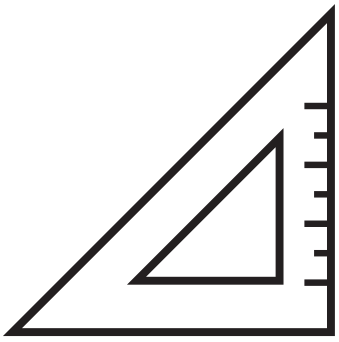
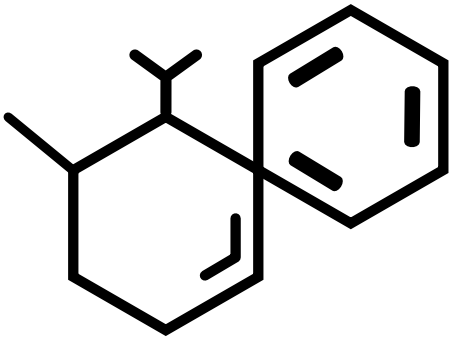
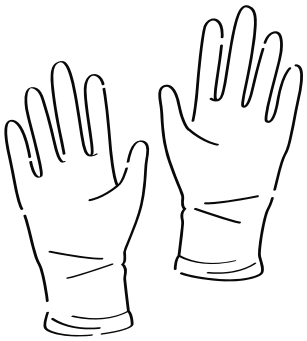
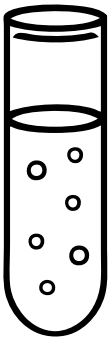
Colour me in and take some mindfulness time

Name:

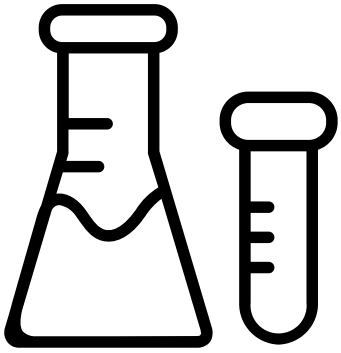


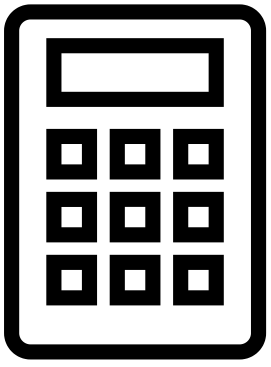


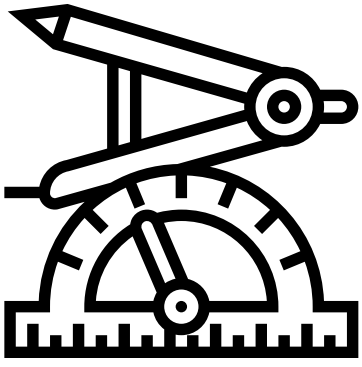


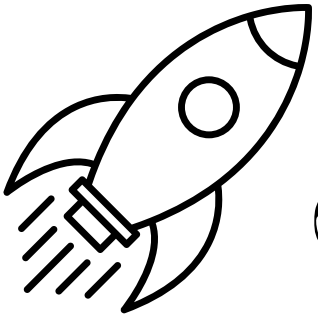


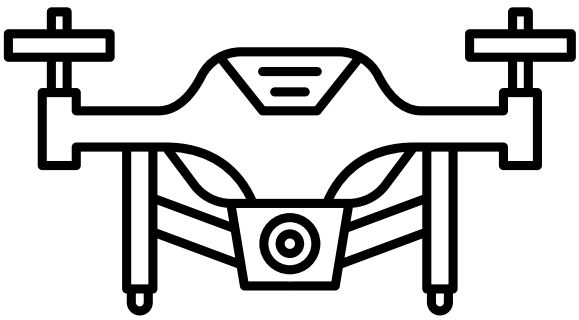
Finding the ME in STEM











Lisa’s student activity pack

FUTUREYOU

www.futureyouaustralia.com.au

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

Lisa

Student name:

Comprehension Questions

What three job titles does Lisa give herself?

1.

2.

3.

What does Lisa love about her job?

What inventions are astronomy responsible for?

1.

2.

What does Lisa want to do?

What two things is Lisa not good at?

1.

2.

Name two things Lisa is good at.

