



Crash Zone
Education Resources



7 Curriculum Activities
based on the
Crash Zone TV Series

Table of Contents

	Page
Summary of <i>Crash Zone</i> Curriculum Activities	3
Cybercitizens of the World Unite!	5
Lost Worlds of the Crash Zone	11
The Games People Play	19
The Robin Hood Factor: Creativity, Ethics & Privacy	30
What's In A Game	37
Where In The World Is Cyber Space?	47
You Are The Dream Team!	58

Summary of *Crash Zone* Curriculum Activities

1. Cybercitizens of the World Unite! (P.5)

Resource Description

These lesson ideas explore the relationship between humans and cyborgs (human-like machines). What are the implications for ethics, politics and citizenship in contemporary societies?

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [Civics and Citizenship](#), [English](#), [Ethical Understanding](#), [Humanities and Social Sciences](#)

2. Lost Worlds of the Crash Zone (P.11)

Resource Description

With these activities' students explore the construction processes through which televisual text communicates meaning, further developing their skills in reading, analysing and evaluating visual texts.

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [English](#)

3. The Games People Play (P.19)

Resource Description

These activities explore technology processes through a focus on the design, construction and evaluation of games.

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [English](#)

4. The Robin Hood Factor: Creativity, Ethics & Privacy (P.30)

Resource Description

Many students think it is okay to copy other people's software programs and Internet pages. They are either oblivious to intellectual property laws or they don't know about them or don't care!

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [Civics and Citizenship](#), [English](#), [Ethical Understanding](#), [Humanities and Social Sciences](#)

5. What's In A Game (P.37)

Resource Description

These lesson ideas invite students to explore some of the ways of 'reading' computer games and interpreting their possible effects by examining storylines and other characteristics of selected games.

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [English](#), [Ethical Understanding](#), [Humanities and Social Sciences](#)

6. Where In The World Is Cyber Space? (P.47)

Resource Description

These activities explore concepts for investigating and communicating ideas about place and space, and natural and social systems, by comparing the geographies of real and virtual worlds.

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [English](#) [Humanities and Social Sciences](#)

7. You Are The Dream Team! (P.58)

Resource Description

Students work together as a focus group in market research by providing feedback to the ACTF on how well episodes represent problems and issues of human relationships for young people of their own age.

Year Level: [Middle Years \(5-9\)](#) Curriculum Study Areas: [English](#)

Cybercitizens of the World Unite!

Program:	Crash Zone
Year Level:	Year 5 to Year 9
Curriculum Study Areas:	Humanities and Social Sciences; English; Technology
Themes/Topics:	Civics and Citizenship; Ethics, Values, Justice
Description:	These lesson ideas explore the relationship between humans and cyborgs (human-like machines). What are the implications for ethics, politics and citizenship in contemporary societies?
Resources:	Overhead projection transparency about Cyborgs made from the Master AI worksheet Turing test worksheet Turing Test Questions at http://www.badpen.com/turing/whatis.php ELIZA at http://www-ai.ijs.si/eliza/eliza.html BRIAN at http://www.strout.net/info/science/ai/brian/ 20Q.net at http://www.20q.net/ The Cyborg Bill of Rights by Chris Hables Gray at http://www.uqf.edu/CompSci/Cgray/CYBILL.HTM A Cyborg Bill of Rights by Arthur T. Murray at http://www.crackinguniversity2000.it/Agora/7256/acbor.html Universal Declaration of Human Rights at http://www.un.org/Overview/rights.html

Lesson plan: With the proliferation of artificial limbs and body parts many humans are becoming more like machines (cyborgs), and the development of artificial intelligence seems to be making machines seem more like humans. What does this mean for ethics, politics and citizenship in contemporary societies? These lesson ideas explore such questions with a view to extending and enriching students' understandings of civic responsibility, citizenship and democratic processes.

