

Aussie
STEM Stars

MUNJED AL MUDERIS

From refugee to surgical inventor

Written by Dianne Wolfer



Teacher Notes

written by

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About the series

Aussie STEM Stars is a fresh and unique series for children and young teens aged 10-13 years that focuses on our Australian STEM heroes. Each book is written by an award-winning children's author and follows the real-life stories of Australia's top scientists and inventors, chosen on the basis of their pioneering work. Themes explored in the series include childhood, school, family and formative experiences, what inspired them to pursue their chosen path, how they persevered in the face of challenges and what they have contributed to science in Australia.

Reason for studying this book

Wild Dingo Press publisher Catherine Lewis is excited about their publication. "These disciplines are more important than ever as we look to our inventors and innovators to solve contemporary problems facing humanity and the planet. Our Aussie STEM Stars series uses narrative non-fiction as a tool for educating children - making it as fun and interesting as fiction books in this market. Our writers are passionate about doing justice to their chosen subjects - and their lives - providing teachers, parents and librarians a wonderful series aimed at encouraging children to develop an interest in STEM at a young age."

About the author

Dianne Wolfer grew up in outer Melbourne, where she made treehouses and imagined she was Silky from *The Magic Faraway Tree*. Other days she was the Muddle-headed Wombat. When she was ten, Dianne moved to Bangkok with her family for two years. After returning to Australia, she studied at Albury High School in New South Wales and then at Melbourne Teachers' College. After graduating, she backpacked through Asia and taught children in remote western Nepal.

Dianne's award-winning books have been published in China, Japan, Poland and the USA, and made into stage plays. She is a bookworm who reads every day. She especially loves animal stories and spent five years researching animal characters in children's literature for her PhD.

Inspiring kindness and imaginative thinking is Dianne's life work. <https://diannewolfer.com>

About Munjed Al Muderis

Professor Munjed Al Muderis is an orthopaedic surgeon, author and human rights activist. He was born in Iraq and became a surgeon during the regime of Saddam Hussein, before fleeing to Australia as a refugee. He was eventually held for nine months at the notorious Curtin Detention Centre in Western Australia. Munjed developed an improved osseointegration prosthetic limb replacement, a new surgery that inserts a titanium implant into the bone and allows patients to recover greater mobility and a certain level of feeling. Munjed's humanitarian work for refugees is equally impressive. In 2020 he was named NSW Australian of the Year. Two books about his life have been published: *Walking Free* and *Going Back*.

Learn more about Munjed's life: <https://www.youtube.com/watch?v=6eEzpnG8LxA>,
<https://www.youtube.com/watch?v=JOIKhUv0DQY>

OUTCOMES

Australian Curriculum

Key focus areas

HASS Stages 2-3

Literacy Stage 2-4

Science Stages 2-4

OUTCOMES

NSW Curriculum

Key focus areas

HASS Stages 2-3

Geography Stage 4

Literacy Stage 2-4

Science Stages 2-4

Before you begin reading this book

Front cover

- What is a refugee? (*Gather information from the students about their understanding before the book is started.*)
- What might a surgical inventor be? (*Gather information from the students about their understanding before the book is started.*)
- Have any students heard of Professor Munjed Al Muderis? Find some images of Munjed and websites which may include interviews or research findings.
- Look at the sketch of Munjed on the front cover. Who has drawn this and why have they drawn him in this way?

Back cover

- Read the blurb. What can you gather about this book from the blurb? Why do we need blurbs for all types of books?

Maps

Have a world map on display in the classroom or in students' books throughout this book study.

- Locate each place mentioned in the book on the map as you come to it.
- Name the region of the world or country that each place is in.
- Describe where these places are in relation to where you live.

Key projects

Key project 1: History – War

Create a timeline of the different wars we have had in the world since 1900. Choose two wars since 1900 to research further and find out how these wars affected Australia and its people. Investigate the ways Australia participated in the war, and the ways it did or did not support refugees.

Key project 2: Refugees in Australia

What do you know about asylum seekers, refugees and migrants who have come to Australia since the World War 2? Is there a difference between a refugee and an asylum seeker? Develop a speech, presentation, blog post or booklet that informs your audience about how refugees come to Australia and why. Structure your text to integrate anecdotes and stories from people like Munjed to make it more meaningful.

