

Louise is
a Fixer

DOESN'T LIKE

sitting still
or spelling

LOVES

working with her hands
and being outdoors

CAREER

Heavy vehicle mechanic

STUDIED

heavy commercial vehicle
apprenticeship at 15

EXPERT ON

fixing big things
and plant machines

GREW UP

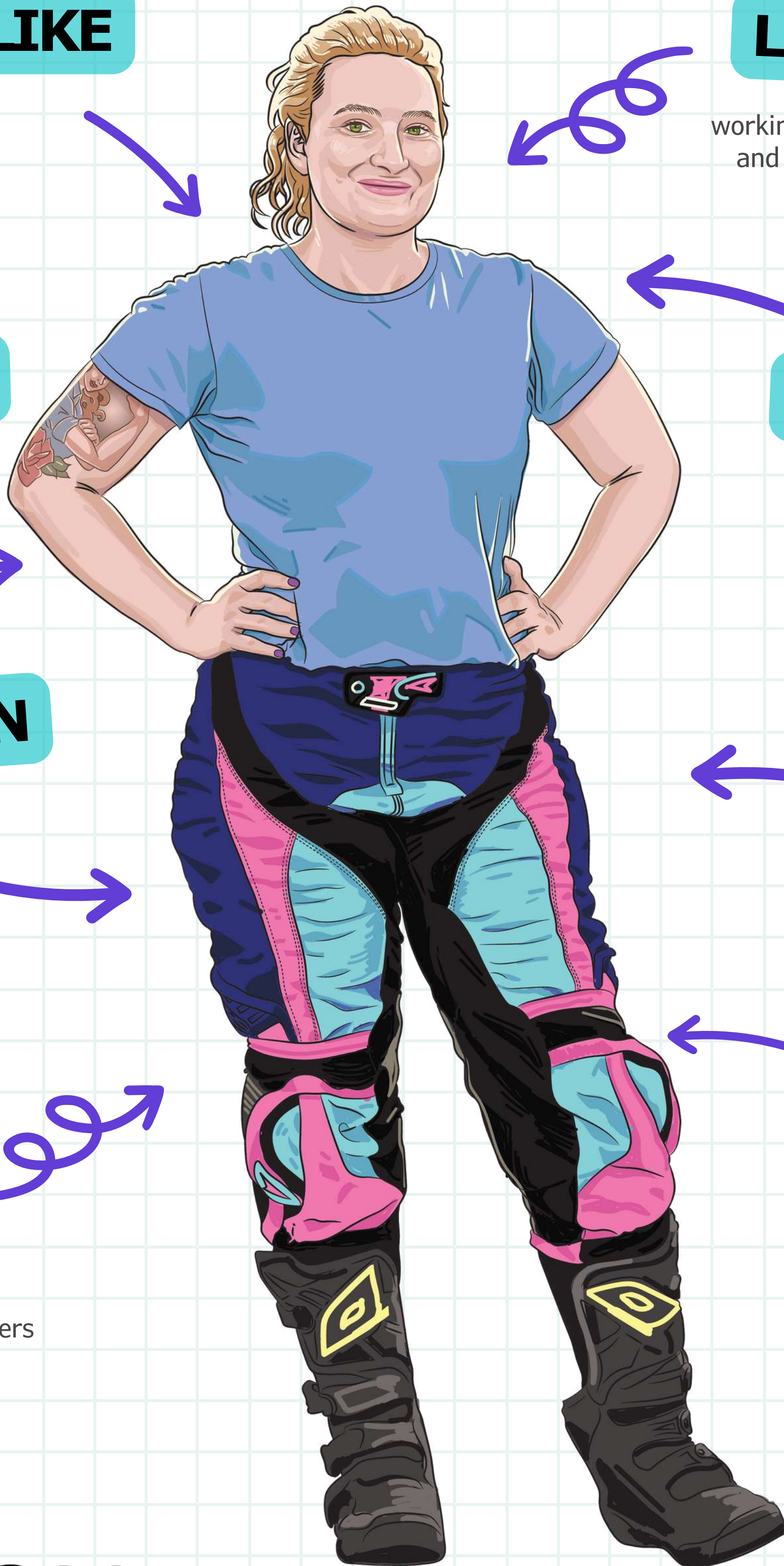
on a farm

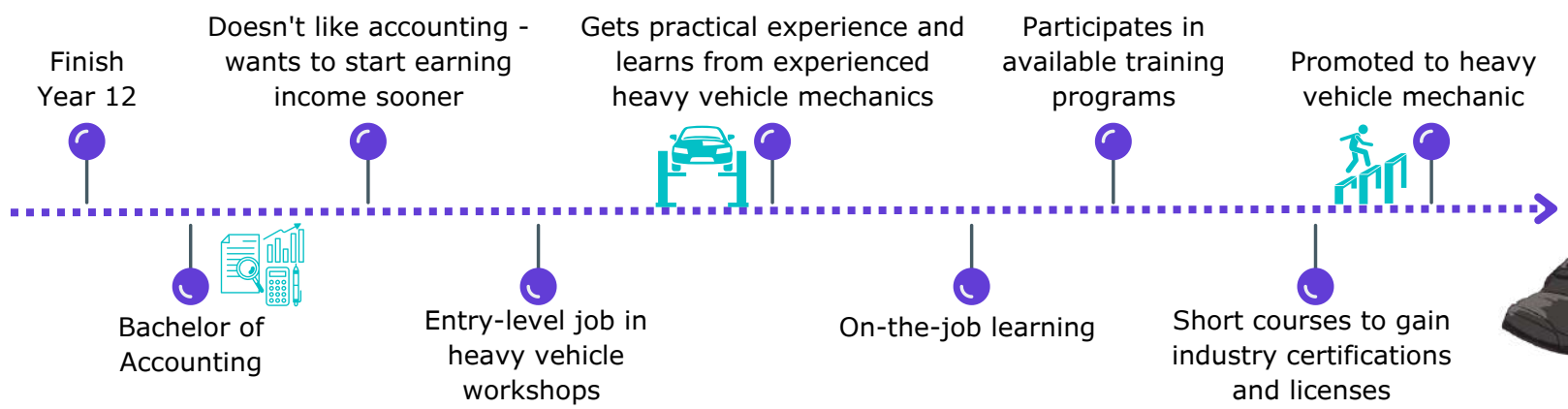
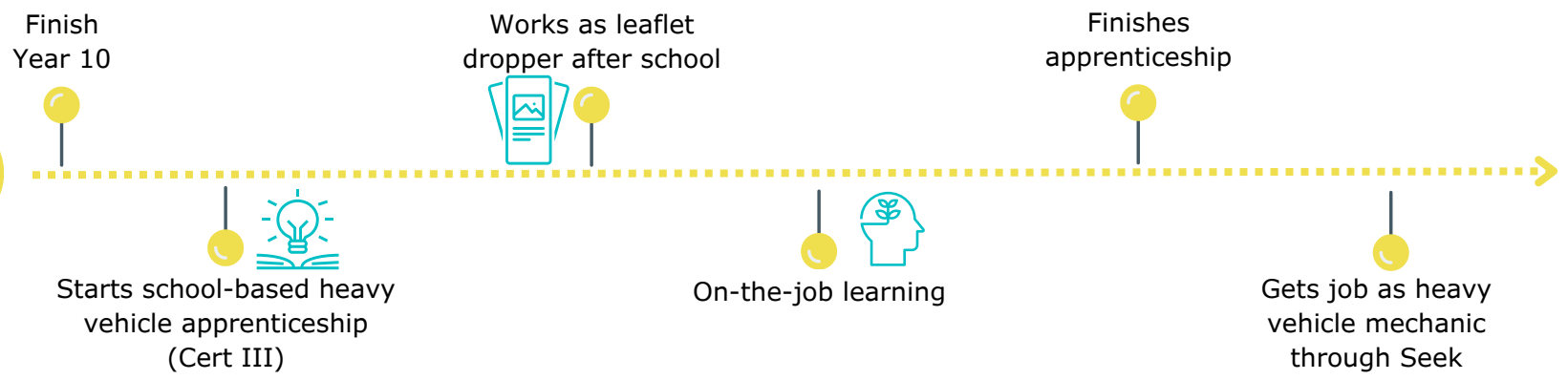
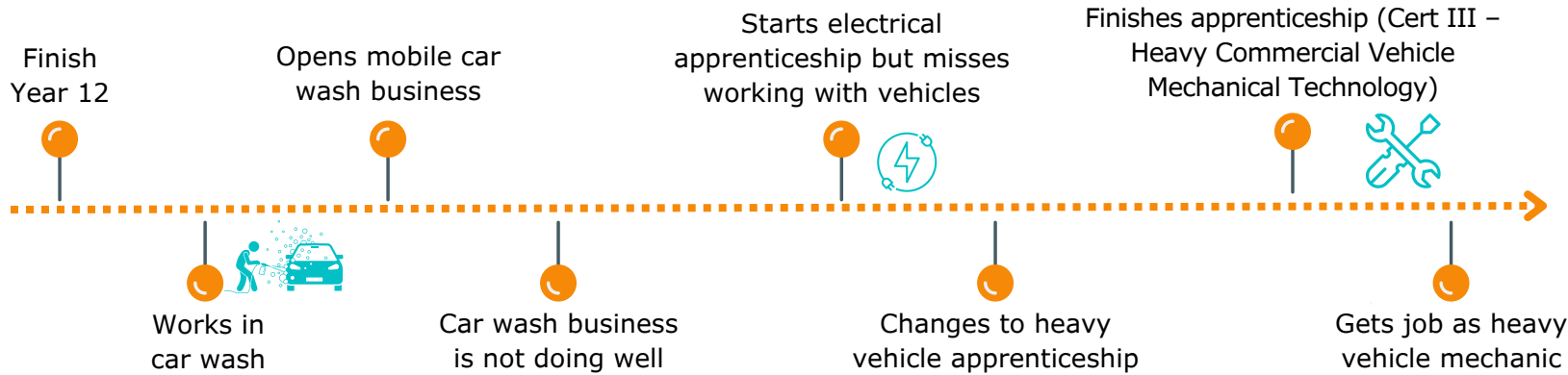
CAN

