

VISITING THE NATIONAL MOTOR MUSEUM

a guide for teachers



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Government
of South Australia

The History Trust of South Australia developed this education resource using the expertise, collections and resources of the History Trust of South Australia, its museums and partners. Our learning programs bring to life the stories, objects and people that make up South Australia's rich and vibrant history.

HISTORY TRUST OF SOUTH AUSTRALIA

The History Trust of South Australia operates three museums - the Migration Museum, the National Motor Museum and the South Australian Maritime Museum, along with the Centre of Democracy managed in collaboration with the State Library of South Australia. The History Trust's role is to encourage current and future generations of South Australians to discover this state's rich, relevant and fascinating past through its public programs and museums.



NATIONAL MOTOR MUSEUM

Our contemporary exhibition halls explore the stories of people and vehicles that have shaped Australia's motoring history.

Discover how motor vehicles have opened up our country, linking some of the most isolated communities in the world. From the stately to the absurd, from the hand-built to the mass-produced, see the vehicles people loved and loathed, thrashed and pampered, in the pursuit of their motoring dreams!

As an international centre for the collection, research, preservation, education and display of Australian road transport history, the National Motor Museum is much more than a collection of vehicles. It is a social history of the way we were, the way we are now and the way of the future.



BEFORE YOUR VISIT

MAKE A BOOKING

Please use the [Booking Request form](#) on our website to begin the booking process, and our team will be in touch with you shortly after.

You can also find a list of [frequently asked questions](#) about school visits on our website.

On-site education programs are outlined on page 5, and on the website. You can also use the discussion questions in this booklet to guide students as you explore the museum in groups.

CONTACT

P: (08) 8568 4000

E: schools.motor@history.sa.gov.au

W: motor.history.sa.gov.au

The museum is open every day (except Christmas day) 10am - 5pm.



Image: National Motor Museum, photo by Andre Castelucci

PREPARING YOUR STUDENTS

Please let students know what to expect and what is expected of them when visiting the National Motor Museum:

- Read the signs and labels to find out more about objects on display
- Discuss objects and information with other students and feel free to ask questions
- Be respectful of other people visiting the museum by keeping the noise to a minimum, walking calmly, and sharing spaces to view displays
- Be COVIDSafe by using hand sanitiser and maintaining physical distancing

ACCESSIBILITY

The museum is wheelchair accessible, with the exception of the 1920s Garage. There is an accessible bathroom on site.

Please contact us if you have any accessibility requests or concerns.

COVID SAFE

To ensure our visitors remain COVIDSafe, hand sanitiser is provided at the main entrance and stationed throughout the museum. We recommend using it upon entry and exit, and before and after touching handrails or interactives. Please ensure all members of your group maintain physical distancing in the gallery.

Visit the [SA Health website](#) to keep up to date with current COVID-19 regulations and restrictions in the state.

Please note: In the instance that a facility has a confirmed case of COVID-19 or a confirmed close-contact among staff, students, residents, or team members which requires the facility be closed, the History Trust of South Australia and its museums will delay any bookings made by that facility for a minimum period of 14 days from the date that the case was identified.

Should no further cases occur during this period the booking may be rescheduled, subject to availability. Any subsequent cases within that period will extend the period an additional 14 days, starting from the date of the last confirmed case or close contact.

The period of 14 days is in accordance with the current understanding of the COVID-19 incubation period. All attempts will be made to reschedule within a reasonable time frame.

ON PERAMANGK LAND



THE NATIONAL MOTOR MUSEUM STANDS ON THE LAND OF THE PERAMANGK PEOPLE

When exploring the National Motor Museum, we encourage you and your students to reflect on the history of the land on which we stand.

The History Trust of South Australia respects the primary place of Aboriginal people in the history of this place. We acknowledge that our story commenced long before Governor Hindmarsh proclaimed the new Province of South Australia on 28 December 1836. Aboriginal people have a history that extends millennia into the past. We acknowledge that Aboriginal land and sovereignty were not recognised and that building a shared understanding of history is critical to reconciliation. We affirm our role in reconciliation as an essential part of Indigenous and non-Indigenous South Australians co-creating a positive future.