You can create a text using this book and other research to teach others about Munjed, OR you can research another person who has come from a refugee background and has also been successful in enjoying a better life and making the world a better place, too.

Check in your library or online to read Najaf's story of his refugee experience: *The Rugmaker of Mazar-e-Sharif* by Najaf Mazari and Robert Hillman.

You can also use <https://newhumansofaustralia.org/?s=iraq> as a resource. From this information find similarities and differences in people's beliefs and values and even clothing who, like Munjed, have left Iraq.

What have we learned about these refugees' experiences of the impacts of war on ordinary people, and the way some asylum seekers are treated? Find some examples to show your viewpoint.

Here are some ideas to start you off:

- on *The Rugmaker of Mazar-e-Sharif*: https://msrogersresources.files.wordpress.com/2013/10/the_rugmaker_of_mazar-e-sharifcathy-lewis-2.pdf
- on *The Happiest Refugee*: <http://www.anhdo.com.au>
- on contributions by refugees to Australia: <https://www.roads-to-refuge.com.au/settlement/settlement-contributions.html>
- on three famous refugees who came to Australia: <https://ras.unimelb.edu.au/refugee-stories>
<https://thriverefugeeenterprise.org.au/stories/>
- <https://www.sbs.com.au/news/refugees-share-personal-stories-to-spark-rethink-of-australian-policy> on refugees' own stories about their experiences: <https://www.refugeecouncil.org.au/stories/>

Key project 3: Refugees in the world

Who are refugees in our world today? We have read about Munjed and his experiences as a refugee because of the war in Iraq. How many other people have fled their countries to live in Australia? Find information about the various countries refugees have come from and why. Display this as a graphic.

Explore why there are refugees, the treatment of them and how we can change this. Consider at least three different ways we could end the situations that create refugees. Is this attainable? Will these solve all the problems related to refugees and asylum seekers? What other problems also need to be solved?

This can be answered in relation to a case study of a person, or of a country which many people have fled. Explore why people leave, why they seek asylum and why the country they enter labels them as refugees and therefore treats them differently from migrants.

Key project 4: How to write biographies

This can be started in many different ways but should culminate in the presentation of a piece of writing, speech or a visual item. This could also be presented as the student dressing up as the person and role-playing them as they 'discuss their own life'.

1. Students choose someone who has made a difference in the world (encourage a positive impact but could also be a negative one) and research.
2. Fill a bag or piece of art with symbols and images to represent that person and share.
3. Depending on the age of students come up with at least one fact to one paragraph under the headings:
 - Childhood
 - Interests and/or hobbies
 - Early career
 - Problems and significant events
 - Where are they now?
 - Why are they famous?
 - What do you admire about them?

Key project 5: Reflection on literature

Students can fill in this table as they read to record their ideas and feelings:

Chapter	How did the chapter make me feel?	Character profile: How did the main characters feel? What did they do?
What real-life events occurred? Use research to find some evidence to show this.	New language used	How has the author made you feel? Think of the language used to create tension, happiness, wonder, anxiety and other emotions.

- What is some new information you learned through reading this book?
- How did your feelings change?
- Did you see the characters change as you learnt more about them?
- What new vocabulary have you learned from this book?

