

TEACHERS GUIDE - THE GHAN

CURRICULUM APPLICABILITY

The Ghan module is principally applicable to the junior and middle high school curricula for History, Geography and elements of other Human Society and its Environment (HSIE) studies.

The key geographical concepts covered by the module include:

- The characteristics and spatial distribution of environments
- How people and communities modify, and are affected by, the environment
- How physical, social, cultural, economic and political factors shape communities, including the global community

Key historical concepts included are:

- Knowledge and understanding of Australian Aboriginal and Indigenous peoples of the world and the nature of contact
- Knowledge and understanding of significant developments in Australia's social, political and cultural history in the 20th century, and in particular the post-WW2 period
- Use of film as an historical source

For other elements of the HSIE curriculum, topics such as civics, commerce, multiculturalism, work, employment and enterprise are applicable to the module. Key aspects include;

- Australian Identity
- Ideas of self, family, community
- Significant Australians, national symbols, celebrations and popular images
- National heritage: natural and built environments
- Population composition and changes

CONTEXT / BACKGROUND INFORMATION

The battle to unite Australia's northern and southern coasts by rail has been a long one. Although construction of railways north from Adelaide began in the late 1800's, a connection with Alice Springs wasn't achieved until 1929 via Oodnadatta. It then changed to follow a completely new route in 1980. The final leg from Alice Springs to Darwin was only opened at the beginning of 2004.

To incorporate the past and present and illustrate the changes, this module follows a hybrid route from Adelaide to Darwin. The first half of the journey follows the early Ghan route via Marree and Oodnadatta. We then move forward in time to the 1980 route to take us through Marla and on to Alice Springs, before picking up the brand new connection to Darwin.

BRIEF HISTORY

The main reason for building a rail link into the interior of South Australia was to connect the coal mines of Leigh Creek to the industrial centre of Port Augusta. The need for coal to fuel the state's power stations made building the line viable, though it was also used to transport agricultural produce. This railway was then gradually extended northwards through Marree and Oodnadatta, which marked the terminus from 1891 till 1928, and then to Rumbalara in December 1928. In 1929, when a link was eventually constructed to Alice Springs. (There were originally dreams of continuing on to Darwin, but the young state of South Australia would have been bankrupted by the cost.)

This early line was of the narrow gauge variety (see notes below). This was cheap to build, but limited how much load the trains could carry. Its route through potential flood plains also meant that the line was intermittently washed out and required an expensive maintenance program. Being of narrow gauge, there was also no possibility that rolling stock from other states could reach Alice Springs. As the decades progressed, it became clear that the narrow gauge line was becoming unworkable and the need for a new, standard gauge connection was increasing. Years of discussion and debate followed as to where the new route should run and how it was to be paid for.

The eventual decision was made to build a standard gauge railway that branched off the Trans-Australian Railway at Tarcoola. This would avoid the flooded areas and link Alice Springs to other states. The old route between Marree and Alice Springs would eventually be abandoned. However, the increased need for coal necessitated a new standard gauge railway being built from Marree to Port Augusta via Leigh Creek in 1957. For a brief period, complete narrow gauge trains were 'piggy-backed' on standard gauge flatbed cars up to Marree and then rolled off to continue on the old line to Alice Springs.

The line between Tarcoola and Alice Springs was completed in 1980. The missing link to Darwin was then the subject of much controversy and political lobbying. It was felt by many experts that the line would be economically unviable considering its great cost and limited potential return. Plans and negotiations progressed throughout the 1990's, and eventually construction began at Alice Springs in 2001. Modern, automated construction methods meant that the railway progressed rapidly and the inaugural Adelaide to Darwin service departed on February 1st, 2004. Regular services commenced on the 8th of February 2004.