ride motorbikes, do a
cartwheel, and teach others
how to fix big things

WANTS TO

support other women doing
apprenticeships and trades
to succeed.





Heavy vehicle mechanic career pathways

Find out more at www.futureyouaustralia.com.au/resources/#other/



The educational qualifications and levels outlined in these pathways are intended as general guidelines. To obtain accurate and up-to-date information, explore resources specific to your state or territory, available through websites like myfuture.edu.au, YourCareer.gov.au and australianapprenticeships.gov.au.

There is also a range of financial support available for students doing apprenticeships or going to university, visit www.servicesaustralia.gov.au/education to see what's available.



- Electrical apprenticeship: <https://www.yourcareer.gov.au/occupations/341111/electrician-general>
- Heavy vehicle apprenticeship: <https://www.aapathways.com.au/jtd/heavy-vehicle-mechanic/44864a7c-0810-49b6-9615-06504b8e85d4>
- Starting your own business: <https://business.gov.au/guide/starting>



- Certificate III in Heavy Commercial Vehicle Mechanical Technology: <https://training.gov.au/training/details/AUR31116>



- Bachelor of Accounting: <https://www.coursesseeker.edu.au/>
- Training courses: <https://www.yourcareer.gov.au/learn-and-train/courses>



Remember, there are countless pathways to the same career. Each child's unique skills, interests, and strengths will guide them on their personal journey to success.