Teaching and learning activities

Chapter 1

- How long ago was 1980? What else happened in that year? Gain some perspective on time passing and the differences between now and then.
- Who was Saddam Hussein?
- Character profile: Build upon this as you read the book. Jot down different people in this biography as you meet them, their character traits, important things they say etc.
- Explore the world map: As you read this chapter, find out where the following countries are and label them on your map: Iraq, Iran, Jordan, Syria, Lebanon, Israel and the United Arab Emirates. Name and locate their capital cities.
- Explore a map of Iraq: Where are Baghdad, the Euphrates River, Ramadi and Basra?
- What do you know about Islam? Do some research to find out more about this religion.
- How would you feel if you were on a holiday and you heard these words: *We must fly home immediately?*
- How does the pitch of our voice change depending on how we feel? *The high pitch of her voice frightens him even more.*
Think of some other ways we use our voice to express our emotions.
- Munjed learns that the ramshackle airport is named after a queen who had died in a helicopter accident a few years earlier. Who is this queen?
- Why do you think there is a box with information about feeling calm in this chapter? Explore some different ways you help yourself to calm down. What other ideas and techniques could you use? Come up with a poster or booklet to place in your classroom for children to refer to when they feel worried.
- Read this descriptive paragraph: *From the bathroom's high window they watch the night sky explode as an eerie dome of anti-aircraft fire spatters the darkness. Every tenth shot is a fiery red indicator, like the eyes of a furious dragon winking in the heavens.*
How else can war be described? Create your own description of what you imagine war to be like.
- Why do they need code words on the radio? How has this been done throughout war history? Explore other coding systems used during war times.

- Abdul Razak encourages anything that stimulates the brain and sparks creativity.

That's one of the things Munjed loves most about his father – the way he encourages Munjed to discover things for himself. Abdul has taught him that it's okay to fail. Failing is another way to learn.

What does Munjed do while the air raids take place and the family need to stay inside more often? Why is being creative important for children and adults? Why does Munjed's father encourage creativity?

Find some quotes and moments in this chapter and throughout the book where Munjed is encouraged to be creative, develop new skills and learn lessons.

Chapter 2

- What is an entrepreneur?
- What is the currency in Iraq? What does it look like? Find some similarities and differences with Australia's currency.
- How is Munjed earning money? What ideas do you have to earn money rather than rely on your parents? Find out what age children in Australia are allowed to have paid work.
- Look back at the task in Chapter 1 about Islam. Did you find out about the Shi'ite and Sunni sects of this religion? In what ways are they different?
- Why do the young boys not care about different religious beliefs? Why is this important to the story?
- How did the paragraphs describing Uncle Salman being frozen to the spot make you feel? Did you want to rush through to find out what happened? Did you read slowly not wanting to know? How did the language create feelings here?
- Explore a timeline of computers as they developed throughout history. Draw up a timeline to find out when and where they were invented, who used them, what they looked like and how they worked.
- What is a superhero? Explore this term and the different ways we can understand what a superhero is. What does Munjed discover about superheroes?

Chapter 3

- What is the game of chess? Have you ever played it? What are the rules?

Play a class game of chess to learn how to play or extend your skills. Look at page 37 and try the different moves Munjed talks about.

- What is a **gracious loser**? Can you think of examples when you have been like this? Or not like this?
- What do the words **virtue** and **truth** mean? Create a poster and brainstorm as many meanings and examples of these words in Munjed's life as well as yours.
- As you read, list different foods and drinks that appear in the book. Find some images and/or recipes for these foods and drinks (*Arabic coffee, kahi with gaymer, pomegranate juice, figs*). You can also research traditional Iraqi breakfast, lunch and dinner.
- What is the War of the Cities? Read up on this to gain a better understanding of how Munjed must be feeling. Throughout this chapter we read how Munjed feels and what his family is going through. Find these emotions and experiences, and create a feelings map about what life is like living in a war.
- What is a **SCUD missile**?
- Why is Munjed fascinated by the Terminator? Read the passage that describes the Terminator on page 33. Using your own descriptive skills, describe the Terminator in your own words.
- What is an **endoskeleton**?
- Is there a movie or a book that has ever left an impact on you? Discuss and compare why we react differently to music, books and movies. Why did this scene from *The Terminator* leave an impact on Munjed? If appropriate, find this scene to watch and see how it makes you feel.
- How did Munjed feel watching his uncle perform surgery? List all the ways he sees this as an incredible feat. Do you find surgery amazing? How? How can something be gruesome yet incredible at the same time?

