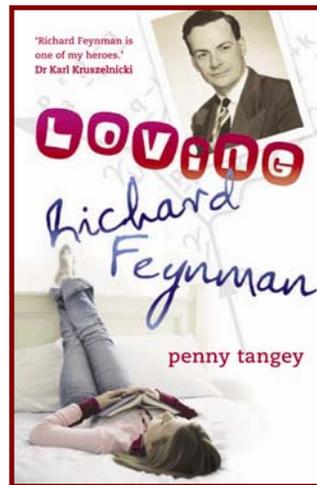


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LOVING RICHARD FEYNMAN

Penny Tangey



Teachers' Notes

Written by a Middle School Teacher-Librarian

ISBN: 978 0 7022 3725 6 / AU\$16.95

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SYNOPSIS

Loving Richard Feynman is a contemporary, realistic story for young adults told through a series of letters written by fourteen-year-old Catherine to the deceased, Nobel Prize-winning scientist, Richard Feynman. Catherine, who is socially awkward and a self-confessed nerd, loves science and idolises the American physicist who helped build the first atomic bomb. She decides to write to him in an attempt to unload her thoughts and feelings. Catherine finds this much easier than trying to communicate with someone who's real.

Catherine is an only child who has a very close bond with her scientist father. He often mentors her through, not only school work, but friendship issues as well. Catherine's world is thrown into chaos when her parents separate as a result of her father's infidelity. Her father – her rock – has let her down. She confides even more in Richard Feynman.

As the narrative progresses, Catherine's insecurities, fears and misinterpretations of her journey through adolescence slowly unravel. This is paralleled with her decreasing admiration for her idol as she discovers more about Feynman's personality and his discoveries.

THEMES**Relationships:**

- Catherine is socially awkward. She finds it easier to confide in a dead, famous scientist than in her own family and friends.
- Catherine becomes infatuated with Richard Feynman, idolising his scientific genius and romanticising her relationship with him. She imagines she knows his personality.
- Catherine is sceptical and insecure in her friendships. She questions the motives of those who befriend her.
- Catherine loses respect for the males in her life in whom she has trusted. Firstly, Jacob, a boy at school, secondly and more significantly, her father and finally for her idol and confidant, Richard Feynman. She realises that no one is perfect.
- Catherine has pigeon-holed her peers into social categories, including her own group. While she is critical of the segregation of groups, she is reluctant to venture outside of her niche.

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Self-Esteem:

- Catherine has little, if any, self-esteem. She doubts and second-guesses any comments or offers of friendship. She also finds it difficult to accept Felix, the new, popular boy at school.

Science and Maths:

- Maths and science are portrayed very positively; Feynman's theory of quantum electrodynamics is featured.
- Catherine has an inquiring mind. She openly debates and questions theories.

Social Activism:

- The loss of the students' right to knit at school offers a taste of student activism in a non-threatening and appropriate manner.

Role of Women:

- Catherine becomes frustrated with the way that both her father and Feynman treat women. Catherine brings her contemporary views to a time in history when the role of women was much different from today. The differences are quite astonishing.

WRITING STYLE

The letters retell key aspects of Catherine's life in an honest and forthright manner. They are written in past tense, first person. Catherine's voice is authentic and pragmatic. The dialogue is genuine and believable. Toward the end of the text, Catherine becomes more disconcerted with Richard and obviously disappointed with her own father too. The language flows well, is appropriately paced and clearly defines both the characters and plot.

STUDY NOTES

- Why do you think Catherine's father chose to give her a poster of Richard Feynman? What is it about Feynman that would appeal to Catherine?
- Research Feynman briefly using a search engine such as www.boolify.org (This search engine allows students to use basic Boolean search techniques but gives them control over the parameters of the search.)
- Discuss Richard Feynman's premise: "What do you care what other people think?" (p2)
 - Is this easier said than done? Is this something to try to aspire to or are there limitations to this theory? Discuss.
 - Do you believe that Richard Feynman really believed this? Explain.