Heavy vehicle mechanic career pathways

Find out more at www.futureyouaustralia.com.au/resources/#other/



Comprehension Questions

Australian Curriculum V9.0 links for Years 3 to 7

English
• Literacy

General Capabilities:
• Literacy

Learning outcomes:

All students will be able to:

- Identify that all people have strengths and weaknesses
- Actively think about what is happening in a video while they are watching it
- Apply comprehension strategies to different media formats

In addition, some students will be able to:

- Identify different reasons for doing different jobs

Instructions:

- Format/print the students' question sheets (or load them onto school LMS) and direct students to a copy.
- Read the questions as a class to start, discussing any meanings
- Discuss with the class strategies for being able to answer the questions as the film plays
- Watch Louise's film with the class, encouraging students to answer questions as you go

Adaptation note: Questions can be modified on the PDF to meet students' needs or learning focus areas in your classroom

Comprehension questions

1. Name FOUR things Louise can do.
2. Name two things Louise CAN'T do.
3. How did Louise feel different from her friends growing up?
4. What decision did Louise make about a career sitting at a desk when she was still at school?
5. What led Louise into the mechanical field?
6. What is Louise's first level of satisfaction?
7. What is Louise's second level of satisfaction?

Scan this QR code to watch my film.



Answers:

1. Ride a motorbike, do a cartwheel, teach people, fix big things.
2. Can't spell, can't sit still.
3. She was always with her parents, outside. Her friends were always inside.
4. She wasn't going to sit at a desk.
5. Didn't want to go to university, wanted to work with her hands.
6. Completing a job.
7. Teaching someone else to complete a job.



Comprehension questions

Name **FOUR** things Louise can do.

- 1.
- 2.
- 3.
- 4.

How did Louise feel different from her friends growing up?

Name **TWO** things Louise can't do.

- 1.
- 2.

What led Louise into the mechanical field?

What is Louise's first level of satisfaction?

What decision did Louise make about a career sitting at a desk when she was still at school?

What is Louise's second level of satisfaction?

Capability Convos

Australian Curriculum V9.0 links for Years 3 to 7

English

- Language
- Literacy

General Capabilities:

- Critical and Creative Thinking
- Personal and Social Capability
- Ethical Understanding
- Literacy

Learning outcomes:

All students will be able to:

- identify some likes, dislikes, strengths, abilities and/or interests when showing a personal preference
- acknowledge that people have different needs, emotions and abilities

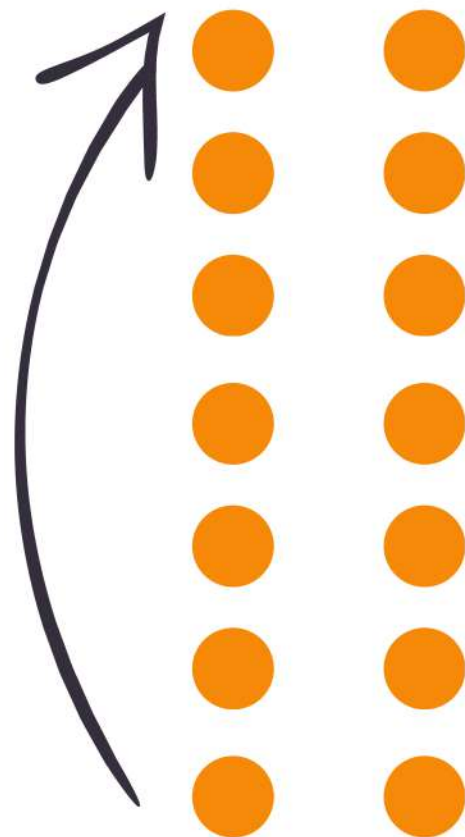
In addition, some students will be able to:

- describe the ways they are connected and can contribute to their community groups

Format

- Interactive game with 10 questions
- Easy to play
- Watch Louise's film with the class
- Print the questions
- Play the game
- Modify or include new questions based on students' needs

Scan this QR code to watch my film.