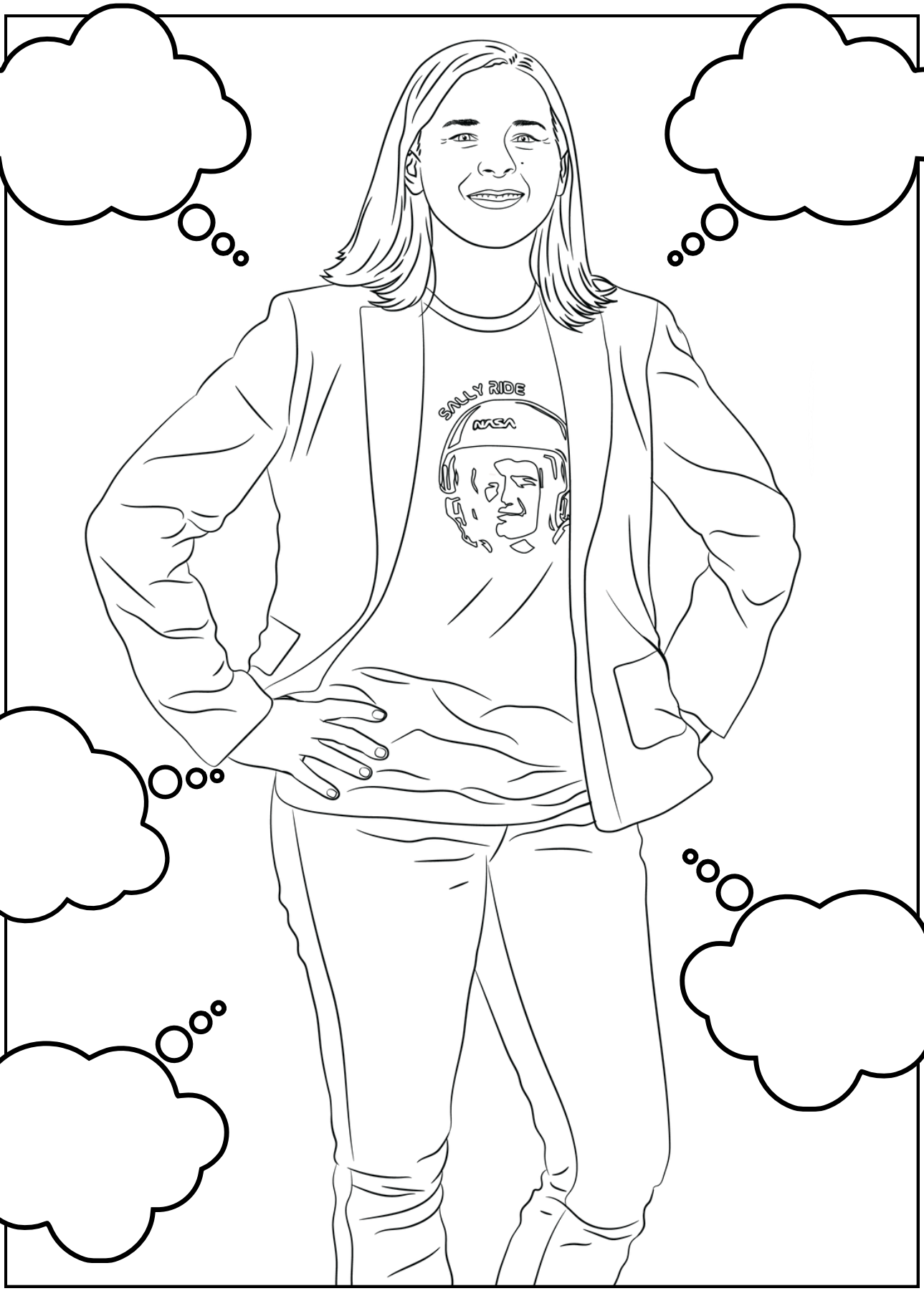
1.

2.

What does astronomy help us to understand?

What big decision did Lisa make when she was 11?

Meet Lisa. She's an astrophysicist who loves seeing galaxies whose light has taken more than a billion years to reach Earth. 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

Astrophysicist

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

Find 20 words Lisa needs to do her job.