Chapter 4

- The chapter heading 'Bullies, Bombs and Books' uses alliteration. Once you have read some other chapters, can you create different headings for them that also use alliteration?
- Who are Udai (also spelt, Uday) and Qusay Hussein? What roles did they play in the 1991 Gulf War and in the 2003 Iraq War?
- In this chapter we read that the Hussein brothers are bullies and get away with a lot of things. Why do some bullies get away with being mean or breaking the rules?
- What is the movie *E.T.* about? Why would this movie inspire Munjed to build an 'audacious communications project'?
- Imagine living in a world where there was no television. Look back through the book and list the different activities Munjed would do to alleviate boredom. Do you ever feel bored? What activities do you do when you cannot use devices or television? How do you think you would cope if you were in Munjed's situation?
- Research further into how satellite dishes pick up communication signals.
- Revisit your world map and the map of the Middle East to see where Munjed's university options were.
- Why does the road from Baghdad to Basra is becomes known as 'The Highway of Death'?
- Over pages 48–49 we feel a strong sense of tension. Write down the words that make this section of the book so tense. Explore how words can evoke emotions in books. Write your own piece of writing to evoke tension in the reader, then share it with a classmate.
- How does electricity play a major role in our lives? Maybe you've experienced some hours or days when you experienced a blackout at home or when you've been camping. Write an imaginative piece about living for a day without electricity, what you couldn't do and what you did instead.
- List some random acts of kindness that you can do in your day.
- Who is Khalil Gibran? How do you think this quote helped Munjed? '*Out of suffering have emerged the strongest souls; the most massive characters are seared with scars.*' Research some historical figures who have made a significant impact or contribution in the world in some way to see if this would apply to them.
- What is PTSD? Who might experience this?

- How does the death of Munjed's father affect him? Discuss how Munjed feels about it, but also the legacy his father leaves him with. You can also reflect on this quote: *You are a cog on the wheel of fortune. There will be outside influences, but the one who steers is you.*

Chapter 5

- Create a timeline of the various events that have happened in Munjed's life so far in the book. Add to this timeline as you read further through the chapter.
- Munjed faced an extremely difficult decision when the deserters were brought into the hospital. What are the beliefs and values he had been taught by his family and in his medical training that helped him make his decision?
- Here are two quotes from the Muslim and Christian traditions that people often find useful as guides to the way they should behave towards other people to ensure a respectful relationship:
 - *None of you truly believes until he wishes for his brother what he wishes for himself.*
 - *Do unto others as you would have them do unto you.*

What do they mean? Find quotes from other religions or cultures that have a similar meaning. Rewrite them in your own words.

- Using language to evoke tension, rewrite this scene from pages 58 to 65 but from Munjed's viewpoint (using a first-person narrative).

Chapter 6

- What are checkpoints, and do we have them in Australia? What 'papers' would people going through checkpoints need and why do you think we have such things as 'papers' and passports.
- How important is friendship in times like these? Think back to the different friends Munjed has had throughout this life and the impact they have made on him.
- What is a fake passport? Why is it ok for Munjed to have a fake passport in this situation? When else do people need these?
- *'Goodbye, my son,' she whispers. As he takes his seat, he wonders whether he'll ever see his mother again.*
Do you think Munjed had any other choices in his situation? Would you leave your country if you had to?

- Many people have to escape their countries for different reasons. What are some other ways people around the world have escaped threats or difficulties in their home country?

Chapter 7

- What is the purpose of checks at the airport?
- Where is Kuala Lumpur? Where is Jakarta? Mark these places on your world map.
- What is a **people smuggler**? What do they do? Can they be helpful or harmful? How? Do people smugglers still exist today?
- What might a dilapidated hotel look like? Describe or draw what you think Munjed had to stay in while he was waiting for the unknown.

Chapter 8

- Why would a young man scowl and mutter a threat at a woman wearing 'western clothes'?
- Many people live in conditions where they are crammed into small rooms or in refugee camps as they wait for a better life. Is this right? Is it possible to stop this from happening? If so, how can countries stop it?
- How many people would comfortably fit in a 15-metre boat? If 65 people are to live on this boat, how will they fit? Calculate what the area would be for each person if the boat were 2.5 metres in width. Would there be enough room to lie down if you were an adult?
- How many days does a boat trip take from Jakarta to Christmas Island?
- How did you feel when you read the section where the Australian police stepped on board and told the refugees they were safe (on page 94)?
- Discuss the map between Chapters 8 and 9. How long has this journey taken? What help has Munjed had? Add some dates and details to a map of your own.
- *Little does he know.*
What does this mean? Predict what you think is going to happen in the next chapter.

