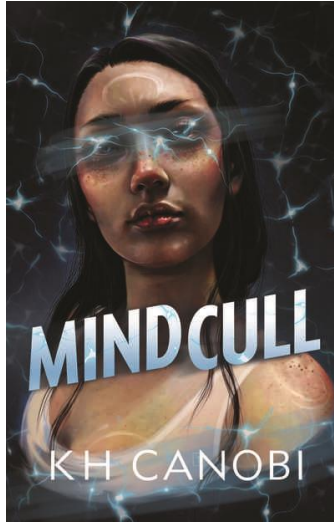# TEACHER'S NOTES

# *MINDCULL* by K H Canobi



## SYNOPSIS

In a time when nothing seems as real as virtual reality (VR), shy, mistrustful, sixteen-year-old EILA is plunged into a fierce battle for control of her mind. When Eila is shortlisted in a VR competition by Pearl, a global corporation, a stunning future opens up. Shortlistees are invited to stay in a stately English mansion, try out Pearl's exciting, new VR skinsuits and attend a glittering celebration. The winner will front Pearl's VR marketing campaign.

But a harrowing interrogation by law enforcement officers makes Eila apprehensive of Pearl and its skinsuits. And when Eila and her best friend use illegal surveillance technology to find out why Pearl is being investigated, they stumble across a plot to assassinate Pearl's CEO.

Coerced into spying for law enforcement officers and burdened by her knowledge of the murderous plot, Eila travels to England. There, amidst lies and distortions, she must decide what is real and who her true allies are. After she arrives, Eila manages to foil the assassination attempt. Then she joins the other shortlistees in trying out Pearl's new skinsuits. But unexpectedly, while the skinsuits take the other shortlistees into a fairy-tale VR world, Eila enters the consciousness of a stranger – someone has used her skinsuit to connect Eila to the thoughts of HEAD, the leader of Kin, a secret organisation.

Head's ability to use technology to temporarily 'occupy' the minds of others has given him wide-ranging expertise and enabled him to build a huge corporate empire. And a faction inside Head's organisation has formed a plan to fatally alter a mental-health treatment intended for hundreds of people to acquire mind-occupation skills for themselves. Eila is shocked and fearful when she witnesses Head's consent to their plan, especially after Head detects her intrusion and she only narrowly escapes his vicious attack on her mind.

Eila wins the competition but her dreams of a bright future with Pearl are overtaken by her determination to save the lives threatened by Kin. As time runs out, and Head's identity and physical location remain unknown, Eila risks her life by putting on a skinsuit again. Then she confronts Head mind to mind. Their clash sets in train a series of events in which the sinister plans of a breakaway Kin faction are revealed, many deaths are prevented and surprising similarities between Eila and Head make Eila resolve to stop distancing herself from others.

## THE AUTHOR



K H Canobi is a cognitive scientist who has published widely in developmental psychology. She has carried out research and lectured at universities in Australia and the UK and holds an honorary research fellowship at The University of Melbourne. She is the mother of four young book devourers.

## *MINDCULL* and STEM

According to the Department of Education and Training, 'STEM – science, technology, engineering and mathematics – covers a wide range of disciplines and skills, which are increasingly in demand in our rapidly changing world. STEM skills and knowledge are important for all stages of our learning, jobs and everyday lives.' Novels provide a useful pathway to helping both boys and girls think about STEM themes because they ignite the imagination and offer an accessible and entertaining way for students to engage with scientific topics. In a world where technology is rapidly changing how we live and relate, *Mindcull* will provide a springboard for interesting discussions on how STEM might transform our future. Creatively exploring the role of technology stimulates students' creativity, promotes flexible thinking and acts is a springboard for analysing the ways in which we use technology now.

*Mindcull* is set in a future time when the characters use STEM in a variety of ways to influence others, further their ambitions and shape the world around them. Sixteen-year old, Eila, the main character, is catapulted into a dangerous adventure when she succeeds in a global competition by designing appealing virtual reality 'clips'. This success, combined with her youth, pattern recognition skills (as evidenced by her mathematical abilities) and family background mean that she alone can influence events in a way that will save many lives. To do this, she must confront Head, who has exploited developments in cognitive science to achieve immense power and wealth.

*Cognitive Science* is a contemporary field encompassing a number of disciplines including mathematics, psychology, biology, computer science and neuroscience. Cognitive scientists investigate the nature of knowledge, its components, its development and its use. In the fictional future that is the setting for *Mindcull*, findings on cognitive development, memory,

expertise, attention and perception have been exploited to develop effective technologies. Some of these findings are addressed in the further research section at the end of these notes.


**KEY THEMES AND LINKS TO CURRICULUM**

Mindcull addresses the question, '***How we can find our own path and develop authentic relationships when technology can be used to disguise the truth and serve as an escape from reality?'*** Its themes of identity, relationships and technology link the learning areas of *Health and Physical Education*, *Technologies* and *English* in Years 7-10.
For example, in Year 7 and 8, students:
- 'examine the nature of their relationships and other factors that influence people's beliefs, attitudes, opportunities, decisions, behaviours and actions and investigate the impact of transition and change on identities' in *Health and Physical Education*
- 'evaluate the advantages and disadvantages of design ideas and technologies' in *Technologies*
- explore 'challenging and unpredictable plot sequences and a range of non-stereotypical characters' along with 'themes of interpersonal relationships and ethical dilemmas' in *English.*

The themes of *Mindcull* continue to link these three learning areas as students further develop their knowledge in Years 9-10 and beyond.

**COMPREHENSION**

1. Why was the novel called *Mindcull?*

2. How do people in the book become discordant?

3. What was the Face of Pearl competition? Why did Eila want to win the competition? How did her attitude change?

4. What happened to Eila's parents?

5. List three difficult situations that Eila faces. How does her reaction to crises change over the course of *Mindcull*?