Discussion questions:

1. What land is your school on? Use the [AIATSIS map of Indigenous Australia](#) as a reference. What are the neighbouring lands called?
2. What do you think the land would have looked like before English colonists arrived?

BONUS TASK: In small groups, create your own ceremonial welcome to your class. It might include speaking, singing, dancing, a symbolic gesture, or a mixture of these. The welcome should make a guest feel safe, and teach them a bit about the rules and values of the class. Once they are complete, take turns presenting your welcome and discuss your choices.

EDUCATION PROGRAMS

For more information about these programs and to book, visit the [National Motor Museum website](#).

MOTORWORKS

In this program students learn about the introduction of the assembly line and the impact it had on vehicle manufacturing. As a group students will simulate an assembly line to build a cardboard replica of a Model T Ford. Each student will have a different task and some will be supervisors of a section. At the end of manufacturing the students can take one of the Model T's home.

The opportunities for student learning are diverse and the program links well with the Australian Curriculum and is informed by the Teaching for Effective Learning framework

HAWKER VANS: THE CORNER SHOP ON WHEELS

This education program is based around the 'Hawker Vans' exhibition at the National Motor Museum. In the early twentieth century hawkers connected rural Australian towns with cities by carrying and selling goods such as clothing, kitchen utensils and lollies. The first hawkers traveled by foot, horse or camel, but with the introduction of motor vehicles hawkers were able to cover larger distances and carry heavier loads.

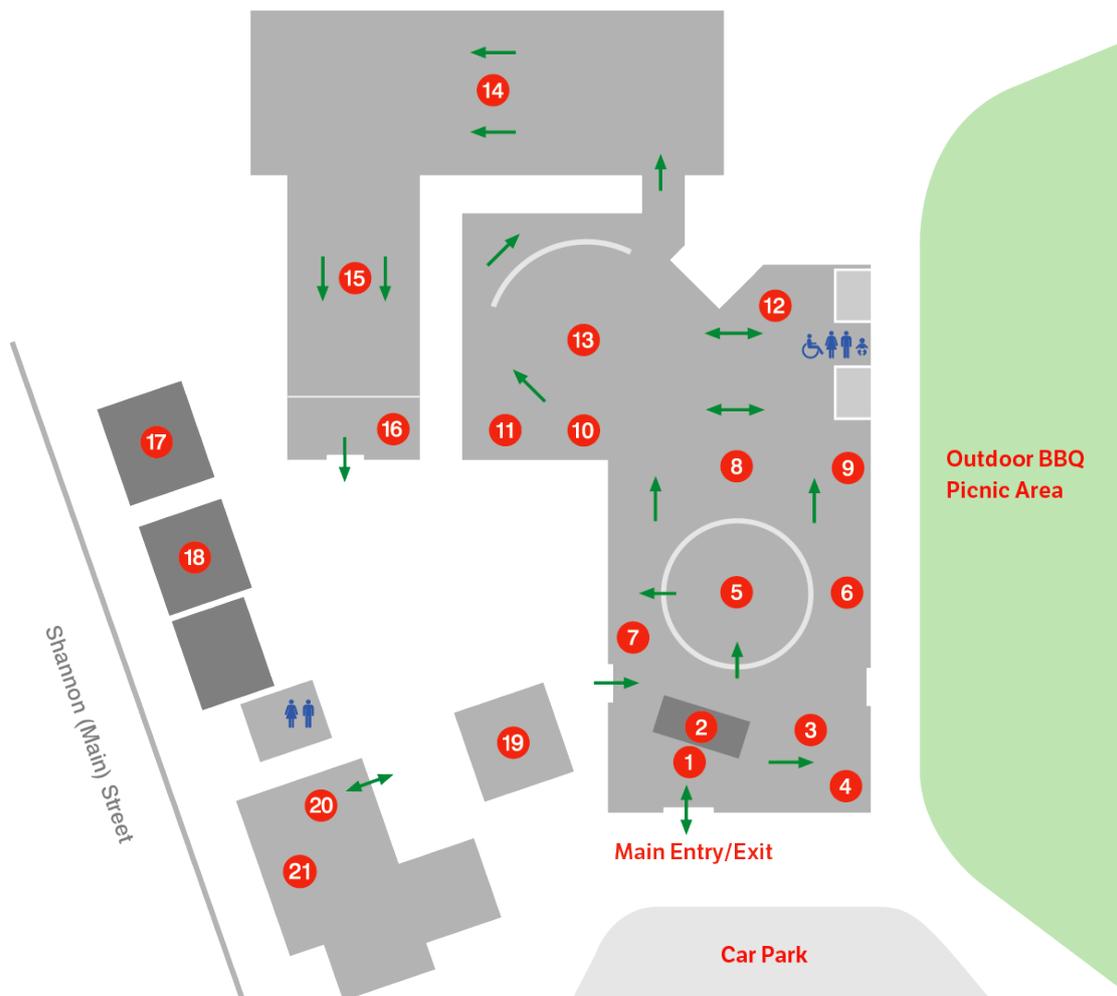
In a fun and hands on activity, students will look at historical objects as sold by hawkers and carry out a simulated journey where they prepare their vehicle for travel, load up their wares and then spruik their wares to the other students from a mini scale model hawker van.