Through these activities students will:

- appreciate the difficulties of making unambiguous distinctions between humans and other entities such as cyborgs and artificial intelligences
- consider ethical questions arising from relationships between humans, cyborgs and artificial intelligences
- interact with simple artificial intelligence programs

- critically appraise examples of attempts to formulate a Cyborg Bill of Rights and the possibilities of extending such rights to artificial intelligences
- clarify their understandings of the concept of citizenship and how it is defined and determined.

Teacher preparation

This lesson is best done in circumstances where students have ready access to the Internet. They should work in groups of two or three with each group having computer access. Check the sites you want students to use beforehand, especially the artificial intelligence web games and sites. In addition to those suggested in the resource and reference lists above, there are several other AI and chatbot sites that could be used equally effectively. Some students might already be familiar with some of these sites.

Introduction

Conduct a brief discussion with the class to establish students' existing understandings of cyborgs and artificial intelligences. Many students will be familiar with fictional cyborgs, robots and androids from movies and TV shows and it might be useful for the class to brainstorm for examples (recent movies include AI: Artificial Intelligence, Bicentennial Man and Inspector Gadget). In small groups, ask students to respond to this question:

It is relatively common for people to be fitted with artificial limbs. It is also possible for a person to be fitted with an artificial stomach, heart, kidneys and skin, heart and brain pacemakers, implanted corneal lenses and hearing aids, radar devices replacing sight and many other artificial body parts and organs. Is there any point that might be reached in replacing an individual's body parts where you might be tempted to say that the individual is no longer 'human'?

Define what "begin human" is. What are human traits and attributes that differ from other life forms?

Depending on the age and maturity of the students, you might wish to draw their attention to real cyborgs such as Stephen Hawking and Christopher Reeve and to ask if people who deliberately modify or 'sculpt' their bodies-such as Michael Jackson-should also be regarded as cyborgs. Information about both-including their respective biotechnological modifications and/or dependencies-is readily available on the Internet.

Display the overhead projection transparency about Cyborgs and the issues surrounding them. Discuss these with the students.

Artificial citizens?

Introduce **Men in Khaki**. If students are unfamiliar with the series, tell them that one of the characters in this episode is Virgil, an artificial intelligence (AI). Ask students to take

particular note of the ways in which Virgil's 'behaviour' in the episode resembles human behaviours.

View Men in Khaki

Following the video presentation, ask students in their groups to compare their notes on Virgil's behaviour and other aspects of the episode by responding to these questions:

- What specific aspects of Virgil's behaviour resemble those of an intelligent organism, such as a human? In what ways is he unlike a human?
- From what you presently understand about artificial intelligence systems, how plausible is Virgil? To the best of your knowledge, what sorts of things does Virgil do in this episode that existing artificial intelligence systems cannot do?
- Consider Colonel Winter's plans for Virgil and the reaction of the Crash Zone kids as outlined in this dialogue:

WINTER: ...an Artificial Intelligence of this nature is vital to National Security. We'd strip it down, remove any personality, program it to act without compassion. It would be capable of making thousands of strategic battlefield decisions per second. It would be unbeatable in any combat scenario...

MARCELLO: It's unbelievable!

RAM: They can't use Virg like that!

PI: They'll destroy his personality if we let them!

BEC: Use Virgil to fight wars? Not a chance!

Should Military Intelligence have the right to destroy the 'personality' of an Artificial Intelligence? Give reasons for and against.

Extension activity

You might also wish students to consider the ethics of Winter's threat to use an EMP-electromagnetic pulse generator-to wipe the memories of Catalyst computer systems. This should be discussed in the context of stereotyping-and even demonising-the military. Students should be encouraged to consider if the Winter character is portrayed fairly or is a crude caricature of an army officer.

- Penny says to Mathew: *'Virgil's not just a program, Dad, he's like part of the family...'* Would you be likely to consider Virgil (or an AI with similar capabilities) to be part of your family? How 'intelligent' does an artificial intelligence have to be before you would be prepared to grant it similar rights (and responsibilities) to human citizens?
- What would a machine, such as a computer, have to do to convince you that it should be given similar rights to those we routinely give to humans?

