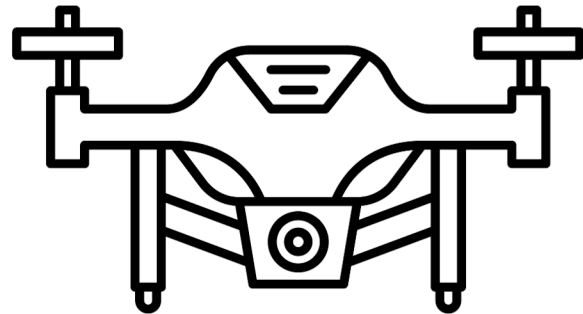
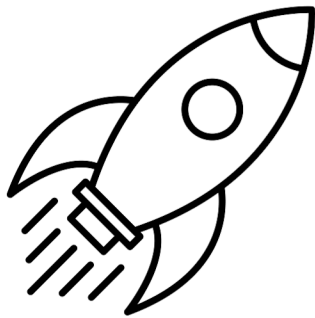
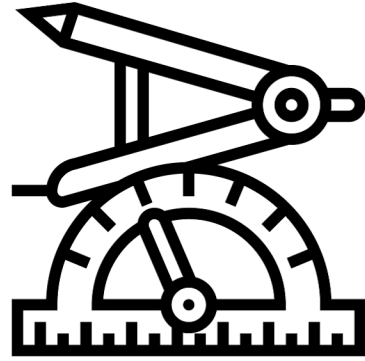
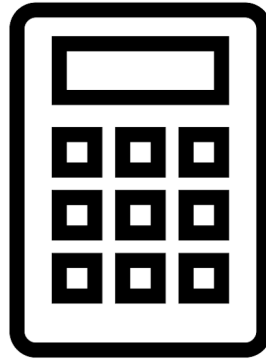
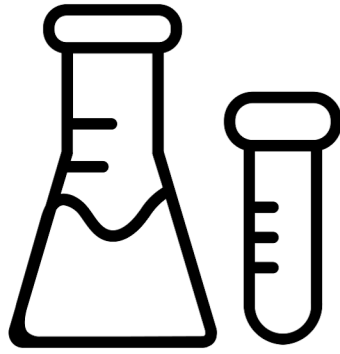


# Finding the ME in STEM



## Jamie'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



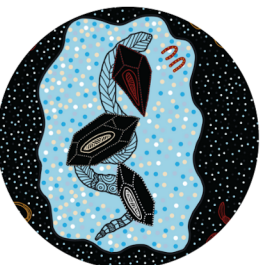
## **Semper** by Rebecca Lim

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 Jamie can do.

1.

2.

What does Jamie do when he first gets to work?

Name TWO things Jamie can't do.

1.

2.

How does Jamie's job make the world better for people?

What qualifications does Jamie have?

1.

2.

What does Jamie want to do in the future?

What does Jamie love about his job?

How does Jamie get to work?

Meet Jamie. He's a third-year apprentice on his way to becoming a patisserie chef. Fill in the bubbles with 5 STEM (Science, Technology, Engineering and Mathematics) skills he uses in his 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

## Patisserie Chef

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

Find 20 words Jamie needs to do his job.

1. MEASUREMENT
2. TEMPERATURE
3. PRECISION
4. THERMOMETER
5. SCALES
6. PROPORTION
7. CHEMISTRY
8. RATIOS
9. HYGIENE
10. TECHNIQUES
11. INGREDIENTS
12. MIXING
13. TIMING
14. CALCULATIONS
15. CONDUCTION
16. CONVECTION
17. CROISSANT
18. EXPERIMENT
19. DOUGH
20. APPRENTICESHIP