6. Complete the following table:

| WORD | DEFINITION | PAGE WHEN FIRST MENTIONED |
|---|---|---|
| Headset | | |
| VR | | |
| Discordant | | |
| Gem (as in wallgem, wristgem, cargem) | | |
| Treena | | |
| skinsuit | | |
| Vclip | | |

| Pearl | | |
|---|---|---|
| A-VEP | | |
| Vfeed | | |
| Distorter | | |
| Aucupas | | |
| Kin | | |
| Mind occupation | | |
| Spy lenses | | |
| Yaniflard | | |

7. Give a one-sentence description of the following characters:

- Eila
- Mei
- 'Man Mountain'
- 'Ice Queen'
- Gemma Trill
- Malcolm
- Pita Henare
- Chip Bower
- 'Head'/Damon
- Harper
- Grace
- Sophia
- Hugo
- Sameera
- Lynne Forrester

8. What moral dilemmas did Eila face in the course of *Mindcull* and how did she resolve them?

9. What did Pearl gain from running the competition?

10. Was Eila the same person in her vclips as in real life?

11. Why did Hugo try to talk Eila out of wearing a skinsuit that last time?

12. Why did Chip Bower want to carry out Mindcull so much? Why did he underestimate the risks?

**STORY STRUCTURE AND STYLE**

1.  How did the author build suspense in the opening chapters of *Mindcull*?

2.  Why did the author use the first person, present tense?
    a) What other options are there?
    b) What are the strengths and limitations of the first person narrative?
    c) How did the author address these limitations? Was she successful?
    d) Are there sections of *Mindcull* where the author moved out of the first person narrative? Why do you think she did this?

3.  Was the title appropriate?

4.  There are many points in *Mindcull* when Eila felt trapped inside a constrained space (e.g., inside Heyton House) and longed to get out. List three examples. Do you think the inside/outside contrast is a metaphor? If so, what for? What does being 'inside' and 'outside' represent for Eila?

5.  Did the ending of *Mindcull* satisfy you? Write an alternative ending.

6.  A character arc refers to the way in which a character changes over the course of a story. In *Mindcull,* how did Eila change from someone who wondered, 'Would it be so bad for us to just do nothing?' (p. 94) to someone who was willing to sacrifice herself for the sake of others?

**DISCUSSION**

1.  How do you use technology for entertainment and communication? What are some of the risks and benefits?

2.  How far into the future do you think *Mindcull* was set? How was Eila's world similar to and different from ours?

3.  How did Eila use technology to express herself and to keep her distance from others? What did her use of technology reveal about her personality?

4.  Discuss the issue of trust in *Mindcull.* How did Gemma Trill win Eila's trust? Why did Eila distrust Hugo and Henare for so long?

5.  Why were Mei and Eila friends? How did they differ in outlook, personality and use of technology?

6.  Who was the real villain of the story? Why?

7.  What kind of a leader was Head? What were his strengths and weaknesses?

8.  Who was Eila's family?

9. Malcom tells Eila, '. . . relationships can be costly. But they are also worth it. (p. 43) In what ways might relationships be 'costly'?  Using illustrations from *Mindcull* explain whether/ to what extent you agree with Malcolm.

10. Eila would like to belong but she often sees herself as an observer or outsider. Find some examples and explain how Eila handles these situations.

11. Based on Eila's experiences, how important is it to be honest?


## CREATIVE ACTIVITIES AND FURTHER RESEARCH

1. Summarise current findings on how on-line gaming and social media activities affect human development, emotions, interpersonal relationships and identity.

2. Research the uses of virtual and augmented reality in our world today. What are some future directions?

3. How are virtual reality and augmented reality used in Eila's world? What forms of technology do we use to achieve similar aims? Make a table with three headings: Use or Function of Technology /Name of Technology in *Mindcull*/ Name of Technology in our World

4. If you entered a vclip for the Face of Pearl competition what would it be like? Make a short film of your vclip.

5. Imagine that you are in the cream-coloured room in Heyton House putting on a skinsuit.  Describe what you see and hear and feel. What happens next?

6. Pick a character from *Mindcull* other than Eila and tell their story.

7. Write an excerpt from the diary of one of the contestants in the Face of Pearl competition.

8. Make a newspaper or TV report on the Face of Pearl competition and award night party.

9. Imagine you are a reporter and want to write an in-depth article about either Hugo, Mei, Malcolm or Pita Henare. Formulate at least 6 interview questions that you might ask.

10. Eila was willing to risk her life to stop Mindcull. Can you think of an occasion when you took a risk to do what was right? What happened?

11. Describe a time when you or someone you know used technology to present a false picture of reality. How was the true situation uncovered?

12. Prepare a crossword or word search puzzle using some of the vocabulary from *Mindcull*.

13. Mindcull refers to the following discoveries from cognitive science about human thinking:

    a) *Lying* takes up more cognitive resources or brain power than telling the truth. Ice Queen refers to this in Chapter 1 when she talks about how the need to attend to sensory information from the distorter will stop Eila from lying.

    b) How well we remember something depends, at least in part, on the degree to which the *context* in which we first learned it is similar to the context in which we are trying to recall it. Ginger refers to this in Chapter 4 when he expects Eila and Mei to most readily recall the experiences they have had when wearing a distorter if and when they are forced to wear a distorter again.

    c) Based on many years of experience, *experts* process information differently and use different problem-solving strategies to people with little experience (i.e., novices). In *Mindcull*, Head bypasses this process, taking on the expertise of others through mind occupation.

Do your own research to find out about these ideas and others from cognitive science that help us understand how humans think. What implications do your findings have for our everyday lives?