Ask groups to share their responses to the above questions with the class as a whole.

Testing artificial intelligence

In their responses to the last question above some students might suggest a variation on the Turing Test, named after computer scientist [Alan Turing](#) who developed it as a 'thought experiment' during the 1950s. Turing reasoned that a machine should be regarded as being intelligent if it could 'fool' a human into believing it was human.

There are a number of websites that explain the Turing Test in varying degrees of detail (see Resources above) and students could be encouraged to search for some of them. It is probably sufficient to give the students the [AI Worksheet](#).

After students complete the AI Worksheet ask them to compare the relative 'intelligence' of at least two of the programs. For example, how quickly can they 'fool' each program into revealing its limitations?

An activity that worked well with a year 7 trial group is to play 20Q.net using 'artificial intelligence' as the 'answer'. The program initially asks, 'Think of something and I will guess...' and the first question is 'Is it classified as? Animal, Vegetable, Mineral, Other, Unknown'. Working in pairs or small groups students need to discuss and reach consensus about how to classify and describe an AI in response to each question. This helps to clarify students' understandings about the nature and design of information processing programs. 20Q.net already 'knows' what artificial intelligence is, so if students appear to 'fool' the program on this item it means that they are classifying and describing artificial intelligence in a different way from the program (that is, from the program's point of view the students would appear to be 'cheating'; under these circumstances the program will challenge players and point out where its answers differed from theirs).

A cyborg / AI bill of rights?

Ask students (in pairs or groups) to compare the two versions of a Cyborg Bill of Rights:

- [The Cyborg Bill of Rights](#) by Chris Hables Gray and
- [A Cyborg Bill of Rights](#) by Arthur T. Murray

Understanding Gray's Bill of Rights depends to some extent on familiarity with US Constitutional Amendments, but its basic premises can be discerned without any detailed knowledge of them. Murray's Bill of Rights is more straightforward and could be used by itself with younger students.

However, even if students do not refer directly to Gray's Bill of Rights, you should draw attention to his questions about defining citizenship:

Citizenship Defined: This is the hard one. How old the human must be, and how mentally competent to be a citizen, is an old debate. Cyborg technologies will complexify this confusion incredibly. Now it just isn't how mature the human but how human the cyborg? How machinic can a citizen be? How many voters in a cyborg pod of multiple bodies? How bright the AI? How bright the dog? Whether or not one is mentally competent isn't just an issue applying to injured humans, it covers machines, posthumans, and enhanced beasts. Any aliens that ever visit as well, if you get down to it, although it doesn't seem to be as pressing an issue as cyborg citizenship is, in my opinion.

It might be worth pointing out to students that tests for citizenship in the past have ranged from gender and class (e.g. until recently even in Western societies only property-owning males could vote), through literacy, to the current situation where birthright assumes eventual citizenship unless it is forfeited as a result of misdeeds (see professional development article by Harry Phillips in the teacher reference list).

Secondary students in particular could also compare the articles in one or both of the Cyborg Bills of Rights with the articles in the [United Nations Universal Declaration of Human Rights](#). The UN Declaration has thirty articles whereas Gray's Bill of Rights has ten and Murray's Bill of Rights has only five.

- Which human rights are not reflected in the Cyborg Bills of Rights?
- Does this suggest that the Cyborg Bills of Rights need additional articles? Ask students working in groups to consider the desirability of each article of Murray's (and/or Gray's) Cyborg Bill of Rights.
- Which of these should be extended to AIs?
- If these rights were protected by law in the imagined world of **Crash Zone**, how might the script of **Men in Khaki** have been different? Which articles would have direct consequences for Virgil? How would the human characters be affected? In what ways?
- Write a 60 second 'speech' for Virgil to deliver via the internet to his fellow AIs. The speech should begin with the words 'Cybercitizens of the world unite...' and should end with Virgil urging all cyborgs and AIs to lobby the United Nations to adopt a Universal Declaration of Cybercitizen Rights. One member of each group should 'perform' this speech for the whole class.