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- How does Catherine try to adopt this same philosophy? Give some examples from the book.
- Likewise, list some examples that show Catherine is not quite able to do this fully.
- What does Catherine mean when she writes, “Maybe I should have stuck to admiring your scientific work?” (p189)
 - Is Catherine’s disappointment in Richard Feynman to some extent her own fault? Explain your response.
- Catherine says that, “seeing both sides of the story is no fun.” (p149) People often fail to look at an issue from all perspectives. Use De Bono’s *6 Thinking Hats* to analyse a range of issues related to the novel. Ideas could include:
 - The U.S. Government’s bombing of Hiroshima and Nagasaki during World War Two
 - The creation of atomic/nuclear weapons
 - Nuclear disarmament
 - The banning of knitting at school
 - Hannah’s Birthday Party
- When Catherine’s father disappoints her, she looks to Richard as her male figurehead. Could this contribute to her feelings of disappointment as the novel progresses? How?
- Create a sociogram that shows how Catherine interacts with some of her peers: Felix, Harry, Hannah, Amanda, Sophie, Chloe and Renee.
- Choose a scene from the novel to dramatise.
- Using Photostory 3 (download available free from: www.microsoft.com/windowsxp/using/digitalphotography/photostory/default.mspx) create a book trailer for *Loving Richard Feynman*. For examples, look at websites such as: www.learningplace.com.au/deliver/content.asp?pid=41987 . Teachers can also look for additional ideas on: www.sblceastconn.org/booktrailers.htm
- Reread the letter to Martha Stewart on p138/139. This is a clever letter that uses humour combined with a formal tone to address what is essentially a trivial matter. Brainstorm some similar, seemingly harmless activities that could possibly be banned at your school. In groups, pen a letter to an expert in that field stating your dismay and requesting support.

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- Catherine is aware of peer pressure and walks to the beat of her own drum. When Hannah's friends decide to sign the petition, Catherine describes them as "such sheep." (p145) Describe the role that peer pressure plays in *Loving Richard Feynman*.
- Research some aspects of the Cold War. How did Richard Feynman's work in Los Alamos contribute to something as long-lasting as the Cold War?
- The way in which Catherine addresses her letters to Feynman changes as the novel progresses, for example, Professor Feynman, Richard Feynman, Richard, R, Richard Feynman, Dick the Prick, Richard Feynman and Professor Feynman. Create a flowchart that shows what episodes have influenced the way in which Catherine addresses her letters.
- On p153/154, Richard has written a letter to his deceased wife, Arline. We as the readers don't get to read this letter but it has a profound impact upon Catherine. Write a letter to someone that you know who has passed away. This may be someone who you've never met, possibly a grandparent or great grandparent. What would you say in such a letter?
- On p159, Catherine discovers that Richard was appointed to a presidential committee that investigated the Challenger Space Shuttle accident. Investigate this accident.
- Choose another famous scientist, possibly a Nobel Prize-winner. Research their achievements and life story. Try to get a sense of who they were. Print out a 'poster' of your scientist. Write a series of letters to this scientist, telling them about your everyday thoughts and feelings.
- Try the squared numbers theory on p180 for yourself.
- On p184, Catherine writes that it's, "hard to really know someone just from what they say about themselves." Do you agree with this? Why?
- On p168–170, Catherine is very distressed by the way in which Richard treated women during the 1950s. Investigate the role and position of women during the 1950s, comparing it with changes to this role during the following decades. In a table, show how the role of women has changed since the 1950s.
- On p170, Catherine rips her poster off the wall and says, "I'm glad I never met you." Why does she feel this way?

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- Catherine doesn't really know much about Feynman's private life. She doesn't seek this information about Felix either. Are there some parallels here with her misunderstanding of both male characters?
- Conduct your own experiments with the angle of light reflection from a mirror.

AUTHOR MOTIVATION**Penny Tangey on her book:**

What most interests me about Richard Feynman was his capacity to inspire very strong feelings of admiration both in people who knew him, and in people who read his books – including myself. I first read about Richard Feynman in *Surely You're Joking Mr Feynman!* This very popular book helped cement Feynman's public persona as a fun-loving genius who didn't take life too seriously. Then I read James Gleick's biography of Feynman, *Genius*, which gives a more nuanced impression of Feynman's life and the impact that he had on other people. I wanted to explore my own and other people's reactions to Feynman through the character of Catherine.

I had the idea of writing the book in letter format because Feynman wrote a very beautiful letter to his first wife two years after she died. Gleick points to this letter as one of the things that contradicts Feynman's public persona. Feynman presented himself as being ultra-rational yet he wrote a letter to his dead wife in which he struggled with what it means to love someone who doesn't exist anymore. So I made Catherine do the same thing; she prides herself on being rational and logical, yet she's confiding in a dead physicist.

I hope that people who read *Loving Richard Feynman* will want to learn more about Richard Feynman but for me the book isn't just about him. It's about a girl idolising someone to the extent that not only she can't see their faults but also can't see other people's good points.

ABOUT THE AUTHOR

Penny Tangey stepped into the stand-up comedy scene after winning the Victorian final of Triple J's Raw Comedy Competition in 2001. Since then she has performed regularly in Melbourne and been involved in many festival shows. In 2003 she was selected for the prestigious Comedy Zone. This show is produced by the Melbourne International Comedy Festival to showcase Australia's best young comedians. In 2004 Penny appeared on Stand-up! on ABC TV.

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Penny was a 2006 recipient of a Brian Macarthy Memorial Award (Moosehead) for her show *Kathy Smith Goes to Maths Camp*. The Moosehead is an in-kind grant awarded to an innovative proposal for a Melbourne Comedy Festival show.

Penny lives in Melbourne