Instructions for students

Line the class up in two lines facing each other to form pairs. Ask the first question. Once each pair has discussed it, get one line to move one person to their right. The person at the end runs around to the other end of the line. Then you ask the next question and repeat the process until all the questions have been asked.

Louise Mechanical Engineer

Question 1

What do you think is interesting about Louise's career?

Question 2

What skills does Louise have that you also have, and does she have any skills you don't have that you would like to have?

Question 3

How might technology change this career in the future?

Question 4

Why do you think it's important to find a career that suits your skills and personality?

Question 5

How are your current interests and hobbies similar to Louise's career?

Question 6

How do you think Louise's career contributes to society?

Question 7

How could this career be done in a rural or remote setting?

Question 8

What are some tools you think Louise would need to use on the job?

Question 9

How important do you think it is for Louise to be able to work independently and why?

Question 10

What kinds of heavy vehicles have you seen that you think Louise would work on? How do you think Louise would maintain or repair them?

Pathfinder Census

Meet the Pathfinders! Find out how much you, and your classmates, have in common with them.

Learning outcomes

All students will be able to:

- organise data and information
- identify patterns and relationships
- share findings through displays

Some students will be able to:

- share findings through displays to present data in a creative way

Previous knowledge

Before undertaking this activity, get students to review each Pathfinder's career information sheet and poster. These documents include information about each Pathfinder that is relevant to this activity.



[Career Information Sheets](#)



[Pathfinder Posters](#)

Instructions

Tell your students they will analyse their classmates to see which Pathfinder they are most like.

Students will use the tally worksheet to gather data about their classmates. After they've finished collecting their data, they will use the graph worksheet to organise their information to make it easier for them to analyse it. After they've analysed their data, they can answer the questions on the graph worksheet.

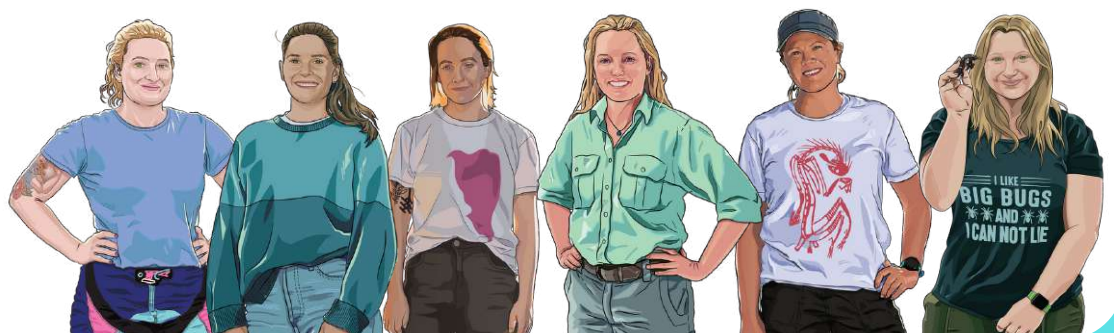
Note: There are two versions of the tally and graph worksheets to cater to students' different abilities. We recommend that students in Years 3 and 4 use **Worksheet 1** and students in Years 5 and 6 use **Worksheet 2**. Please choose the sheet most appropriate to the skill level of your classroom.



