TEACHERS' RESOURCES

RECOMMENDED FOR
Upper primary/lower secondary (ages 8+)

CONTENTS

KEY CURRICULUM AREAS

- **Learning areas:** Science, Geography, and History
- **General capabilities:** Literacy, Critical and Creative Thinking, Personal and Social Capability, Ethical Understanding, Intercultural Understanding
- **Cross curriculum priorities** Sustainability

REASONS FOR STUDYING THIS BOOK

- Investigate scientific, historical, geographic, civic and economic concepts and ideas
- Develop critical and creative thinking

THEMES

- Biological sciences
- Chemical sciences
- Earth and space sciences
- The nature and development of science
- Geography
- Water in the world
- The making of the modern world
- Prehistory and ancient history
- Discoveries and Inventions
- Human and natural impact on the environment
- Primary and secondary sources

PUBLICATION DETAILS

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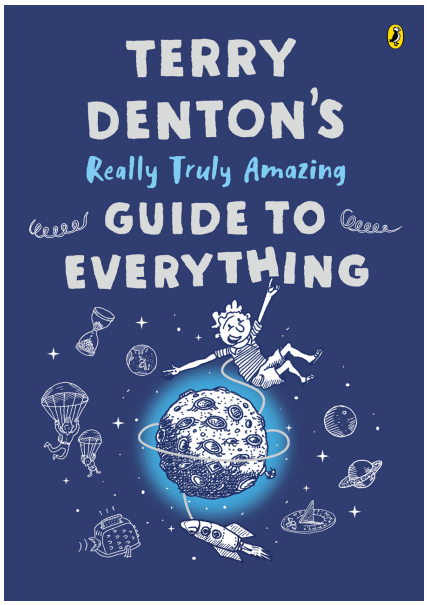


Terry Denton's Really Truly Amazing Guide to Everything

Terry Denton

SUMMARY

A mini book of facts packed with maximum humour!

Professor Terry Denton talks you through all you need to know about Earth, Life, the Universe and EVERYTHING (almost).

Sure to engage any reader, this is a funny, fascinating whistle-stop tour of the history and science of the Universe, life on Earth, the ins and outs of biology, geography, geology and the weather, how life evolved and how it works, and how people use the forces of nature around us to create amazing things. There's even a chapter on the mysteries of time.

Get ready to laugh and be amazed at the Universe around you and within you.

An fun and funny read, filled with Terry's trademark humour, cartoons and much-loved characters like Bird and Horse, cheeky monkeys and a giant spider too. Also featuring detailed, labelled diagrams and infographics on the subjects it covers.

Perfect for the classroom – particularly relevant to the National Curriculum Year 4 to Year 6 Science. A broad overview that explores Science and Geography at each year level. And sets readers up for the topics that will be explored in detail at the Year 7 and 8 level. Does for Science what Terry and Alison's *Upside-down History of Down Under* did for Australian History.

There are very few books out there that make science engaging and fun and encourage kids to go further and engage with specific areas.

An excellent introduction to science concepts and terms. Each term and concept is defined either explicitly or in context at first mention. The conversational tone of the definitions encourages kids to engage with them, rather than skip over, and all concepts come together in Chapter 5 The World We Made, which discusses how discoveries and inventions changed human existence and created the modern world.

The text is structured so that the reader builds on knowledge gained in previous chapters.

3-6 Curriculum topics covered

Science
Life cycles – animals, plants
Day and night, seasons
Human and natural impact on the environment Force
Creatures and their environments
Solar System
Reversible & irreversible changes
Energy transformation
Natural disasters

Geography
Main climates of the world
Types of natural vegetation
Impact of floods, bushfires

This might also be useful as an entry level text for students who need encouragement in Science, Geography and some History subjects in the secondary school classroom.

