



MARS

AWAKENS

HM WAUGH

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Recommended for: 10–14 years old

Themes: Space exploration, survival, adventure, courage, conflict, environment, aliens

Applicable to learning areas: English language, literacy and literature and Science (especially STEM)

Summary

Raised in rival colonies on Mars, each long ago abandoned by Earth, Dee and Holt have been brought up to hate even the idea of each other. But when a mysterious object crash-lands on a far-flung plain, they are both sent to investigate, and their fates intertwine. Together they must battle epic storms and deadly bioclouds while unpicking the web of lies they have been told about their planet. Will their bond be strong enough to withstand the arrival of a mysterious invader that threatens to end life on Mars forever?

Timely and compelling, *Mars Awakens* is the unputdownable first book in a duology offering a window into our future.

About the Author

H.M. Waugh is an environmental scientist, writer and educator with a long-term love of wild places and high mountains. This has led to icy feet and sunburnt cheeks in magical countries like New Zealand, Nepal, Bolivia and Switzerland. She has studied dolphins in New Zealand and rare plants in the Wheatbelt, and worked in mining and construction projects across Western Australia. When she's not writing, she's teaching school and community groups about science and the environment.



An Interview with the Author

What drew you to the idea of humans living on Mars?

I've always loved the mystery of space and the idea that we could travel to new planets, and for many years my plan was to become an astronaut until I was told only people with perfect vision could be taken. I combined that with my passionate belief that we can save this beautiful planet we already have if we look to rewilding, to planting local native plants in our gardens, to growing more of our own food, and move away from fossil fuels and plastics.

How did your experience as a teacher and environmental scientist inform your writing?

Around the time I wrote *Mars Awakens*, I was teaching a unit on Mars at school and I could see how fascinated the students were by the subject. Luckily, I'd worked for many years in the Pilbara of WA, which is supposed to most accurately reflect the landscape on Mars, so I was able to draw on those memories. I wove a lot that I'd learned as an environmental scientist into the ecosystem I created on Mars to make sure it felt real and had a good chance to be

balanced and self-sufficient. I purposefully added crickets as the main protein because there is such a conversation at the moment about the sustainability of our protein choices here on Earth.

Why did you decide to have boys become almost extinct in the Davinci colony?

I've taught genetics and evolution at school and realised that Mars would probably create some cool opportunities to play with these topics. But my final decision, which created the society in Davinci, came from a desire to switch the gender stereotypes. As a child I often read books with girls on the back step, girls as the minor characters, girls controlled by fathers and society and made to feel weak. And if it wasn't questioned, it made me believe that was acceptable. So I wanted to write a story where girls are strong and awesome and where boys are incorrectly seen as the weaker sex. That idea led me back to gender chromosomes, and how a mutation on the X could be overcome in a girl with XX but could prove extremely deleterious for a boy with XY.

Suggestions for Classroom Discussion and Application

Before reading

- Working in groups of two, (a) choose one of the following topics to research, (b) come up with the five most interesting facts you can find, and (c) present those facts to your class:
 - The case for humans spending billions to settle on Mars
 - The case against humans spending billions to settle on Mars
 - Elon Musk and SpaceX
 - How humans may evolve if we lived on Mars
 - How humans might be able to make Mars habitable
 - Discoveries from the Mars 2020 Perseverance Rover

On the cover

- Before reading the story, examine the front cover [images + title + strapline + font + colours used] and write a short paragraph about what you think the book will be like. Include details about setting (place and time), literary genre and the sort of things you might expect to occur in the story? Try to pinpoint elements within the cover that provided clues to you. After finishing the novel, go back to this paragraph to see whether your predictions were correct.



Comprehension Questions Relating to Chapters 1 and 2

1. From what is Aram's needle made?
2. What is a 'Y' and why are they considered precious?
3. What is Phase 2 and why isn't Dee as enthusiastic about it as Aram?
4. 'Dee sports a healthy list of adaptations and beneficial gene sequences...' Name one and explain why it is very useful to have on Mars.
5. How does a pridesister differ from a bloodsister in Davinci?
6. What role do the Futures have in Davinci?
7. Why can't Aram be assigned routes too far from Davinci?
8. What is a kitesail and why would it be useful on Mars?
9. What is terraforming?
10. What is Dee's theory of immortality?

Text Interpretations

- Consider these extracts from the text and answer the questions below:

Empathy

Across the cavern, Phobos looks up. Sees Dee. Her eyes widen. They're staring. Then a Futurekeeper taps Phobos on her shoulder, and she finally looks away.
(Page 11)

- Imagine you are Phobos in this scene. What sort of things might she be feeling about her life as a Future versus her sister's life as a Gardener?

Writing to heighten drama

The Thing looms in front of them, all dull, pock-marked metal and the wail of wind through jagged gaps.....Begins to roll. (Pages 95–99)

Find through the full extract (pages 95–99) in the book to identify examples of literary devices being used to build tension, including:

- Repetition
- Simile
- Metaphor
- Personification
- Changes in sentence length
- Use of words to create an effect

Contrasting societies

Seriously, survival was about getting off this planet, not deliberately exposing yourself to radiation in some ridiculous attempt to belong. It had got nasty. Fights. Deaths. In the end the Others all went to Davinci, and the sensible ones ended up in Newton. (Page 63)

Newton cares for its own. And that's why Newton has proper clothes and fast sleds and a dome to stop the rays. And an absence of cricket appendages stuck in teeth
(Page 75)

- Which colony – Davinci or Newton – is most suited to living on Mars?
- How do attitudes about living on Mars differ between Davinci and Newton?

- How does each colony's mode of transport – sleds and kitesails – reflect their differing attitudes to living on Mars?
- What preconceptions do Newtons have about people from Davinci, and vice versa?
- How have inhabitants of the two colonies evolved differently?
- What do you think would happen if the two colonies chose to join forces?

Debate: Divide into two groups – Davinci and Newton – and argue why your colony is superior.

Finding balance

Gardening is all about achieving balanced, self-sustaining ecosystems that will last forever. (Page 26)

But Aram reckons the plagues are happening because the population of humans has fallen too much, while the crickets keep breeding. She says the balance is upset. Too many crickets eating vegetation, and not enough humans to eat the crickets. (Page 51)

- What do you think 'achieving balanced, self-sustaining ecosystems' means on Mars?
- Do you believe we have achieved such ecosystems here on Earth?
- Give an example of an ecosystem becoming unbalanced on Earth and what happened as a result.

Insects as a 'balanced, self-sustaining' source of protein

- While people in Davinci eat insects because they don't have alternative sources of protein, the situation in contemporary Australia is quite different. Yet many scientists believe that that is exactly what future generations will need to do to survive on Earth. (Google the article, *Eat insects, save the world* on the UK's Natural History Museum website to find out why.)
- Create an advertisement (television, radio, print or social media) designed to convince Australians to start eating insects. Consider what you would need to say and show in the advert to make this idea more appealing to as many people as possible?

Gender Stereotypes

- H.M. Waugh says of *Mars Awakens*, 'So often in fantasy and history we see girls on the back step, girls as the minor characters, girls controlled by fathers and society and made to feel weak. And I wanted to write a story where girls are strong and awesome and where boys are incorrectly seen as the weaker sex.'
 - Do you agree that books often present girls differently to boys? In your answer provide examples from books you have read.
 - How might presenting girls as 'secondary' in literature have an impact on our society?
 - How does H.M. Waugh use genetics to explain the differences between the sexes in Davinci?
 - Did this element of the novel make it more or less interesting for you?

Debate Topic

'By going to Mars one day, we will make things better for us here on Earth.' – Scott Kelly