Image: Students involved in the Motorworks program at the National Motor Museum

AT THE MUSEUM

- | | | |
|--|---|---|
| 1 Reception | 9 Milestone Vehicles | 15 Motorcycles |
| 2 Regent Garage | 10 Alice Anderson's Motor Service | 16 Education Centre |
| 3 Bugatti Veyron | 11 George Brooks Library Reading Room | 17 1920's Garage |
| 4 Kapi Ungkupayi | 12 Travelling Emporiums: Hawker Vans | 18 Indoor BBQ and Vergola |
| 5 Sunburnt Country: Icons of Australian Motoring | 13 Game Engine | 19 Barn Find |
| 6 Model Behaviour | 14 Motoring Pavilion: Vintage, Veteran, Classic and Modern Vehicles | 20 Solid Ground (basement) |
| 7 [re]assembled | | 21 George Brooks Library (open by appointment only) |
| 8 Holden Heroes: A Retrospective 1948-2017 | | |



AT THE MUSEUM

3. BUGATTI VEYRON EB 16.4

The Bugatti Veyron is an extraordinary feat of automotive engineering. Complete with seven gears and special run-flat tyres that cost up to \$20,000 each it is designed specifically to handle top speeds. The Veyron can reach 100 km/h in 2.46 seconds and has a special spoiler that deploys to lower the vehicle when it hits 220 km/h.

- 1 **The top speed for this car is 343 km per hour. What kind of safety features do you think it would have?**

4. BUSH MECHANICS

Based on the popular ABC television series co-created by David Batty and Francis Jupurrurla Kelly, and told through the show's distinctive brand of humour, this exhibition showcases the ingenuity of outback mechanics whose clever resourcefulness can turn branches, spinifex and sand into tools and spare parts to get cars back on the road.

The Exhibition features a range of items from the series, including an original car, clay figurines, specially commissioned artwork and interactive displays, it also provides broader insights into Aboriginal life and culture.

- 1 **Watch the short animated film on display. What can we learn about the character's culture and beliefs?**
- 2 **Where is the story based?**
- 3 **What are some of the methods the Bush Mechanics use to fix their car?**

5. SUNBURNT COUNTRY: ICONS OF AUSTRALIAN MOTORING

From the novelty of a horseless carriage in 1899 to the 1948 release of Holden's 'Australia's own car', *Sunburnt Country* celebrates Australia's unique love affair with all things motoring.