7-8 Curriculum topics covered

Science
Biological sciences:
Classification helps organise the diverse group of organisms
Interactions between organisms, including the effects of human activities can be represented by food chains and food webs
Chemical sciences:
Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques
Earth and space sciences:
Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon
Some of Earth's resources are renewable, including water that cycles through the environment, but others are non-renewable
Change to an object's motion is caused by unbalanced forces, including Earth's gravitational attraction, acting on the object
Nature and development of science:
Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available
Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures

Geography
Water in the world:
Classification of environmental resources and the forms that water takes as a resource
The way that flows of water connects places as it moves through the environment and the way this affects places
The nature of water scarcity
Place and liveability:
Factors that influence the decisions people make about where to live

History
The ancient world:
The theory that people moved out of Africa between 120 000 and 60 000 years ago and migrated to other parts of the world, including Australia
The evidence for the emergence and establishment of ancient societies (including art, iconography, writing tools and pottery)
Key features of ancient societies (farming, trade, social classes, religion, rule of law
The ancient to modern world:
Key features of the medieval world (feudalism, trade routes, voyages of discovery, contact and conflict)
The emergence of ideas about the world and the place of people in it by the end of the period (such as the Renaissance, the Scientific Revolution and the Enlightenment)

The making of the modern world:
The nature and significance of the Industrial Revolution

ABOUT THE CREATOR

Terry Denton has written or illustrated a vast number of amazing books, including the world-famous Treehouse series (with Andy Griffiths) and the science and history picture books *Moonwalkers*, *Jandamarra* and *Boomerang and Bat* (with Mark Greenwood).

He has created three non-fiction history books for middle readers with Alison Lloyd, including *Upside-down History of Down Under*, which was the winner of the Young People's History Prize in the NSW Premier's History Awards.

AUTHOR'S INSPIRATION

Most of us know a LITTLE BIT about a LOT of things.
Or a LOT about NOT MANY things. But I know QUITE A BIT about ALMOST everything!
I'll admit, there's SOME stuff I know nothing about.
Stuff like make-up and fashion, car repair, flying a plane, open-heart surgery, closed-heart surgery and gorilla training . . .
But I looked all the OTHER STUFF up.
And I think you'll agree that it's all VERY interesting.
In this book you will learn about:
THE UNIVERSE, which is very, very, very, very, very, very big. It has billions of huge round things moving in (sort of) circles around billions of other even huger round things.
PLANET EARTH, which is also very big
and full of flaming molten iron.
Yet somehow it doesn't burn up.
LIFE on Earth,
including weird animals like birds and horses,
and bugs and teeny weeny bacteria,
most of which are trying to eat you.
The HUMAN BODY and how the parts work . . . or don't work. Or epically fail.
All the COOL STUFF that humans invented
and made with their brainy brains and fingery hands.
There's even a whole chapter about TIME,
except it's complicated, and I don't understand any of it. And after I have explained it, neither will you.
Enjoy!

KEY STUDY TOPICS

Biological sciences

- https://education.abc.net.au/newsandarticles/blog/-/b/3308353/curious-kids-how-do-wounds-heal

  Can you remember a time when you were injured and your body had to repair itself? Using the information in the body section of the book (Chapter 4) and the resource above, write a story from the perspective of your immune system explaining what it did.

- https://education.abc.net.au/newsandarticles/blog/-/b/2911460/curious-kids-why-does-my-snot-turn-green-when-i-have-a-cold

  Read the section on viruses and the immune system (p168-169). Draw the grosses picture you can of yourself sneezing. Using the information above turn your drawing into a diagram explaining why snot is green.

- https://education.abc.net.au/home#!/media/1496259/in-digestion

  Draw yourself shrunk down with Bird and Horse in their little craft (p147) and draw yourself exploring the digestive system (include labels) (p163, p164-165). View the resource above for more inspiration. Now draw what happens if the body doesn't like it and you get vomited back up!

- https://education.abc.net.au/home#!/media/2622293/the-science-of-smell

  Read the section of the senses (p156-157) and watch the video above. What is your experience of smell? Do you have positive or negative feelings associated with smells? Why do you think that is?

- No one believed the first people who figured out that disease could be spread by tiny germs too small to see. Read the section on viruses (p189, p168-169), and write a persuasive speech convincing everyone why it's true and what the benefits are of knowing about viruses and how to fight them and protect yourself from catching them.

- At the moment everyone is trying to find a vaccine for Covid-19. Read the page on medicine (p189). What is a vaccine and how does it work? Research one serious illness that used to kill thousands of people in Australia that is no longer

a problem because of a vaccine. Present what you have learnt as an information text.