It should therefore be noted that there have been three versions of the train known as The Ghan. The first was the narrow-gauge train that ran from Adelaide via Oodnadatta to Alice Springs. The second incarnation was that which ran on the standard gauge line from Adelaide via Tarcoola to Alice Springs from 1980 onwards and firmly established the train as a tourist route. The third version is the modern luxury train that now operates over the complete link between Adelaide and Darwin.

As mentioned all three versions are amalgamated into this module.

The name "Ghan" is an abbreviation of "Afghan" and refers to the camel drivers who were brought from Afghanistan in the latter half of the 19th century to help with transport through central Australia. The stony deserts and lack of water made horses unsuitable for use as pack animals and so camels were a natural choice. Lacking expertise with camels themselves, the Europeans imported both the beasts and their Afghan handlers to solve the supply issues. These camel 'trains' were a vital lifeline to central Australian residents and instrumental in opening up the country's interior to white settlement. Their importance is remembered in the naming of today's train.

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It may be interesting to note therefore that the concept of immigrants from Islamic nations is nothing new to Australia! Also, that while rabbits and foxes might be more famous examples of feral animals introduced to Australia, feral camels are an equally large problem in some parts of the country.

RAIL GAUGES

The biggest problem with uniting the country by rail was in the choice of gauge: the width between the tracks. From the beginning of major construction programs in the 1850's, the various Australian colonies adopted different railway gauge widths for reasons of tradition, cost and stubborn rivalry. Therefore, despite Federation, the states of Australia tolerated different widths of railway. In the case of some states, they even had multiple gauges operating internally. This meant that interstate passengers, freight and livestock had to change trains when crossing a border or at other internal points where gauges differed. This was a time-consuming and costly process. In 1924 the Commonwealth Government funded a uniform gauge from Sydney to Brisbane which opened in 1932. This was not extended to Melbourne until 1962. The gauge problems came to head during World War 2 when military movements northwards were badly hampered by the need to change trains and the lack of appropriate rolling stock.

The three gauges used in Australia were:

Broad (1600mm or 5'3")

Used in Victoria and parts of SA.

Standard (1435mm or 4'8.5")

Initially used only in NSW and by the Commonwealth Railways between Port Augusta and Kalgoorlie. Later used for certain lines in most states

Narrow (1067mm or 3'6")

Used in Qld, WA, SA and Tasmania. Victoria also built four 2'6" (762mm) 'narrow' gauge lines.

	NARROW GAUGE	STANDARD
PROS	Cheap to build. Cheap to maintain. Lighter, cheaper rolling stock. Can be built to turn sharper corners and climb steeper grades, meaning less detours over rugged country.	Can carry heavier load. Was a European standard. Was compatible with British-designed rolling stock. Smoother and faster travel.

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CONS	Limited load can be carried. Not as comfortable to travel on owing to increased movement.	More expensive to build. Required more surveying and ground preparation.
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Up until the 1930's, a train journey between Brisbane and Perth would have meant changing trains at the border with NSW, the border with Victoria, at Adelaide for the trip to Port Augusta, then again for the standard gauge line to Kalgoorlie and then once more for the final leg to Perth. This obviously slowed travel time and required complete sets of rolling stock for each gauge.

South Australia was perhaps the state most crippled by the 'break of gauge' issue, since it operated all three systems in different places. In the case of the northward rail link, narrow gauge was chosen to expedite cost and construction time. This eventually became a handicap though, as there was no linkage with lines running from other states and it also limited the amount of weight the coal trains could carry. As the state developed and its need for larger amounts of coal increased, the line had to be completely replaced.

INDIGENOUS AUSTRALIANS

It's not hard to notice that most of the film clips used in "On The Rails" don't feature Indigenous Australians at all, or at least only incidentally. This is largely due to the cultural paradigms present at the time the films were made in the middle of the 20th century. At this time, Indigenous people were considered an unimportant and insignificant element of Australian society.

