VCE Circus: End of Year Break – books to read.

There is no authority to this list, except that it has only books that I feel were well worth reading. The majority of them I borrowed from the local public library. There is a bias towards classics.

General reading

A scramble of books (which is how it should be) to choose from or ignore.

Scottish

► *The great guide: what David Hume can teach us about being human and living well* -- Baggini, Julian

20th C physicists, Einstein and others read works of philosophers. David Hume was regarded as significant because of his interest in the nature of reality,

German

►*The Trial*, -- Franz Kafka, translation John Williams

In the edition to hand John Williams' introduction to Kafka's book begins: :"Rather like 'Orwellian', the term 'Kafkaesque' has come to be used, often enough by those who have not read a word of Kafka, to describe what are perceived as typically or even uniquely modern traumas: existential alienation, isolation and insecurity, the labyrinth of state bureaucracy, the corrupt or whimsical abuse of totalitarian power, the impenetrable tangle of legal systems, the knock on the door in the middle of the night…" *The Trial* is assessable Kafka but pure Kafka never-the-less. It does not directly address VCE issues.

Russian

►*Crime and Punishment* Fyodor Dostoyevsky

An accessible entry to the classic Russian canon.

English

► *Beau Geste* P. C. Wren

Over the top British Empire stuff, but excellent reading.

► *Personality and power: builders and destroyers of modern Europe* -- Kershaw, Ian,

A reviewer writes in part "The concept of slicing history vertically by following individuals through time rather than slicing it horizontally, year by year and examining the events across the each year, works well, particularly during the period of World War II."

The book could make excellent background reading for revolutions.

►*Creativity: a short and cheerful guide* Cleese, John

Easy quick reading – good value and important.

►Joseph Conrad – Pretty much anything, check the library catalogue.

Irish

► *The Picture of Dorian Gray* -- Oscar Wilde

►*The Third Policeman* -- Flann O'Brien

Brilliantly weird.

American

►*Cat's Cradle* -- Kurt Vonnegut

Not readily reviewed.

►*The Kingdom of Speech* -- Tom Wolfe

A thought provoking book – especially for potential biologists.

►*To Kill a Mockingbird* – Harper Lee

A clever narrator.

►*Guys and Dolls* -- Damon Runyon
Another way of using English.

Australian
►*Wake In Fright* -- Kenneth Cook
Devastatingly Australian earthy.

►*Picnic at Hanging Rock* – Joan Lindsay
An Australian classic.

Physics, Engineering and Mathematics preliminary reading

If you are in year 10, 11 or 12 and you are considering doing some preliminary study you can work from the prescribed texts; however, there is there is an alternate approach. Don't study SD content material directly, but read about the sequence of people who, over thousands of years, investigated physics, engineering and mathematics and how that knowledge fitted into world development. The theory being that, so informed, you will be well placed to, and more interested in, absorbing the teaching material when back in the classroom.

The authors of books on technical topics (and no doubt other disciplines) generally fall into two classes – professional writers and, people with a direct connection with the subject material. Professionals write well, generally utilising their illusion of expertise they will buff their way through a technical explanation. At times however it becomes apparent that their understanding of the material is very shallow. Moral, it is far more likely that a physicist will be a good writer than a writer will be a good physicist.

Suggestions, which of course you are perfectly welcome to ignore, follow. At least some of these books should (with any luck) be available at your local public library. If a book is not available, search for books by the same author or books covering the same topic.

Give each book a chance to lead you to a book outside of the list. Perhaps guided by author, content or whatever -- this sort of free range research can be very rewarding.

►*50 physics ideas you really need to know* -- Baker, Joanne
The inside front cover blub reads "In *50 Physics Ideas You Really Need to Know* author Joanne Baker describes, in a sequence of 50 clear and concise essays, the discovery, significance and functioning of the laws, principles, and theories that govern the workings of our physical universe." That's a fair description. If you were to read just one book to prepare for further physics study this would be a good choice. A shelf copy to hand for pre-reading as your class progresses through the physics syllabus could be very useful and give you a sense of context.

►*The Art of More: how mathematics created civilisation* -- Brooks, Michael
It's true, there are mathematicians who actually believe that mathematics created civilisation. Brooks is one, nevertheless his book is good reading.

A reviewer says in part: … "an extraordinary piece of work. Its scope is staggeringly broad; it would be a very competent mathematician who could honestly claim to be aware of all the material between its covers. Brooks handles the difficulty of approaching a diverse audience very skilfully…. historical aspects covered by the book [are] particularly interesting; for example, the development of '0' as a valid numerical character, as in 5 x 2 = 10 and the reluctance of some clever people to accept the concept of a negative number.".

► *On the origin of time: Stephen Hawking's final theory*-- Hertog, Thomas
A reviewer writes: "I found this book to be a brilliant piece of literature; the seemingly seamless blend of solid physics and simple humanity was totally absorbing."

►*A Brief history of Time: from the Big Bang to Black Holes* -- Hawking, Stephen
A classic. A good introduction to Hawking

►*Six easy pieces*: *essentials of physics*,Feynman, Richard
A physics classic. Extracts from a series of lectures

►*Six not-so-easy pieces: Einstein's relativity, symmetry and space-time* -- Feynman, Richard P.
A physics classic. Extracts from a series of lectures

► *Einstein's dice and Schrödinger's cat: how two great minds battled quantum randomness to create a unified theory of physics* -- Halpern, Paul

► *The frontiers of knowledge: what we know about science, history and the mind* -- Grayling, A. C.
A thorough work, though some points are overstated. It is divided into sections suitable for cherry picking.

► *Prof Alan Turing decoded: a biography* -- Dermot Turing.

► *Stephen Hawking: Quest for a Theory of Everything* -- Kitty Ferguson

► *Brief answers to the big questions* -- Hawking, Stephen,

► *Relativity: the special & the general theory* -- Einstein, Albert,

► *A stubbornly persistent illusion: the essential scientific works of Albert Einstein* -- Einstein, Albert,

►*Cracking Mathematics: you, this book and 4,000 years of theories* -- Beveridge, Colin
Contents look good.

► T*he dreams that stuff is made of: the most astounding papers on quantum physics--and how they shook the scientific world* -- Stephen Hawking 2009

► *Professor Povey's perplexing problems: pre-university physics and maths puzzles with solutions*,-- PoveyThomas

►*The Art of Doing Science and Engineering: Learning to Learn* -- Richard Hamming
Well worth reading if you can get hold of a copy of this classic.

► *Engineering challenges in 19th century Victoria* -- Harper, Brian C. S

► *Engineering the Pyramids,* Parry, Dick.
A thorough examination of the engineering techniques used in the construction of the Egyptian pyramids. Perry solves (well, almost solves) the mystery of how such huge structures could have been built without substantial mechanical equipment.

Other disciplines, preliminary reading

If you are in year 10, 11 or 12 and you are considering doing some preliminary study working from the prescribed texts there is an alternate approach. The suggestion is that you don't study SD content material directly, but read about the sequence of people who influenced world development in the discipline of interest. The theory being that, so informed, you will be well placed to, and more interested in, absorbing the teaching material when back in the classroom.

VCE-Circus website: https://vce-circus.logicfronttoback.nz/
Any errors or comments? Email Harlan: logic@logicfronttoback.nz