[Worksheet 1](#)



[Worksheet 2](#)



Australian Curriculum V9.0
links for Years 3 to 7

Science

- Science Inquiry

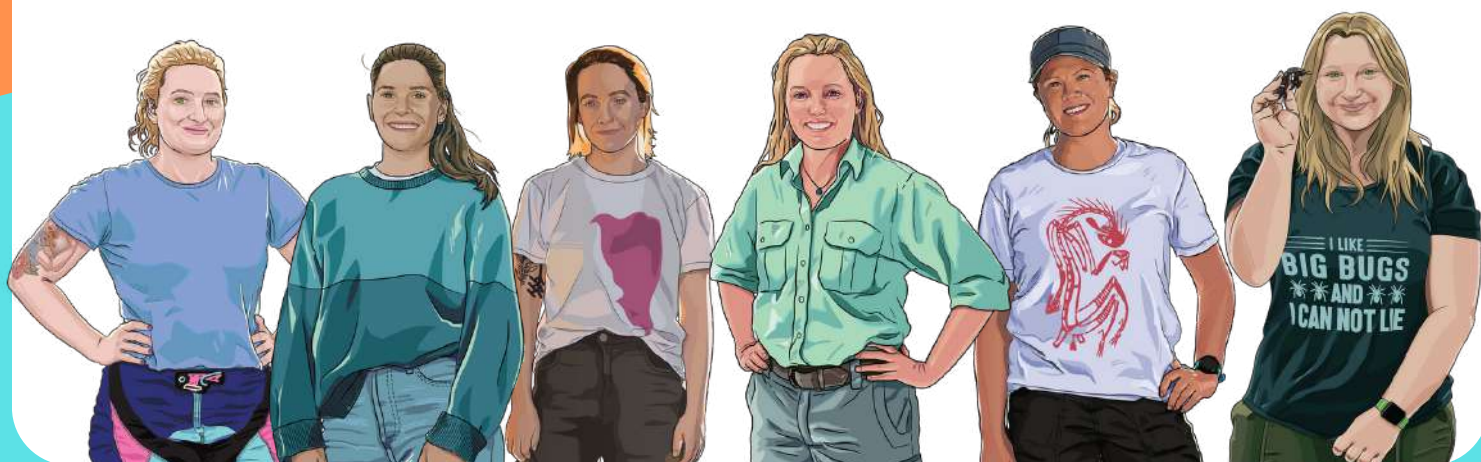
General Capabilities:

- Critical and Creative Thinking
- Numeracy
- Personal and Social Capability
- Literacy

Curriculum Links

Links with the Science Curriculum Area

Strand	Content Description
Science Inquiry	<p><u>AC9S3I04</u> – Year 3 construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns</p> <p><u>AC9S4I04</u> – Year 4 construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns</p> <p><u>AC9S5I04</u> – Year 5 construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships</p> <p><u>AC9S6I04</u> – Year 6 construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships</p>



Heavy Vehicle Mechanic

Louise is a heavy vehicle mechanic. She started her apprenticeship at 15 and repairs and maintains heavy vehicles like trucks, semitrailers and buses. She also trains and mentors other tradespeople in heavy vehicle and plant mechanics. Find out more:

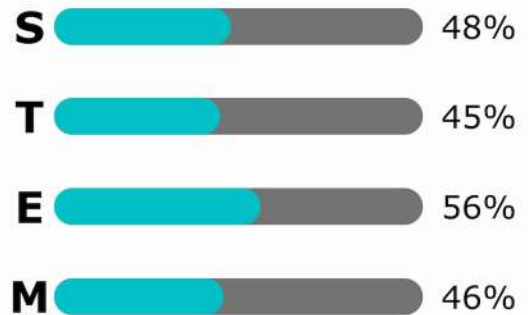
futureyouaustralia.com.au/pathfinders/louise



'The idea of going to University didn't appeal to me at all. I wanted to work with my hands.'

STEM Meter

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



Source: jobsandskills.gov.au

Job stats and facts

Location: 49% of heavy vehicle mechanics live outside capital cities.

Employment pathways: A certificate III in a relevant mechanical field.