Australians have embraced motoring as a fundamental part of our lives, and for many, it is an obsession. The exhibit includes the hand-built 1899 Shearer Steam Carriage, the 1908 Talbot that crossed from Adelaide to Darwin and the faithful 1936 Leyland Badger that enabled the legendary South Australian Mailman of the Outback, Tom Kruse, to deliver mail to rural communities. Other vehicles and objects on display capture significant moments of Australian motoring history.

- 1 **Tom Kruse adapted his truck to suit the outback by attaching a larger truck bed to the powerful Leyland Badger engine and cabin. What else do you think a truck would need to**

navigate through remote Australia?

- 2 **Why do you think Tom Kruse became so well known and loved in his later years? What were his achievements?**
- 3 **Can you find some items of clothing in this exhibition? Why do you think people would have worn certain types of hats, gloves and clothing while driving?**

6. MODEL BEHAVIOUR

Model Behaviour showcases the collections of three South Australians who had a passion for toy and model cars. If you remember Corgi models ('the ones with the windows') or you've ever wanted a pedal car, *Model Behaviour* is sure to delight.

- 1 **Did you have any model cars or toys like these? What are some of the differences between your toys and the ones on display?**
- 2 **What are the old pedal cars made from? Are modern car toys made differently? Which do you prefer?**



Image: Photograph of Tom Kruse and passengers with his truck along the Birdville track

AT THE MUSEUM

7. [RE]ASSEMBLED: AUSTRALIA'S AUTO-MOTIVE MANUFACTURING JOURNEY

As the factory doors closed at GM Holden's Elizabeth plant late 2017 Australia saw the end of automotive manufacturing in this country. This exhibition looks back over the history of automobiles in Australia from the hand-built invention of a South Australian jeweler, to the first Australian car the Holden 48-215, to the beloved family cars of the Ford Falcon and Holden Commodore.

An assembly line from Holden's Elizabeth factory hangs above the exhibition and demonstrates the different stages of construction. The final car of the assembly line is the renowned signature car, which Holden staff have signed over the last few years.

1. **How many stages of the assembly line can you see displayed? What are the changes in each stage?**
2. **An assembly line manufacturing process means workers focus on one specific task and become very efficient at it. What do you think some of those individual processes might be? And what kind of skills would be needed to complete them?**

8. HOLDEN HEROES: A RETROSPECTIVE 1948-2017

Holden Heroes: 1948 to 2017 a retrospective is a showcase of 18 of the most special vehicles from Holden's Heritage Collection on display at the National Motor Museum.

- 1 **The vehicles on display are mostly prototypes. That means they were created to demonstrate a new style or idea. Not all of them went into production. Can you see any unusual features on any of these vehicles?**

10. ALICE ANDERSON'S MOTOR SERVICE

Alice Anderson was Australia's first female garage proprietor, opening 'Alice Anderson's Motor Service' in 1919. The garage offered petrol sales, vehicle repairs, a driving school, 24 hour chauffeur service and organised chauffeured tourist parties on interstate trips. Alice employed approximately nine chauffeurs and mechanics, all women. Her ambition was to turn garage work into a suitable profession for women.

- 1 **Alice was a pioneering mechanic and business owner, and was also an inventor. What are some of Alice's inventions?**
- 2 **Who was Alice's role model and why? Who is your role model? Write yours on a card and hang it on the display.**
- 3 **An all-women garage would still be fairly unusual today. What do you think we can do to promote gender equality in all workplaces and industries?**



12. TRAVELLING EMPORIUMS: HAWKER VANS AND THE MOBILE SALESMEN OF RURAL AUSTRALIA

In the early twentieth century, hawkers had an important role in sustaining rural Australian communities. This exhibit features two South Australian hawker vehicles from the National Motor Museum collection.