Chapter 9

- Look up some images of Christmas Island to find out what you might see when you first arrive, how you might feel at this sight and what you might hear.
- Find out more about the process used to find out about asylum seekers who have just arrived on the island. Why do they need a tag?
- Read over the first few days Munjed spends on Christmas Island. What are the new sights, sounds and tastes he experiences? Why does Munjed find honey chicken strange? Why is the mullah not happy with cornflakes?
- The red crab migration is an annual event on Christmas Island. Find some videos to see what happens, and how humans and crabs have made adaptations to keep out of each other's way – or not! (It doesn't always work, like the scene in the book where the doctor drives over the crabs.)
- How is sport an activity which unites people on Christmas Island? How does it do this in the world?
- Who are the federal police? Who are Australasian Correctional Management? What is the difference in their roles and in their attitude towards the refugees? Why do you think there is this difference?
- *They drive across a desolate landscape towards shed-like buildings behind a tall wire fence that is topped with razor wire. The dirt is brownish red with clumps of scraggly bushes here and there.*
How does this description make you feel?
Which words made you feel this way and why?
- On page 109, Munjed meets people who have already been at Curtin Detention Centre for a while. They ask him if he has seen their loved ones. List the types of questions they are asking. List the emotions they are feeling. Discuss why these people feel this way.

Chapter 10

- Using a map of Australia or Western Australia, find out where Curtin Detention Centre was located. Discuss the reasons why the government might have located the centre there.
- On Christmas Island Munjed had a tag, and now at Curtin he has a number written on his arm. Why is this done? What notorious example from history does this remind you of?
- *'You're not welcome here,' she says in a cold voice.*
Why is this line so pertinent to Munjed's story? What do you think her purpose was?

- Learn more about the Refugee Convention which Australia signed in 1954. Does Australia act in a way that follows the convention?
- Express your own idea of what life in a detention centre is like through a sketch, poem or first-person narrative. Use the descriptions in Chapter 10 to help you.
- Munjed speaks to a man called Philip Ruddock. What was his position or role at the time they spoke?
- The events in this chapter drew world media attention to what was happening in an Australian detention centre. What other events have happened in detention centres run by the Australian government to make the world know what is going on?

Chapter 11

- Did the nurses' action help people to realise what was happening in detention centres? Why?
- Munjed found the jails where he spent some time had better condition than the detention centre. Can you Why do you think that was?
- What do Australian jails look like inside and out? Explore these facilities and how people live in them.
- What do you think Munjed saw as he travelled from the detention centre to Melbourne? Using a map and looking at the roads crossing Australia, imagine the journey Munjed took and how he felt along the way. Write down what his itinerary could have been.
- How do people bully others in different ways? Discuss what bullying can look like, and how it can be damaging even when it is not always obvious.

Chapter 12

- What was Munjed's first job in Australia? Would you take on a job like this if it meant realising your dream? Why or why not?
- In the book Munjed reflects on what Garry Kasparov, the Russian chess grandmaster said: *One does not succeed by sticking to convention.* What does this mean for you? How can this quote carry you through life and the choices you will face?
- What does the word **bittersweet** mean? How can it be used?
- Munjed has a few good suggestions for what the Australian government can do for refugees. Have any of these ideas been taken on?

- What does the word **osseointegration** mean?
- Who are Munjed's first patients? Why was it important that these people were able to trust his new ideas?
- Why is it important for Munjed to return to Iraq? What are the emotions you think he might be going through as he prepares to leave?

Chapter 13

- This is an article written by Adam Baidawi. How does it paint Munjed? What else can you learn from this article?
<https://www.gq.com.au/success/opinions/surgeon-returns-to-baghdad-healing-wounds-in-iraq/news-story/a390a6f15495c43c13503baec83cd12f>
- What is the moral problem for Munjed in his visit back to Iraq? Would this also be an issue for you? How can the government do this when there are many other people in need?
- Many people with amputations do overcome their disability and contribute to society in a diversity of careers from building to media to politics to sports to teachers and lawyers. Can you find out about 5 people working in different areas who have overcome an amputation to succeed.
- What is an Australian of the Year? Read about Munjed and his award. Who else has received this award for scientific achievements in the last 5 years?