1. TELESCOPE
2. GALAXIES
3. STARS
4. PLANETS
5. ASTRONOMER
6. COSMIC
7. OBSERVATIONS
8. GRAVITY
9. EXOPLANETS
10. BLACK HOLE
11. NEBULAE
12. SOLAR SYSTEM
13. COMETS
14. RESEARCH
15. ASTROPHYSICS
16. SPACE
17. UNIVERSE
18. RADIATION
19. DATA ANALYSIS
20. SPECTROSCOPY

Scan this QR code to find out more about Lisa.

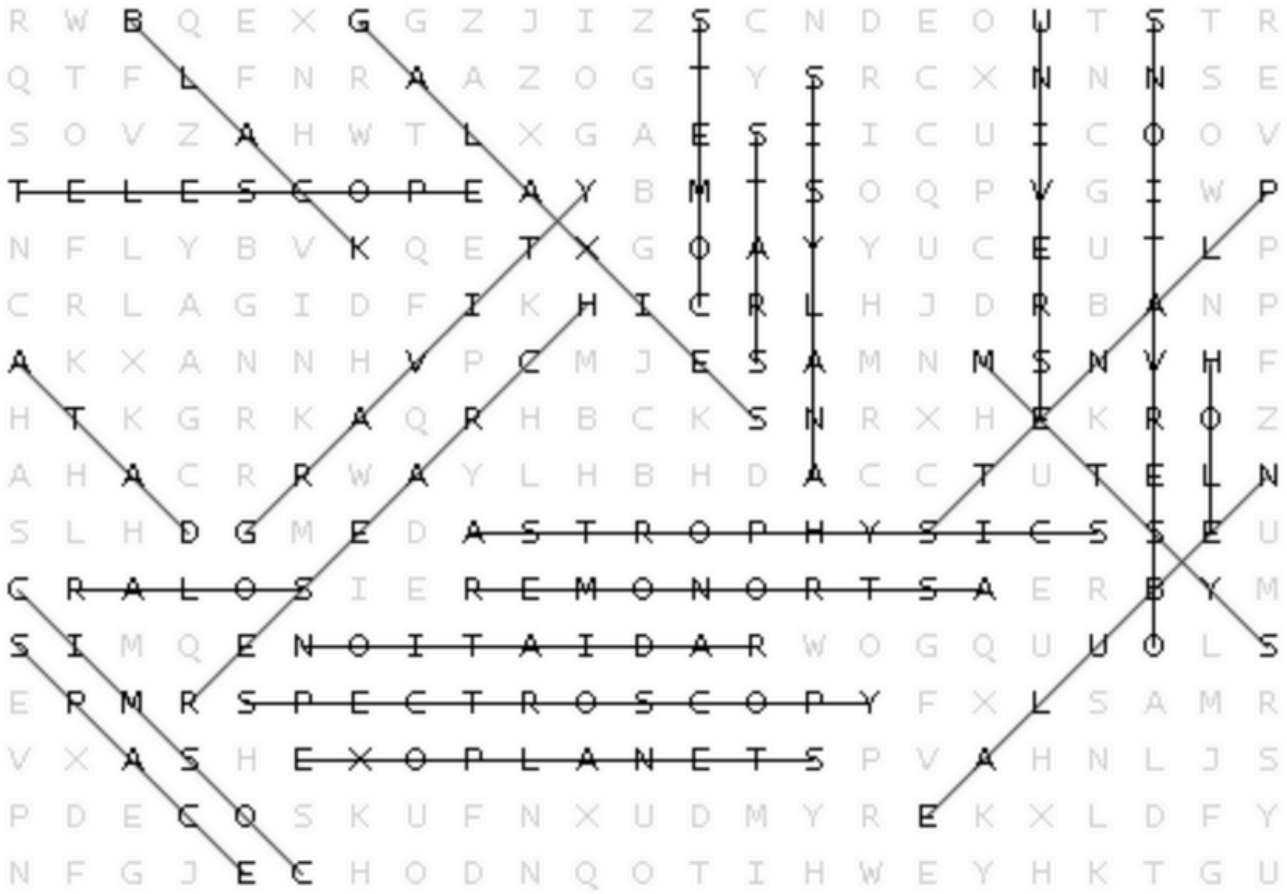
SCAN ME

FUTUREYOU

www.futureyouaustralia.com.au/pathfinders/lisa

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 Lisa might need to do her job?