This would have been particularly the case in films such as those we have taken our clips from: films about railways that praised European concepts like technology, industry, modernisation, progress, mineral exploitation and 'taming a savage and/or worthless land'. Film-makers (and audiences) of that time would have felt that these concepts had little to do with Indigenous societies and so not bothered to feature the traditional landowners whose territories these trains traversed.

This absence of Indigenous people in the film clips is worth drawing to the attention of students. The very use of film as an historical record can raise issues of inclusiveness. Whose stories are being told in such a technological medium? Whilst there are plenty of ethnographic pieces that document Indigenous Australian life in Film Australia's archive, these people were often left out of documentaries that strove to portray Australia as a modern and progressive nation.

A possible classroom activity that would parallel the European, modernist perspective of these film clips is to ask students to research the cultures of the Indigenous populations who traditionally lived along the route of the east-west and north-south railways. What tribal areas are represented? How might the railway have affected their lifestyles? To what extent were Indigenous people involved in the building of the railways and the industries which the lines made possible (mining, agriculture etc.)?

Another intriguing avenue of study is to explore similarities the films had with other forms of popular culture of the time, such as literature and song. How were Indigenous Australians regarded? Why were they so often left out of portrayals of Outback life or at least portrayed negatively? For example:

"Some blacks were ready to be hostile if the occasion arose. At first they approached the camps in fear. With a little more boldness they asked for

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'Chewbac'. The early Tea and Sugar train attracted them in hordes, all clamouring for supplies. Hostile blacks bailed up a railwayman's wife at a lonely outstation because she had refused them food, or maybe because she'd given refuge to an outcast woman of the tribe.

On this occasion, the crew cut waddies, waited for the blacks to creep close to the camp and then took to them and chased them off. I've had to use a gun to frighten them."

- From East Goes West by Frank Berkery, 1944.

GENERAL “CHALLENGE” NOTES

There are five types of challenges that the students will encounter along the way. These challenges must be solved before they can progress onto the next ‘stop’. Most of the challenges involve watching a short piece of video first. Some of the videos are directly related to train travel and rail history, whilst others are more concerned with the society and culture of the places en route. The five types of challenge that occur through the module are:

Multiple choice: pick the correct answer from four alternatives.

Hidden word: fill in the correct answers to reveal a word running vertically.

Drop and Drag: pair up answers and questions from a scrambled list.

Jigsaw Puzzle: arrange a broken image into its complete form

Game: Play a simple animated game and reach a minimum score.

At the end of each of the module, students will be provided with a certificate with their name and school. This can be printed off as ‘proof’ of completing the journey.

LOCATION CHALLENGES

1) PORT AUGUSTA

The clip is a newsreel from the 1950's reporting on the opening of a new standard gauge line between Port Augusta and Marree. This replaced the original narrow gauge line along a similar route. The transport of coal was the primary reason for this line being built. The clip also features a demonstration of the piggy-backing system, where narrow gauge trains were loaded onto wider carriages to get them up to Marree, from where they continued on to Alice Springs.

Students will complete a drop and drag challenge matching key vocabulary from the clip with the definitions of those words. The words in the challenge are GAUGE, SURVEYORS, WELDING, FETTLERS, BALLAST.

Suggested discussion areas:

- What were the problems presented by the differing rail gauges throughout Australia?
- What are the pros and cons of the different gauges?
- Why did a new standard gauge railway become required for coal transport?
- How does the way in which news information was presented in the 1950's differ from the way it is packaged today?

Possible classroom or homework activities:

- Use an atlas to examine the old route between Marree and Port Augusta. What towns might have been on the line? What is the topography like?

2) LEIGH CREEK

This clip further examines the importance of rail for transporting coal. This mineral accounts for a large percentage of all freight carried on Australian railways. Although the clip, filmed in the 1960's, makes much of the fact that South Australian coal trains could pull over 5,500 tons of freight, such loads are tiny compared to contemporary locomotives, which can haul many times that amount.

Suggested discussion areas:

- Why is coal so important to industry?
- Why not build the power stations closer to the coal mines and not bother with a railway?
- Why not use road transport?
- What would be the problems in controlling such a long and heavy train?