The hawker vans once belonged to Syd Graeber and Hassan Monsoor. Syd and Hassan traveled with their vans to outback towns, farmhouses, and cattle stations selling an assortment of wares such as cigarettes, seeds and fabrics.

- 1 **What kind of objects can you see on the Hawker Van shelves?**
- 2 **What objects do you think Hawker's would have carried for children living in remote areas?**

13. GAME ENGINE: DIGITAL LEGENDS

The exhibition allows you to explore the changes in gaming technology in the most fun way: by playing some of history's most influential motoring games. It includes a giant joystick to play one of the first motor-influenced video games, Night Driver (1976) on a giant screen.

- 1 **The National Motor Museum has developed their own motor racing game where the player can make changes to the car, and the display. Have a go at changing some of the settings as you play the game.**
- 2 **Why do you think motoring games have been so popular since the earliest video games?**

AT THE MUSEUM

14. MOTORING PAVILLION

The pavillion features a huge display of motor vehicles from all eras of motoring history. There are some strange and beautiful designs and cars owned by significant people. The memories will come flooding back when you walk amongst this collection.

1. **In what order are the cars displayed? Read the labels in front of the vehicles to find out.**
2. **What do you notice about the colours of the cars on display? Are certain colours more popular in particular eras? What colour is your favourite?**
3. **Can you find any cars used for racing? How is the shape of a racing car different for a car made for cruising?**

20. SOLID GROUND: A HISTORY OF THE BIRDWOOD MILL

This exhibition explores the history of the Museum site from its origins before German settlers established the town and built the first flour mill to its abandonment and new life as a museum.

Step into the basement of the beautiful heritage mill to see original milling equipment as well as the luxurious Brough Superior motorbike owned by museum founder Jack Kaines, one of the first objects in the collection. The exhibition was launched on 20 November 2015, exactly 50 years after the museum first opened.

- 1 **Here you will learn about the founder of the museum, who started with his own collection of motorbikes. Do you have any collections? What kind of museum would you like to create?**



After completing the *Motorworks* program, have a go at completing this follow-up activity. This activity can also be undertaken without visiting the museum.

Learn about the Ford Model T in the National Motor Museum collection and view a high definition photo on our [Google Arts and Culture](#) page [here](#).



AFTER YOUR VISIT: MOTORWORKS

MOTORING FOR ALL

The Model T illustrates a turning point in motoring history, when cars stopped being a luxury item for the wealthy and became more accessible to the general public. In 1908 the purchase price for a Model T was US\$950, although it fell much lower as Henry Ford developed and refined his production line techniques. Once more people had cars, cities changed dramatically, as people could live further out of town and further away from work, creating suburbs and highways.

Pictured on this page is the Ford Model A, which replaced the famed Model T and was manufactured between 1927 and 1932. From the moment of its debut in December 1927 to February 1929 one million had been sold.

The Model A was considered more physically appealing than its predecessor. It was the first Ford to use the standard set of drive controls: a conventional clutch, brake pedals, throttle and a gear shift. It was also the first car to have a safety glass windshield (glass that holds together when shattered).

THE ASSEMBLY LINE

The Model T became such a popular and affordable vehicle largely because of how it was built.

On December 1, 1913, Henry Ford installed the first moving assembly line for the mass production of an entire automobile.

His innovation reduced the time it took to build a car from more than 12 hours to one hour and 33 minutes.

To efficiently streamline the process, the Model T's assembly was broken into 84 discrete steps and workers were trained to complete just one step. He also hired motion-study experts to make those jobs even more efficient.

ACTIVITY: ASSEMBLY LINE

Have a go at creating your own assembly line in the classroom.

1. Choose something small and simple for your class to build. An origami car like the one [in this video](#) is fun and simple, and has several clear steps.
2. Watch the video or demonstrate the process to the class. Have the students write a numbered list of all the steps involved.
3. After a few practice runs, have your students build their own origami car from start to finish and time them.
4. Then break your class into groups and assign each person a task. Students should sit in a line, and pass the origami car on to the next person when they have completed their step.
5. Have the students built the origami car again but only completing one or two steps each. Time them again and compare with the time taken to complete the task individually.