- Many people didn't like the idea that evolution was real (p75-81). They didn't want to be related to gorillas. As a class, brainstorm the kinds of arguments that people might have used to tell Darwin he was wrong, and Darwin's possible responses. In groups of three act these out as a TV interview with Darwin and his opponent.
- https://education.abc.net.au/newsandarticles/blog/-/b/3539602/curious-kids-why-is-my-dog-so-cute

  Read the section on the evolution of dogs (p78-79), survival of the fittest (p86-87) and the section on neurotransmitters (p158). Then read the resource above. Why do you think it might be useful to find our own dog cuter than a strange dog, or more cute than a wolf? Why do you think that dogs might have evolved to look cute to humans? Do you think it was natural selection or deliberate breeding? Write a piece explain this to your dog.
- https://education.abc.net.au/home#!/media/2806409/interact-with-these-minibeasts-

  Choose your favourite mini-beast, draw a diagram labelling their body parts and categorise them based on the descriptions of animal types in the book (p111-119). What adaptions do they have that might have helped them survive in their environment?
- Did you know that bacteria helps us to make cheese (p188)? What is your favourite cheese? Look up how it is made from milk and draw a life of the cheese similar to the infographics in the book about the egg and the tomato (190-191). As long as the labels are correct the illustrations can be true or funny!
- What area of Australia do you live in? Research the local dinosaurs, megafauna and native animals.

Chemical sciences

- Read about the discovery and invention of penicillin (p169, 189). Visually tell the story as a humourous cartoon, in a series of 12 Terry Denton-style illustrations.
- https://education.abc.net.au/home#!/media/1589918/a-mini-chemistry-set-in-a-stick

  Read the section on combustion (p51) and energy (p196-197, p210-211). Watch the resource above and write a flow chart showing what is happening when you creak a glow stick and produce light through a chemical reaction.

Earth and space sciences

- Make a quiz game of true/false or multiple-choice questions using space and universe facts described in the book (Chapter 1). Test your friends to see who remembers the most accurately.
- Was there something that surprised you about space and the universe in the book (Chapter 1)? Write a reflection piece describing what you thought you knew and what you learnt and what you would still like to know.
- https://education.abc.net.au/home#!/media/3604611/science-years-5-6-with-mrs-carmeli-earth-and-space-the-solar-system

  What is your favourite planet in the solar system (p16-17)? Make a scale drawing of that planet and where it fits in the Solar System. Design your own rocket to travel there and a futuristic space suit that would let you visit the surface.
- What was most interesting to you about the space exploration timeline (p24-25)? Where do you think we will be in 100 years?
- Is there an ethical dilemma around sending animals to space and using them for experiments (p24-25)? Write a persuasive text with reasons to convince someone of your answer.
- https://education.abc.net.au/newsandarticles/blog/-/b/3293114/curious-kids-can-a-black-hole-affect-earth-in-the-future

  Read the section on black holes (p10-11)and write a science fiction story about what would happen if a black hole formed close by. See the resource above for more information.
- Look at the section on static electricity (p58). Write a procedural text on how to zap your friend!
- https://education.abc.net.au/home#!/media/2829805/how-to-name-a-cyclone

  Research a famous cyclone (p56). Write a newspaper article with a headline. If you could name your own cyclone, what would you call it and why?

The nature and development of science

- The internal combustion engine (p204) could not have been created without a number of other important discoveries, inventions and new materials (Chapter 5). Choose eight examples, starting with 'learning to make fire' and create a timeline.
- Modern buildings could not have been created without a number of other discoveries, inventions, new materials and changes in human behaviour (Chapter 5). Choose eight examples, starting with 'people inventing agriculture and setting in one place', and create a timeline.

Geography

- People used to believe that the Earth was flat. Why do you think they thought that? Write a dialogue between yourself and someone who lived at that time, arguing each person's evidence for their belief.
- Find the world map and mark the places you have been to or would like to go to. Now try to mark those places on the map of Pangaea on page 30 (the super continent).
- Was there something that surprised you about the geological history of our planet in the book (Chapter 2)? Write a reflection piece describing what you thought you knew and what you learnt and what you would still like to know.

Water in the world

- https://education.abc.net.au/home#!/digibook/618210/un-year-of-h2o-cooperation

  Read the section on water (p38-43). Why do you think water and drought is a particular worry in Australia? Look at the resources above and using the TEEL paragraphing method discuss what we need to do to ensure we have enough water to survive.