Further literacy and thinking activities

Students should work through the following comprehension strategies at their own pace. Each of the strategies not only deepens students' comprehension skills but also allows the teacher to explicitly teach skills and monitor the progress of each student. The strategies are drawn from collaboration between Learning and Teaching Directorate, the NSW Department of Education and the English Teachers Association of NSW.

<p>Understanding</p> <p>Students analyse texts and in their responding and composing explain information and ideas for particular audiences and purposes. They use their knowledge of texts to make generalisations about how texts work.</p>	<p>What is your understanding of the situation in Iraq and Munjed's family's decision to stay? Why do people choose to stay in countries that are experiencing war? Explore how the Iraq-Iran War started and why people had to stay in Iraq.</p> <p>Find out the dates when major events took place and what life is like in Iraq, Iran and Kuwait now.</p> <p>Do you think these events will occur again?</p> <p>What is the role of a surgeon? Build up your vocabulary of language that surgeons use when studying and operating. What are the attributes needed to be a surgeon? How does the practice of surgery differ between countries, or is it the same worldwide?</p>
<p>Engaging personally</p> <p>Students respond to and compose texts reflecting their widening world. They identify ways in which their own experiences, perspectives and contexts influence their responses.</p>	<p>Choose some parts of the book that make you</p> <ul style="list-style-type: none"> - proud to be an Australian - ashamed of being an Australian - inspired to learn more - believe in yourself - inspired to create, play games and do sport rather than be on a device!

<p>Connecting</p> <p>Through responding and composing students make connections between information, ideas and texts. They compare texts to understand the effects of different choices of language, form, mode and medium for various audiences and purposes.</p>	<p>Why do you think Munjed was chosen to be one of the people included in this Aussie STEM Stars series?</p> <p>What defines this story and makes it stand out in the series?</p> <p>Is it possible to compare the three STEM superstars to find how they all play important roles in science?</p> <p>As you read the other stories in the series, are there similarities and differences among the three STEM stars that have led to their success in their fields? What do they all have in common?</p>
<p>Engaging Critically</p> <p>Through responding and composing students explore the different ways texts can be interpreted. They identify ways in which composers position the audience to accept particular views and perspectives and make judgements about these.</p>	<p>What other texts are there that teach us about the lives of refugees? Create a list of books and articles that also address the refugees' lives.</p> <p>Discuss the various ways these books, articles, movies and opinion pieces portray refugees. What do they tell us about who refugees are, where they come from and how they are part of our world?</p> <p><i>(Ask students to compare and contrast how different opinions can shape how we understand who refugees are and how we react to them when they live in our cities, arrive on boats or cry for help from detention centres or in camps.)</i></p> <p>Give examples from these texts to show how they make us feel towards this ongoing issue.</p> <p>Consider this question: Why is it important that we learn about Munjed's upbringing and early life before we learn about what he is doing now and the fact that he was an asylum seeker?</p>
<p>Experimenting</p> <p>Students use, adapt or subvert particular textual conventions across modes and media to experiment with a range of meanings and textual concepts.</p>	<p>Choose a section of the book where Munjed had to go through a difficult experience (hiding in the toilets at the hospital, driving through war zones or even on the boat to Christmas Island).</p> <p>Rewrite one of these in the first person, imagining how Munjed felt, what may have run through his head and what he would have seen.</p>

Reflecting

Students begin to personalise their metacognitive processes, identifying their own pleasure and difficulties in responding, composing and learning. They are able to plan and monitor their work, articulate their own learning processes and begin to assess which learning processes may suit them and will suit particular tasks and why.

(Students complete teaching and learning activities throughout the chapters but are given the opportunity to share and reflect on their responses.

Encourage students to discuss ideas and even change their responses once they have listened to others.)

Extension questions for further thinking

Provocative question

Do we need to have an award for Australian of the Year? Find out more about these awards and the reasons they have been created, to help you answer this question. Who are the judges and what criteria do they use? Do you think they are fair – are there people who miss out who may be making a contribution in ways that might not be recognised?