Scan this QR code to find out more about Jamie



# Pathfinder Workwords

## Answers

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

### 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 Jamie might need to do his job?

\_\_\_\_\_

# A day in the life of a patisserie chef

- 6.00am** I wake up, go for a shower, get dressed (enclosed shoes are a MUST when working in a kitchen), blow dry, and oil my beard for that day. I have to look good while I make the goodies.
- 6.45am** I kiss my partner goodbye and she hands me last night's leftovers to have for lunch. Then I walk 15 minutes to the train station while bopping along to wicked music; metal or rock is my go-to. I have to catch two trains and a bus to get to work, and I go to my favourite cafe to get a coffee and breakfast between trains.
- 8.50am** Finally, my morning commute is over. I get off the bus and walk a couple hundred meters to the shop.
- 8.52am** I open the shop and turn on the ovens and the coffee machine. I need more caffeine. It's the lifeblood of a hospitality worker. Because we're a dietary specialist bakery and don't do normal bread, we don't need to get to work at 4am like a traditional bread baker would - another benefit of dietary requirement baking is not only can everyone eat it, we all get longer in bed each morning! When my boss arrives, we look at the customers' orders that need to be made today and divide and conquer. Most of the time, an order starts with a 6 or 8-inch chocolate or vanilla base cake. These are the building blocks we need to create before we can decorate! I give my hands a good scrub with soap and then put on my apron, hair and beard net (nobody wants hair in their cupcake!), hat and gloves. Then we put on some good tunes to set the vibe for the day.
- 9.00am** Time to bake. Along with cupcakes, I have to make three batches of brownies, four batches of carrot cake, two batches of big cake squares for mousse cakes, fruit cakes, and cheesecakes for the shop. Being a patisserie chef is like being a "dessert scientist", and I have to use STEM skills every day to make my yummy treats. I measure all my ingredients carefully, and this is where my maths skills come in handy. Ratios are very important. Once you know the ratio of ingredients to each other, you can quickly work out how much flour, sugar, etc., you need that day to make however many cakes are required. If I had to add up all the individual weights, it would take forever! I turn the ovens on and keep an eye on the thermometers to ensure they're at the perfect temperature. Too hot or too cold, and those desserts won't stand a chance. I get out all my baking tools and ingredients and start baking.
- 12.30pm** By this time, I'm starving! It's time for lunch. I sit outside in the sunshine to eat and watch something on my phone. I don't take breaks with the other staff as there's a lot to be done, but we spend a lot of time chatting while we're working so I'm happy for the peace and quiet.
- 1.00pm** I finish lunch and finish off what needs to be baked. I then start to make the fillings and flavourings for the cakes, and some extra so we have spare in the fridge and freezer. No room for error here. I triple-check my ratios and my measurements. Wastage is not a good thing in my job. I also have to mix things in a specific order to ensure the texture and taste is JUST right. It's chemistry in action. I basically spend my days doing fun science experiments with food!
- 2.30pm** It's time to decorate! I work with the head decorator to make sure everything looks delicious and exciting. After I've done the cupcakes, I get out the cake squares and make mousse cakes. I switch between choc raspberry, peanut butter and jam, choc hazelnut, and good old chocolate. I also decorate some other goodies that go behind the counter for Teri to sell. I tried working up the front of the shop but didn't like it as much because customers can be annoying. I much prefer working on the cakes.
- 4.30pm** It's time to start cleaning up and getting ready to head home. It's important to leave the shop clean as a whistle. We take hygiene, health and safety very seriously.
- 5.00pm** I lock up shop and start my long trip home, but this time in reverse. The bus then two trains.
- 7.02pm** I get home, eat dinner with my partner and kids, and we all talk about our days.
- 8.00pm** After I get the kids ready for bed, it's time to relax on the couch with my partner while we watch a movie.
- 10.00pm** It's time to turn the TV off and get some sleep for a bright and early start tomorrow.

# Patisserie Chef

**Jamie** is a third-year patisserie chef apprentice who enjoys seeing the joy on people's faces when they eat his desserts. Jamie has a Cert II in Kitchen Operations and a Cert II in Commercial Cookery and dreams of opening his own cafe in the future. Find out more:

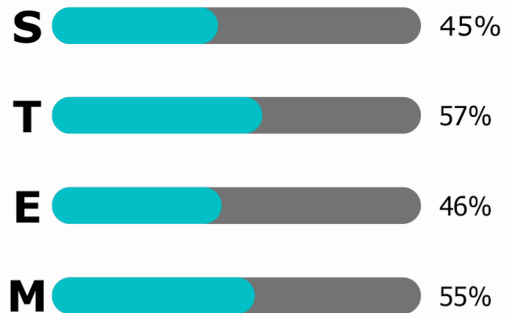
[futureyouaustralia.com.au/pathfinders/jamie](http://futureyouaustralia.com.au/pathfinders/jamie)



*'I have this natural ability to bring joy and energy to my passion.'*

## STEM Meter

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



Source: [jobsandskills.gov.au](http://jobsandskills.gov.au)

## 5 reasons why you should do this job

- 1** It's a creative and artistic job
- 2** Working with your hands is fun
- 3** You'll make people happy
- 4** Travel opportunities
- 5** Work with lots of different people

### 3 STEM skills required for this job

Chemistry

Creativity

Ratios

### Subjects to develop these skills

Science

English, HASS, Science, Technologies, the Arts

Mathematics