3 STEM skills required for this job

Arithmetic: Fractions & conversions

Troubleshooting

Problem-solving

Subjects to develop these skills

Mathematics, Science

Science, Mathematics, Digital Technology

Design and Technologies, Digital Technology

3 other jobs that value this skill

Business Intelligence Analyst, Accountant, Pharmacist

Principal, Marketing Manager, Dentist

Social Worker, Air Traffic Controller, Chemist

Other careers related to this line of work



Engineering

Marine Engineer
Mechatronics Engineer
Robotics Engineer
Industrial Engineer
Electrical Engineer



Driver

Delivery Driver
Truck Driver
Train Driver
Tow-Truck Driver
Forklift Driver



Retail

Rental Salesperson
Service Station Attendant
Automotive Sales Manager
Sales Representative
Vehicle Detailer



Education

Driving Instructor
Automotive Technical Trainer



Automotive

Panelbeater
Motor Mechanic
Vehicle Body Builder
Vehicle Painter
Tyre Technician

The world is changing rapidly, and this means the career possibilities available to our kids are wide-ranging and exciting (and probably don't exist yet!).

From traditional vocations to emerging fields, there are countless pathways to be explored.

Parents and teachers can create environments that encourage kids to discover and investigate possible careers that match their skills and interests.

We've included some links to other valuable resources that can help guide career conversations and explorations. Find out more at:

www.futureyouaustralia.com.au/resources/#other

Heavy Vehicle Mechanic

Louise is a heavy vehicle mechanic. She started her apprenticeship at 15 and repairs and maintains heavy vehicles like trucks, semi-trailers and buses. She also trains and mentors other tradespeople in heavy vehicle and plant mechanics. Find out more:

futureyouaustralia.com.au/pathfinders/louise



'The idea of going to university didn't appeal to me at all. I wanted to work with my hands.'

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** Help keep food in our homes
- 2** Make our roads safer
- 3** Ensure our heavy vehicles last longer
- 4** Make sure important deliveries arrive
- 5** Contribute to technological advances

3 STEM skills required for this job

Arithmetic: Fractions & conversions

Troubleshooting

Problem-solving

Subjects to develop these skills

Mathematics, Science

Science, Mathematics, Digital Technology

Design and Technologies, Digital Technology

An example of a day in the life of a heavy vehicle mechanic

This is what a typical day could look like if you became a heavy vehicle mechanic.