The making of the modern world

- Which of the empires (p177-180, Chapter 6) mentioned in the text in the most interesting to you? Use primary sources to find quotes, facts and pictures relating to that empire. Compile these into a collage or poster that portrays what you find most memorable.
- Discuss the fact that BC dates run in a different direction from AD dates, in that the larger the number the further back in time it is (p180). Imagine you are explaining this concept to a class and prepare a three-minute speech. Use the white board to help show how it works.
- Make a table comparing life in a time covered in this book with now. What did transportation, homes, food, entertainment, clothing and jobs look like then, compared to now?
- Look at the time zones map on pages 222 and 223. What time is it Australia when it's breakfast time in Mexico? Convert that time to 24 hour time.

Prehistory and ancient history

- Examine the evolutionary timeline from the book (p70-71) and the human history/giant spider timeline (p228-231). Choose an early period of history that interests you and construct a timeline from research, including funny drawings to keep it interesting.
- Was there something that surprised you that you learnt about ancient human history in the book? Write a reflection piece describing what you thought you knew and what you learnt and what you would still like to know.
- Think about the invention of the idea of planting crops rather than going out to look for food (p102-103). Using the TEEL paragraphing method write a short persuasive text explaining why it would benefit the community to do this.

Discoveries and Inventions

- Recreate an scientific discovery from the book in a video. Possibilities include live action, paper cut-out characters, 2D drawings or stop-motion animation.
- Make a tin can phone based on the instructions in the book on pages 212 and 213.
- Choose a memorable event or discovery from the book. Imagine you are watching or involved in this event from one person's perspective. Write a series of tweets (140 characters or less) that this person could post as the event unfolds, describing what is happening and their reaction. Don't forget the hashtags!
- Choose a memorable scientist or inventor from the book. After doing some further research,

create a Facebook profile for them. Include sections for personal information, friends, location check-ins, pictures and a status update or two.

- Imagine you are responsible for choosing five famous scientists to win the Best of All Time Nobel prize. Who would you choose? Explain the reasons for your selection.
- Create a piece of art to reflect on one of the stories of a discovery or invention that changed humanity and how it makes you feel.
- What would life be like without one of the significant discoveries or inventions of the past. Write a short 'alternate' history story about what life would be like now without it.

Human and natural impact on the environment

- https://education.abc.net.au/newsandarticles/blog/-/b/3477818/curious-kids-what-is-needed-to-tackle-the-climate-emergency-and-who-is-responsible

  Answer the question, 'Are we (mostly) looking after our planet?' (p63) Watch and read the resources above. What would we need to do to ensure the answer is yes?

- https://education.abc.net.au/home#!/media/2440035/how-will-fire-change-the-climate-

  Read the sections of combustion (p51), the section of bushfires (p57) and the section of greenhouse gases and photosynthesis (p50, p52-53). Combustion is big cause of greenhouse gas and fire burns down forests. How might fires create more problems for the environment? Watch the resource above for more information and write an information report explain your findings.

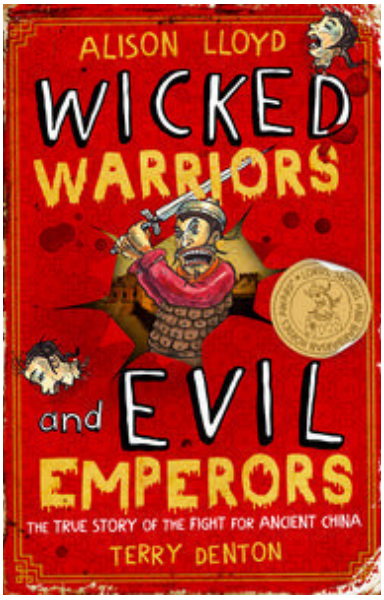
Primary and secondary sources

- Discuss the difference between primary and secondary sources (p231). Identify the information in one chapter as either a primary or a secondary source.
- What are the benefits and weaknesses of a primary source? What are the benefits and weaknesses of a secondary source?
- Use primary sources to find quotes, facts and pictures about a memorable person you have read about. Compile these into a poster that portrays what you find memorable about them.
- Imagine yourself interviewing a scientist or inventor mentioned in the book. Write a series of questions and answers, drawing on primary sources where possible. See if you can find quotes from them to answer your questions.
- Construct a personal timeline of your life, focussing on important historical events that have happened since you were born.
- Read the time capsule section of the book (p235) and create one of your own.