What other awards are given to Australian citizens annually to honour or mark the contribution they have made to Australia in some way?

Attribute listing

How do we define who is an Australian?

Paradox

Adversity is needed to inspire change. Is this true?

Discrepancy

What would the world look like if there were no wars or refugees? Would we be better off in every way? Explore this from different perspectives.

Elaboration of outcomes to the Australian Curriculum

Science

Stage 2

Science involves making predictions and describing patterns and relationships (ACSHE050, ACSHE061).

With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment (AC SIS054, AC SIS065).

Stage 3

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083, ACSHE100).

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS086).

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE081, ACSHE098).

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS103).

Stage 4

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available (ACSHE119, ACSHE134).

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures (ACSHE223, ACSHE226).

People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE121, ACSHE136).

Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (AC SIS124, AC SIS139).

Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (AC SIS125, AC SIS140).

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures (ACSHE223).

HASS

Stage 2

Diverse communities and places and the contribution people make

How the community has changed and remained the same over time and the role that people of diverse backgrounds have played in the development and character of the local community (ACHASSK063).

Sequence information about people's lives and events (ACHASSI055).

Stage 3

Australia in the past and present and its connections with a diverse world

Sequence information about people's lives, events, developments and phenomena using a variety of methods including timelines (ACHASSI125).

The contribution of individuals and groups to the development of Australian society since Federation (ACHASSK137).

Stories of groups of people who migrated to Australia since Federation (including from ONE country of the Asia region) and reasons they migrated (ACHASSK136).

Literacy

Stage 2

Discuss texts in which characters, events and settings are portrayed in different ways, and speculate on the authors' reasons (ACELT1594).

Draw connections between personal experiences and the worlds of texts, and share responses with others (ACELT1596).

Make connections between the ways different authors may represent similar storylines, ideas and relationships (ACELT1602).

Discuss how language is used to describe the settings in texts, and explore how the settings shape the events and influence the mood of the narrative (ACELT1599).

Plan and deliver short presentations, providing some key details in logical sequence (ACELY1677).

Plan, rehearse and deliver presentations incorporating learned content and taking into account the particular purposes and audiences (ACELY1689).

Use comprehension strategies to build literal and inferred meaning and begin to evaluate texts by drawing on a growing knowledge of context, text structures and language features (ACELY1680).

Use comprehension strategies to build literal and inferred meaning to expand content knowledge, integrating and linking ideas and analysing and evaluating texts (ACELY1692).

Stage 3

Clarify understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a point of view (ACELY1699).

Plan, rehearse and deliver presentations for defined audiences and purposes incorporating accurate and sequenced content and multimodal elements (ACELY1700).

Navigate and read texts for specific purposes applying appropriate text processing strategies, for example predicting and confirming, monitoring meaning, skimming and scanning (ACELY1702).

Make connections between students' own experiences and those of characters and events represented in texts drawn from different historical, social and cultural contexts (ACELT1613).

Analyse and evaluate similarities and differences in texts on similar topics, themes or plots (ACELT1614).

Identify, describe, and discuss similarities and differences between texts, including those by the same author or illustrator, and evaluate characteristics that define an author's individual style (ACELT1616).

Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for defined audiences and purposes, making appropriate choices for modality and emphasis (ACELY1710).

Analyse how text structures and language features work together to meet the purpose of a text (ACELY1711).

Use comprehension strategies to interpret and analyse information and ideas, comparing content from a variety of textual sources including media and digital texts (ACELY1713).

Stage 4

Identify and explore ideas and viewpoints about events, issues and characters represented in texts drawn from different historical, social and cultural contexts (ACELT1619).

Reflect on ideas and opinions about characters, settings and events in literary texts, identifying areas of agreement and difference with others and justifying a point of view (ACELT1620).

Recognise and analyse the ways that characterisation, events and settings are combined in narratives, and discuss the purposes and appeal of different approaches (ACELT1622).

Create literary texts that adapt stylistic features encountered in other texts, for example, narrative viewpoint, structure of stanzas, contrast and juxtaposition (ACELT1625).

Use comprehension strategies to interpret, analyse and synthesise ideas and information, critiquing ideas and issues from a variety of textual sources (ACELY1723).