- 6.00am** I get up early so I can take my dogs for a walk, squeeze in a quick ride on my motorbike and prepare a cooler of snacks and lunch before work. I love doing something for me every day before starting work. It helps me start the day with a positive mindset.
- 7.30am** I race out the door with a breakfast sandwich in one hand and a coffee in the other. Nothing better than a warm brekky in my belly before a full day on the tools.
- 8.00am** I start my workday on the workroom floor and make sure I have all the tools and parts I need at my workstation to take on my jobs for the day. I scan my work queue – this is a document our team uses to track the vehicles we're working on, so we know what's coming up and know what parts we need. I notice that later this week I am working on a tractor that will need some new belts and hydraulic pumps. We don't have any in the workshop at the moment, so I place an order to ensure we're prepared.
- 9.00am** Our team uses a whiteboard in the workshop to track the vehicles we're working on. This is really handy because we also include estimates of time, which means my boss can see who has capacity to take on new work orders as they roll in (or, sometimes, sputter in). I update my part of the board because I was in the middle of a job yesterday when I came across an unexpected issue involving some cracked pistons. This means the job will take longer, but it's great that we found them because now they won't cause major issues down the track. My boss is satisfied with the extra time I have allocated, and the client is also happy, because these machines are NOT cheap and it's important to keep them in tiptop shape.
- 9.30am** It's time to deal with the cracked pistons. This is not a small task. Before I start fixing them, I need to work out WHY they cracked. This can be caused by quite a few things, and I need to do some investigation to find the cause. Then I will be able to let the client know so they can hopefully not do it again. Investigating the cause requires me to strip the engine and remove the pistons for closer inspection. I love this part! Finding out the WHY is always so exciting.
- Midday** Lunchtime and I am starving! I smash through my cooler of food and chat to some of my colleagues. We always end up talking shop, which is great because it means we can chat about the issues we are dealing with and sometimes a fresh set of eyes (or ears, in this case) can see a solution that has not yet been considered. I love my crew. We always share ideas and a laugh. It makes work really enjoyable when you know your team has your back.
- 1.00pm** I have to start another job, which means it's time to consult my checklist and do an inspection. My checklist helps me to identify the issue with a machine by stepping me through a list of frequent engine malfunctions. The customer's reported symptoms, the use of diagnostic equipment, including scan tools, and the results of a test-drive all prove helpful in finding the source of the issue. In this case, it's a bus and it turns out to be a rather simple fix. The customer reported that the bus was taking a few goes to turn on, was stalling, and seemed to be a bit lethargic. Turns out the fuel filter was clogged. A pretty simple fix. I start by lifting the bus with the hydraulic lift in the workshop and locating the fuel filter. Once I locate it, I put a container underneath to catch all the fuel when I release it to clean it. Once it's clean, I reinstall the filter and test the vehicle. The bus is good as new again!
- 3.00pm** Back to those cracked pistons. I found the cause: it was an incorrectly sized timing belt. So I will replace the timing belt with the correct-sized timing belt, and then I will repair the piston. A cracked piston is not repaired or changed alone – it requires changing gasket, rubber sealings, valves and engine oil, which takes time and requires a lot of attention to detail. I get stuck in.
- 5.00pm** Knock-off time! Phew. I am shattered, but it was a great day and I managed to get a lot done. I say goodbye to the crew and head home to shower.
- 7.00pm** I drive over to a friend's house for dinner. About six of us get together every week and do Taco Tuesdays and play board games. It's the best way to unwind after a long day.
- 10.00pm** I get home, hop into bed and set my alarm, ready to do it all again tomorrow.

Pathfinder Workwords

Heavy Vehicle Mechanic

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

Find 20 words Louise needs to her do her job.

1. VEHICLES
2. TROUBLESHOOTING
3. TOOLS
4. CONVERSIONS
5. MEASUREMENTS
6. INTERPRETATION
7. MATHS
8. ENGINEERING
9. VISUALISING
10. SCHEMATICS
11. DIAGNOSE
12. MANUAL
13. COMPUTERS
14. HYDRAULICS
15. MONITORING
16. TESTING
17. EVALUATING
18. OBSERVING
19. COMMUNICATING
20. LISTENING



SCAN ME



Pathfinder Workwords

Answers

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

Let's reflect

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

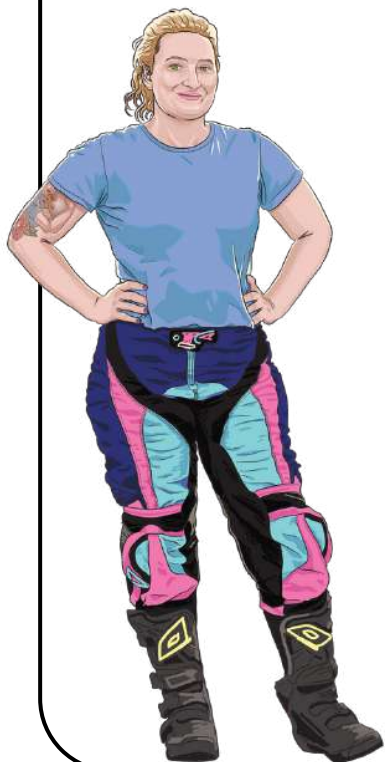
Which of these skills do you think you are best at, or would like to get better at?

1. _____

2. _____

3. _____

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



Meet Louise. She's a heavy vehicle mechanic. Think of five STEM (Science, Technology, Engineering, Mathematics) skills she uses in her job.