AFTER YOUR VISIT: HAWKER VANS

After completing the *Hawker Vans* program, have a go at completing this follow-up activity.

This activity can also be undertaken without visiting the museum.

HAWKER VANS

Imagine if your 'local' shopping centre was a few hours' drive away and you didn't even own a motor vehicle. This was the reality for many rural South Australians in the early twentieth century who lived many kilometres away from department stores and supermarkets.

There is evidence that hawkers were active in Australia as early as the 1820s. The first hawkers travelled by foot or with a horse and cart. With the introduction of motor vehicles the trade was transformed and hawkers could carry a greater variety of stock and visit towns more frequently.

The National Motor Museum collection features two vehicles that demonstrate the story of Australia's early motorised hawkers: a 1936 LE30 Dodge and a 1926 Graham Brothers G-Boy.

The LE30 Dodge belonged to Lobethal man Syd Graeber. Syd converted the Dodge into a haberdashery shop on wheels and from 1936 to 1966 travelled the Northern Hills and Murray Basin districts selling fabrics, buttons and shoe heels. Another South Australian hawker, Hassan (Harry) Monsoor migrated from Lebanon to Australia in 1900 at age seventeen. Harry started his hawking days with a horse and cart. In 1926 he upgraded to the Graham Brothers G-Boy and until 1958 roamed the Flinders Ranges selling boots, lollies, stockings and condoms. Syd and Harry journeyed across dirt tracks and were

away from home for weeks at a time, but both hawkers are remembered for their humour and joyful nature.

A hawker van would be an unusual sight today, but they were once the excitement of the town and brought happiness to many people. The two vans at the National Motor Museum are a reminder of a period when hawkers helped South Australia's rural communities survive and thrive.

ACTIVITY: CREATE YOUR OWN HAWKER DISPLAY

Some of the objects carried by Hawkers look very old fashioned and unusual today, because of the huge changes in technology over the past 100 years.

1. Students should bring one or two objects from home that may seem old or outdated by our standards. It will be more fun if the objects are unusual, so other students have to figure out what they are.
2. Work together as a class or in smaller groups to set up your Hawker displays. Students could make signage or even create the side of a vehicle out of cardboard. Leave an open window and decorate the doors with the name of the Hawker.
3. Create the Hawker display and invite other classes to interact, view and discuss the old objects and Hawker practices.



Image: Syd Graeber's 1936 Dodge LE30

EXTEND YOUR LEARNING: MOTORING INNOVATION

The National Motor Museum is home to many historical vehicles that demonstrate innovation and changing technology.

THE OHLMEYER JIGGER

The Ohlmeyer Tourer 'Jigger' pictured below, is a wooden car hand built by Albert Ohlmeyer in 1904.

Albert Ohlmeyer was a jeweller living in Tanunda, South Australia. Albert was a keen motoring enthusiast who owned two motorcycles, a Gritzner and a Minerva. He was aware of some of the four-wheeled vehicle experiments being undertaken around the world and decided he wanted something similar. Sometime around 1903-04 Albert began to construct his "Jigger", or as it is more correctly known, a "buckboard". Buckboards became a popular vehicle in the United States of America around this time, as without a traditional suspension system, their construction was fairly simplistic. Constructed of wood, the main chassis of the vehicle was able to flex to a certain degree, and along with the rubber pneumatic tyres, provided a certain degree of cushioning over the bumps, after which point the vehicle simply bucked; hence the name "buckboard", reminiscent of giving the driver a ride like a stubborn mule. The Jigger was used by the Ohlmeyer family for approximately 20 years until it was replaced by superior technology.