Possible classroom or homework activities:

- Research some of the statistics about the amount of coal freight carried on Australian railways.
- Research some of the superlative statistics on trains: the longest, heaviest, fastest trains in Australia and the rest of the world. (The iron ore trains that run in Western Australia are particularly interesting.)

3) MARREE

The tiny township of Marree was kept alive by being on the rail route. It provides a good example of how a town can prosper, depending on its proximity to transport links. The clip is a narrative about two men travelling on The Ghan to Alice Springs during the 1970's. It nicely demonstrates the 'make do' culture of central Australia rail travel on the first Ghan, with tuxedoed stewards jumping out in the middle of nowhere to fill up the water tanks, and drivers telephoning ahead from ancient signal boxes to see if the line is clear.

The train between Marree and Alice Springs no longer runs. It has been replaced by the modern route from Tarcoola via Marla.

Students may need to take a few notes to help them with the hidden word challenge afterwards.

Suggested discussion areas:

- What importance did the railway line have for residents of outback properties?
- The train to Alice Springs no longer runs from Marree. What effects do you think this has had on the region and its population?
- How luxurious did the 1970's version of The Ghan seem to be?
- Discuss the hair and clothing fashions of the time.
- What level of safety and technology did there seem to be?

Possible classroom or homework activities:

- Use an atlas to find where Marree is. What other nearby towns would have depended on the trains stopping at Marree?
- If people want to travel to Alice Springs from Marree now, what are their options? If they want to go by rail, estimate how much extra distance it would be.

4) OODNADATTA

For nearly four decades (1891 – 1928), Oodnadatta marked the end of the line from Adelaide. When the connection was finally completed, it proved to be a problematic section of the journey, with the region around Finke particularly prone to seasonal flash flooding. This washed away embankments, tracks and bridges or just submerged them for lengthy periods, making rapid travel impossible.

Eventually this situation became untenable, and when the new, standard gauge track was being planned, surveyors steered well clear of the region. This meant that Oodnadatta lost its rail connection to the outside world and the town became nothing more than an isolated rest-stop on a minor road.

Suggested discussion areas:

- What effects do you think the withdrawal of rail services to Oodnadatta might have had on the district?
- Do you think the decision to move the railway elsewhere was appropriate? Why (not)?

Possible classroom or homework activities:

- Research the rainfall of central Australia. What patterns can be noticed?
- Look at an atlas. When it does rain in the region, where does the water flow to?

5) MARLA

This point is where the chronology and route of this module jump in time and geography. Marla was not on the original route to Alice Springs. It was the standard gauge link of 1980 that made it a rail town.

The clip shows the opening of the new rail link in 1980 and the journey of the 'first' Ghan service. Be aware that this is the 2nd version of the Ghan that ran only as far as Alice Springs. It has now been superseded by the luxury service that runs to Darwin.

Suggested discussion areas:

- What effects would being included on the new rail link have had on a town like Marla?
- The clip shows the new route being opened by a minor member of the Royal Family. What does this tell you about the attitude to Australia's relationship with Britain at the time? If a railway was being opened today, who do you think might be asked to do the honours?
- Why isn't a lack of water a consideration for this new route?

Possible classroom or homework activities:

- Research what towns are on the current rail route between Adelaide and Alice Springs.
- Research what relationship Princess Alexandra has to Queen Elizabeth.
- What VIPs opened the 2004 rail link to Darwin?

6) ALICE SPRINGS

Finally connected to the south in 1929, Alice Springs was the end of the line until 2004. Originally though, it was the overland telegraph line that established this now thriving town.

The clip shows some scenes from the early days of Alice Springs, followed by a multiple choice question about the arrival of the railway line.