Writing and illustration

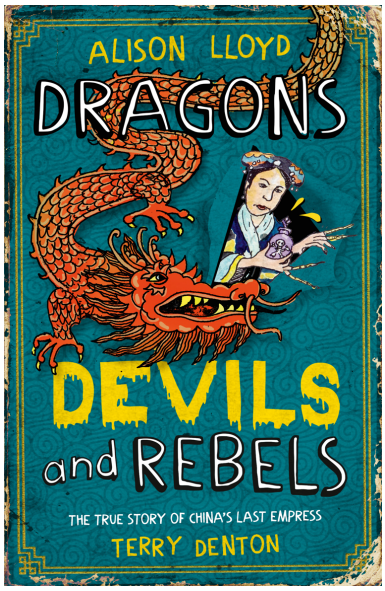
- Choose an event from the book where at least two people were involved. Create an imaginary exchange of text messages between them. You may like to follow the event as it happened or imagine that different decisions were made to change the outcome.
- What does the cover tell you about the content of the book?
- Have you read another book about science? What is different about the voice and tone of this book? How are the books different?
- How does the book's title relate to its content? What does it refer to? Suggest another title for this book.
- Recreate one of the interactions between Bird and Horse or any other characters from the book as a video. Possibilities include live action, paper cut-out characters, drawings or stop-motion animation.

FURTHER READING FROM PENGUIN RANDOM HOUSE AUSTRALIA



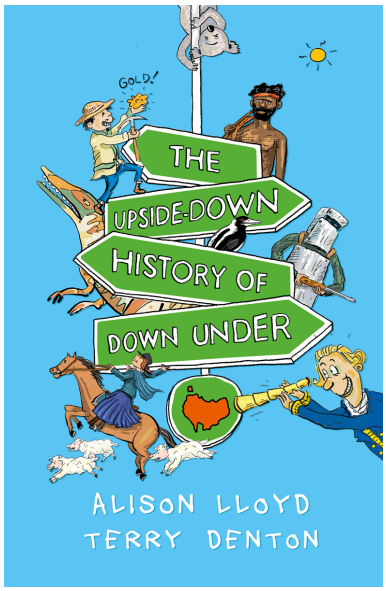
Wicked Warriors and Evil Emperors: the true story of the fight for ancient China by Alison Lloyd and Terry Denton

For anyone who likes their history funny, gruesome, action-packed and thrilling – the true page-turning story of China's first emperor.



Dragons, Devils and Rebels: the true story of China's Last Empress by Alison Lloyd and Terry Denton

When an unknown girl marries the Emperor of China, can she take control and stay in power? Could you? Imagine you were faced with: Dragons, Emperors who had run China for two thousand years, Devils, strange foreigners invading with guns and ships, and Rebels, Chinese bandits and warriors with supernatural powers . . .



The Upside-down History of Down Under by A Lloyd and Terry Denton

The true story of Australia starts with a piece of land that went for a swim. About 200 million of years ago it floated away from Africa. Very, very, slowly. It was home to dinosaurs and giant animals, then the first Australians showed up and got comfortable.
And for a long time this wild and wonderful land was a mystery to the rest of the world. Until the English decided to make it the biggest jail ever . . .

Funny, heroic and tragic – the story of our country from prehistory to federation (1901).

ORDER FORM

TITLE	AUTHOR	ISBN	SCHOOL YEAR	RRP	QUANTITY	TOTAL
Terry Denton's Really Truly Amazing Guide to Everything	Terry Denton	9781760898922	8+	$19.99		
The Upside-down History of Down Under	Alison Lloyd and Terry Denton	9780143788669	8+	$24.99		
Wicked Warriors and Evil Emperors	Alison Lloyd and Terry Denton	9780143786887	10+	$17.95		
Dragons, Devils and Rebels	Alison Lloyd and Terry Denton	9780143309048	10+	$17.99		
DK Children's Encyclopaedia		9780143795049	8+	$49.99		
Do You Dare: The Bushranger's Boys	A Lloyd	9780143307563	8+	$14.99		
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