The Jigger is an exceptional example of the ingenuity of Australian pioneer motorists who built their own vehicle designs. The Jigger's 4 ½ hp 'Automotor' engine took it to a road speed of around 32 km/h, which was more than fast enough in an era where roads were barely more than a well-trodden track. Wooden pulleys and flat leather belts transfer power to the rear wheels and control to the throttle.

The Jigger was built with the unique feature of a moveable steering column. Seen resting on the seat in the picture below, the steering wheel and column can be lifted and moved from side to side. This allowed the driver to stand outside the car and steer, which was very useful when steering the vehicle out of a bog or sitch as it would be much easier without the weight of passengers.

ACTIVITY: THE CAR OF THE FUTURE

1. Think about your family car or one you have been in recently. List some of the innovative features that make the vehicle easier and safer to drive.
2. Working in partners or small groups, brainstorm some features you would like to see in an innovative new car. It could be something practical like a built-in pet carseat, or something more futuristic, like hovercraft technology.
3. Working in those same groups, create a poster advertising your innovative new car, complete with an illustration of the car and a summary of its key features.



EXTEND YOUR LEARNING: ALICE ANDERSON'S MOTOR GARAGE

If you are interested in learning more about Alice Anderson, check out the resources below. The task outlined on this page relates to SACE Women's Studies for Senior students.

To research this topic:

- Explore the Alice Anderson's Motor Service exhibition at the National Motor Museum
- Read *A Spanner in the Works: The extraordinary story of Alice Anderson and Australia's first all-girl garage* by Loretta Smith.
- [Listen to Loretta Smith talking about Alice Anderson on ABC radio.](#)

WOMEN AND WORK

The following can be found in the outline for SACE Women's Studies:

Topic 2: Key Issues in Women's Studies

Students apply the gender analysis framework to one issue of study.

Issue 1: Women and Work

Many have argued that work is gendered – not only in determining how it is valued, but also in determining who undertakes particular types of work. Women have always worked, but often this work is not paid for or valued. Systems of national accounting, for instance, do not include the unpaid labour of women, or men, in the domestic context. Also, once in the paid workforce, women often confront forms of discrimination and harassment, or are obliged to juggle domestic and workplace demands.

There are a number of possible approaches to the study of this issue, including the different experiences of women in the workplace in different times and/or cultures.

ISSUES ANALYSIS

Use Alice Anderson's life and experience as a case study for Assessment Type 3: Issues Analysis.

You may like to use some of the questions below to guide your research:

- What era did Alice live in and what was her family background like?
- Is there evidence to show Alice's family members were supportive of her interest in cars and her business ventures?
- Analyse primary sources relating to Alice's life, including newspaper articles and advertisements for her business. What kind of language is used when describing Alice's work? Consider possible bias, and expectations for women in the era.
- Did Alice and her team of mechanics charge the same amount as male mechanics for their service? Why might the amount differ?
- What kind of obstacles did Alice and her team of mechanics face because of their choice of work?
- Who was Alice's role model and why?



Image: Alice Anderson pictured for her chauffeur service

DELVING DEEPER

Check out the History Trust collections online and visit our museums.



history.sa.gov.au
Torrens Parade Ground, Adelaide
(08) 8203 9888



migration.history.sa.gov.au
82 Kintore Ave, Adelaide
(08) 8207 7580



motor.history.sa.gov.au
Shannon St, Birdwood
(08) 8568 4000



maritime.history.sa.gov.au
126 Lipson St, Port Adelaide
(08) 8207 6255



centrefdemocracy.sa.gov.au
Institute Building, Kintore Ave, Adelaide
(08) 8203 9888

Here are some additional History Trust resources to use and share with students.

- History Trust Learning Resources
history.sa.gov.au/learn
- Kahoot! quizzes
history.sa.gov.au/quizzes
- Explore the National Motor Museum collection online
artsandculture.google.com/partner/national-motor-museum
- SA History Hub
sahistoryhub.com.au
- Adelaidia
adelaidia.sa.gov.au

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