The point is made in the “Did You Know?” section that Indigenous Australians are not mentioned in the film as it charts the growth of Alice Springs. Yet the water holes there would have been a major gathering point for aboriginals for centuries. In addition, a sizeable part (about 20%) of the city’s population is comprised of Indigenous people.

Suggested discussion areas:

- Why was the telegraph line between north and south so important?
- What role did camels have in the exploration and settlement of outback Australia? Why were they more useful than horses?
- What industries are important in Alice Springs?
- Would the town have grown as large without the railway connection?
- What sort of freight would the train have been carrying to and from Alice?
- Before the 2004 link to Darwin was built, all freight between there and Alice Springs had to go by road. What differences would this have made to the cost and volume of freight transport?
- Why do you think Indigenous Australians are not really mentioned in the clip?

Possible classroom or homework activities:

- Research the importance of the telegraph line. How did it connect Australian cities to the rest of the world?
- Try and estimate how far the journey onward to Darwin would be by road.

7) TENNANT CREEK

The challenge is a simple video game that has students helping to prepare the buffet car aboard The Ghan. There is no set maximum score they must obtain. It is intended that whilst being fun, this challenge will also get students thinking about what goods might be necessary to supply a lengthy train trip. Note that the game will prompt students to move on if they do spend too long playing it.

Contrast could be made with the way that Indigenous Australians managed to survive in such harsh conditions. How did they feed and water themselves? What skills did they need to perfect in order to live? What could we learn from them? What sort of effects would contact with European culture (and railways) have on their traditional way of life and their “knowledge base”?

Suggested discussion areas:

- What sort of items would be required to look after passengers aboard a long desert train trip?
- What sort of meals might be difficult to prepare in the limited space?
- There are more passengers than there are seats in the restaurant car. How do the operators get around this?
- How did Indigenous Australians survive in these same localities.

Suggested classroom/homework activities:

- Design a menu that reflects the best of Australian cuisine to be served to overseas passengers aboard The Ghan.
- Research Indigenous diets and survival skills in central Australia.

8) KATHERINE

The picture jigsaw puzzle shows a view of the latest Ghan train travelling through a desert landscape. Attention is drawn to the fact that the Australian desert is not just a bare and rocky place, but rather that many different types of vegetation and terrain are in existence. Additionally, the fact that the train in the picture is travelling along a raised levee is evidence that the area is prone to seasonal flooding.

Suggested discussion areas:

- What sort of plants and animals survive well in the desert?
- How might the life cycles of desert plants be adapted to the short periods of rainfall?

Possible classroom or homework activities:

- Choose an Australian desert plant or animal and research the adaptations it has made to an arid environment.
- Research the temperature and rainfall patterns for the Katherine region. Draw a graph to illustrate.

9) DARWIN

The inaugural passenger service from Adelaide pulled into Darwin on February 3rd, 2004, finally linking the city by rail to the rest of the continent. The construction of the rail link was quite controversial, with many rail experts predicting that the line would never be profitable. (They would have preferred the money to be spent on improving east coast rail links between Melbourne, Sydney and Brisbane. These lines would have carried vastly more freight traffic, been more profitable and removed thousands of semi-trailers from the roads.) But the construction of the Darwin link had more to do with political expediency, guaranteeing a lot of votes in the Northern Territory, whose citizens felt that they were not getting their fair share of Federal infrastructure spending.

The clip, filmed in 1981, shows Darwin as a city on the verge of a boom, following the rebuilding after Cyclone Tracy hit in 1974.

Suggested discussion areas:

- Was the building of a railway to Darwin worth the cost?
- What are the pros and cons of building such a railway compared to building more lines between Sydney and Melbourne?
- Do the citizens of the NT get their “fair share” of government money?

Possible classroom or homework activities:

- Research the damage that was done to Darwin by either Cyclone Tracy or the bombing in World War 2.
- Research how the population of Darwin has grown over the last few decades.

After a correct answer for this challenge, the student will have completed this module and will be able to print off a certificate as proof of completing the Ghan journey.