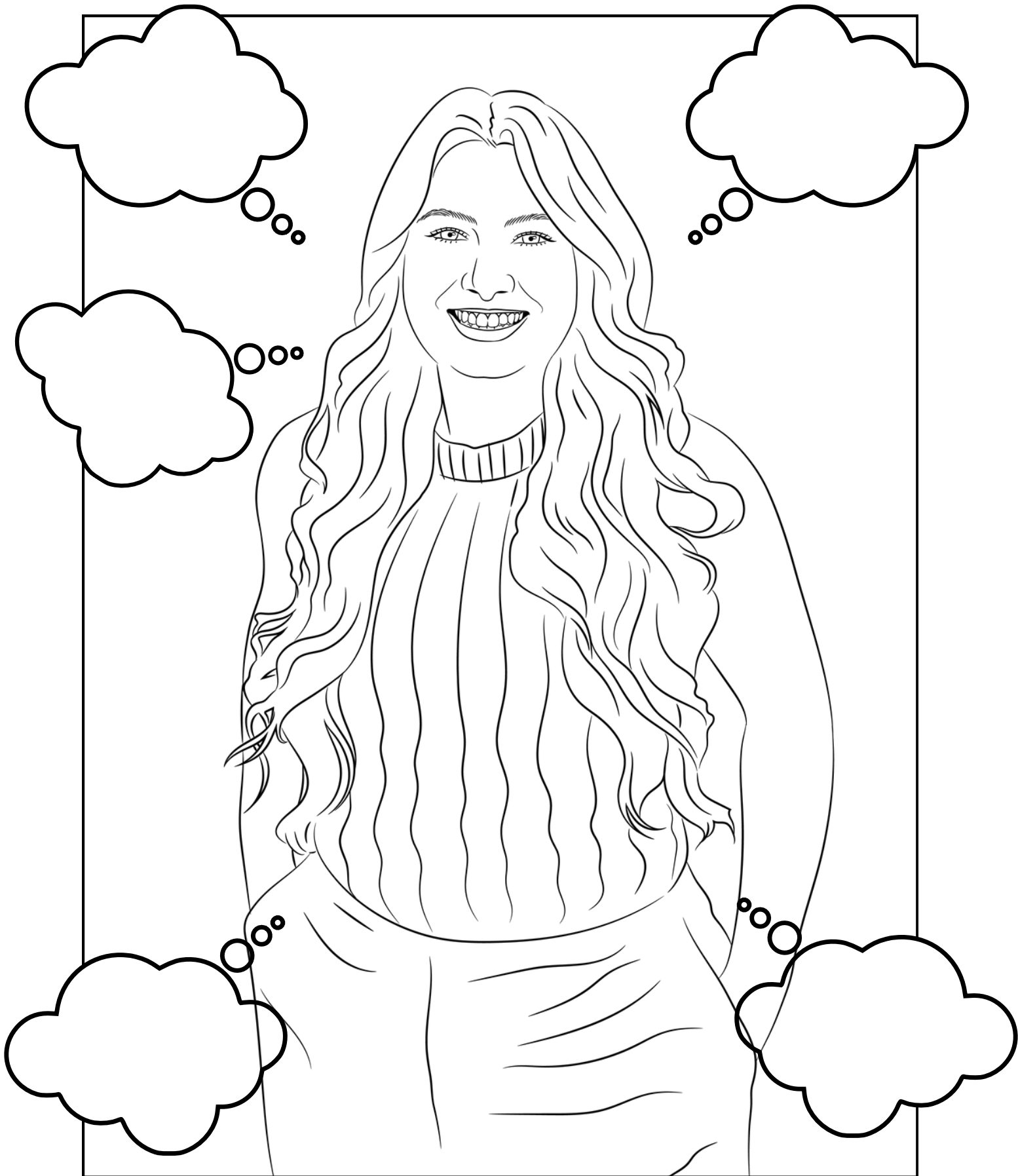
What does Tessa put into every playground she designs?

1.

2.

Does Tessa say her job is solo or team-based?

Meet Tessa. She's a playground designer who loves tunnel slides, monkey bars, and being creative. 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

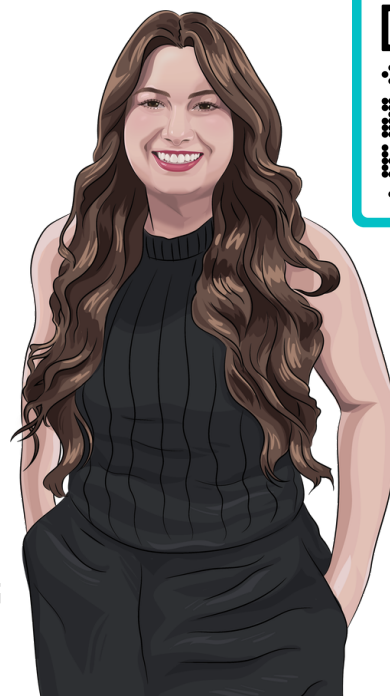
Playground Designer

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

Find 20 words connected to Tessa.