_____

A example of a day in the life of an astrophysicist

6.00am I'm up before dawn because I love staring each day with some cosmic perspective. I enjoy some overnight oats and watch as the night sky gives way to the day.

7.00am Time to get dressed. Today I choose a comfortable blend of casual and intellectual with a cosmic-themed shirt and some tailored trousers.

8.00am I head out the door and to the bus stop because today I've got telescope time scheduled. Normally I work from home, but today I'm going to the office. I take the bus because it gives me time to mentally prepare for the celestial discoveries that await. Of course, I listen to some space-themed music on my way. It gets me excited for the day.

9.00am I convene with my team for a morning strategy session. We discuss research goals, ongoing projects, and collaborative opportunities. It's important to keep the conversation dynamic, focusing on the astronomical wonders we collectively aim to explore.

10.00am I sit down at my desk in front of my computer and prepare to immerse myself in the sea of astronomical data. I analyse star patterns, study celestial phenomena, and contribute to the scientific tapestry of the cosmos. I put my analytical skills to good use and attempt to decode the language of the universe in concise, active sentences.

1.00pm Time to pause for lunch. I meet my colleagues in the breakroom and we discuss some of the latest discoveries of the universe. There's never a dull moment at lunch and there's always something exciting to talk about.

2.00pm I have a virtual meeting with some fellow astrophysicists. We share hypotheses, exchange insights, and debate the mysteries of the cosmos. This is a great opportunity for us to really delve deeply into some of the questions that I have following my morning of universal language decoding.

3.00pm It's the most exciting part of my day! I head to the observatory for a session with the telescope. This is my chance to witness the cosmic ballet firsthand, capturing images and data to unravel the secrets of distant galaxies. I capture my observations into precise and impactful descriptions using my phone.

4.30pm I get back to my desk and input my observations into the immense data collection I have been compiling for years. This work is vital to helping us better understand the universe and where we come from. I spend the last few hours of my day making sure the data I input is clean and all the correct detail is there. Once I've finished this, I shut down my computer, say goodbye to my colleagues, and head out the door.

6.00pm Tonight I am participating in a public lecture as part of an educational outreach program I'm a mentor for. I love these sessions. I get to communicate complex astrophysical concepts in a clear and accessible manner, ensuring everyone can grasp the wonders of the cosmos. I love watching people's reactions to learning more about the universe.

8.00pm I wrap up my day by heading home and reheating some leftovers from dinner last night. Today was a big day, but very rewarding.

9.30pm To help me wind down I head outside to stargaze from the comfort of my backyard. As an astrophysicist, I find immense joy in taking a moment each evening to stare up at the night sky and wonder what I'll discover tomorrow.

10.30pm Time for bed. I crawl under the covers and hope that I'll dream about galaxies billions of light years away.

Astrophysicist

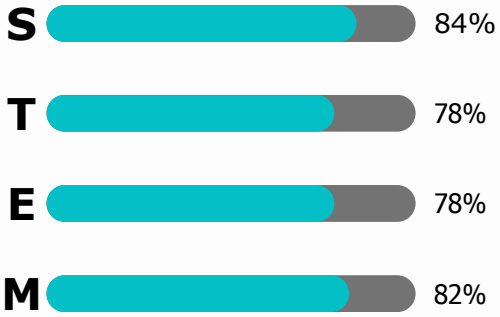
Lisa is an astrophysicist who loves seeing galaxies whose light has taken more than a billion years to reach Earth. Lisa was homeschooled from the age of 11 and has worked on exciting projects like the Australian Square Kilometre Array Pathfinder telescope at CSIRO. Find out more:

futureyouaustralia.com.au/pathfinders/lisa

"Astronomy helps us to understand where we came from, connect with the universe, and develop awesome inventions like medical scanners and wifi."

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. You get to explore the universe
2. Solve cosmic puzzles
3. Be part of groundbreaking discoveries
4. Be a role model for future generations
5. Endless opportunities to learn

3 STEM skills required for this job	Subjects to develop these skills
Reading comprehension	English
Critical thinking	Science, Mathematics, Digital Technology
Complex problem solving	Design and Technologies, Digital Technology