Scan this QR code to find
out more about Tessa

- | | |
|------------------|-----------------|
| 1. CABINETRY | 11. OUTDOOR |
| 2. CHALLENGING | 12. PAINTING |
| 3. COMPLIANCE | 13. PLAYGROUND |
| 4. DESIGNER | 14. RENDER |
| 5. ENGINEERING | 15. RESTORATION |
| 6. FURNITURE | 16. SAFETY |
| 7. GUITAR | 17. SWINGS |
| 8. MANUFACTURING | 18. TUNNELSLIDE |
| 9. MATHS | 19. URBANDESIGN |
| 10. MONKEYBARS | 20. WOODWORKING |



Pathfinder Workwords

Answers

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

Let's reflect

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

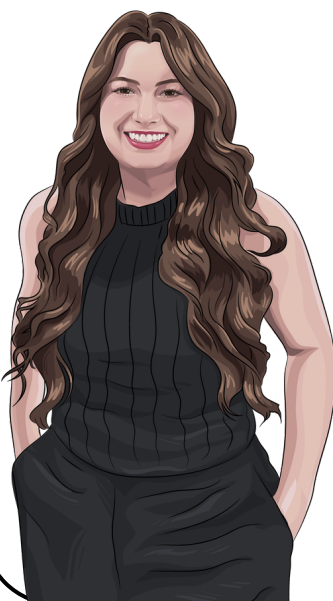
Which of these skills do you think you are best at, or would like to get better at?

1. _____

2. _____

3. _____

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



An example of a day in the life of a playground designer

- 6.00am** I roll out of bed and jump into the shower. I'm not really a morning person, but work starts at 7 a.m., so I don't have a choice. I grab my overnight oats and head to work.
- 7.00am** I arrive, and the day is already underway. My office is right above the manufacturing floor, and they start work as soon as it hits 7 a.m. I head upstairs and say good morning to my team. I turn on my laptop and check my emails. I submitted a few applications to design new playgrounds, so I'm hoping one of them has been accepted.
- 9.15am** Team meeting. Time to see what everyone else is working on. Kat has been developing some new ocean-themed playground accessories. They're super cute, and I'm already thinking about some pirate playgrounds I can use them in. Anthony just did a site check for his latest playground, it's nine-metres-high! Andrew has been rendering his latest design, and we finally get to take a look. I love seeing what our team can do.
- 10.00am** I got some amazing news this morning. Two of my submissions have been accepted. I'm so happy. I put a lot of time and effort into the designs and came up with something that presented plenty of challenges but also filled a really large space. Now I get to bring it to life.
- 11.30am** I head downstairs to chat with the manufacturing team. There are a few elements in my playground designs that haven't been done before. I get their advice on a few bits and pieces. Having the team downstairs is so handy. It means I get immediate access to their expertise, and we can workshop problems together.
- Midday** It's time for lunch. Today, I have leftover vegetarian lasagna from last night. Why do leftovers always taste so good the next day? Yummy.
- 1.00pm** I'm spending my afternoon working on more applications. There are lots of schools looking at upgrading their playgrounds at the moment, which is exciting for me. I love designing new playgrounds, and I always make sure my designs include two VERY important features: tunnel slides and monkey bars.
- 2.00pm** Time to head home. Starting early means finishing early! Yay.
- 2.30pm** I get home and spend a few hours on my latest piece of art. I love being creative at work and at home. It brings me hours and hours of joy.
- 7.00pm** I head to the city to meet some friends for dinner, and we chat until far too late. It's going to be another "roll out of bed" day tomorrow. Oh well. It's worth it.

Playground designer

Tessa is a playground designer who loves creating challenging playgrounds that bring joy to everyone who uses them. Tessa always knew she wanted to be a designer. She just didn't know what kind! She started a trade after school and discovered her passion for industrial design.

unsw.edu.au/future-you/pathfinders/tessa



"You need to be creative to be an engineer."



3 STEM skills required for this job

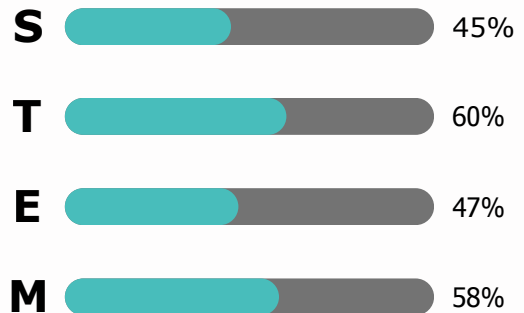
Complex problem solving

Communication

Computer skills

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 Bring joy to lots of people
- 2 Be really creative
- 3 Work with interesting people
- 4 Design really cool things
- 5 Test new playgrounds

Subjects to develop these skills

Design and Technologies, Digital Technology

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

Digital Technology