Teacher references

Yahoo directory of [Artificial Intelligence Web Games](#)
[How my program passed the Turing Test](#)
[BotSpot. ChatBots](#)

Gray, Chris Hables (2001) *Cyborg Citizen: Politics in the Posthuman Age* (New York and London: Routledge).

Gray, Chris Hables (1997) *The ethics and politics of cyborg embodiment: citizenship as a hyper value.*

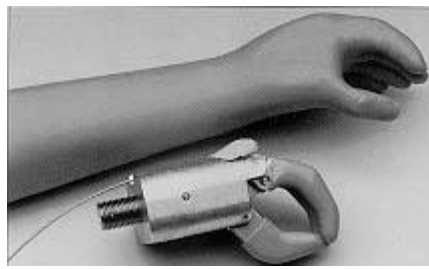
Cultural Values 1 (2): 252-258.

[Citizenship: an historical perspective](#) by Harry C.J. Phillips

Implications of cyborgs for society

Cyborgs (cybernetic organisms) are systems combining organic and artificial elements in one working whole.

Cyborgs are not just the stuff of science fiction. At least 10 percent of Australians are cyborgs in a technical sense, including people with electronic pacemakers, artificial limbs and joints, drug implant systems, implanted corneal lenses and hearing aids, artificial skin, and other medical prostheses.



Mechanical child's hand with cosmetic glove. Source: Advanced biomechanics.

Humans also are being 'cyborged' at an ever-increasing rate as they deliberately integrate themselves into larger cybernetic and mechanical systems either for business or for pleasure. These include neurosurgeons who are guided by fibre-optic microscopy during an operation, pilots of military aircraft who are connected to systems that monitor and feedback information about their bodily states (e.g. following eye movements, testing the conductivity of sweaty palms), and anyone who plays video, computer and virtual reality games.

At the same time that many humans are becoming more like machines (cyborgs), many machines seem to be becoming more like humans-artificial intelligences (AIs).

Whether or not any particular entity is a cyborg or an AI, it seems clear that we now live in a cyborg society in which distinctions between 'natural' and 'artificial' (or between 'organic' and 'machinic') are increasingly subsumed by the proliferation of systems that incorporate both.

What does this mean for ethics and politics in contemporary societies? How should humans treat cyborgs and AIs? What are the implications of extending human rights to cyborgs and AIs?

Lost Worlds of the Crash Zone

Program:	Crash Zone
Year Level:	Year 5 to Year 9
Curriculum Study Areas:	English; The Arts
Themes/Topics:	Narrative Structure; Film Language
Description:	With these activities students explore the construction processes through which televisual text communicates meaning, further developing their skills in reading, analysing and evaluating visual texts.
Resources:	The Dream Team ep 1 vol 1 <i>The Crash Zone, ACTF</i> Identity Crisis ep 2 vol 1 <i>The Crash Zone, ACTF</i> Big business ep 4 vol 1 <i>The Crash Zone, ACTF</i> The Outsider ep 13 vol 3 <i>The Crash Zone, ACTF</i> Print: Students will need character outlines <u>including back stories and activities sheets.</u>

Lesson plan:

Lesson preparation

Print out the activities sheet, cut out the activities and paste each onto an A3 size sheet.

1. Ram's backstory

Tuning in

Ask students if they have ever watched any movies labelled as 'director's cuts' or viewed any of the 'bloopers' shows that are frequently shown on television.

Explain that in any media production there will be 'roads not taken' - ideas for storylines and characters that may be introduced and later discarded in cinematic terms, these are the scenes 'left on the cutting-room floor'. This can also be related back to students' own writing and the differences that often occur between drafts of a story for example.

Viewing

View The Dream Team and Identity Crisis episodes of The Crash Zone. Students should collect as much information as they can about the character RAM - where he lives and anything, they can find out about him.

Cue these video clips to look for further detail: You may need to replay each clip a few times to give students time to look for details. Ask students to add to or clarify the information they have collected about this character.

Clip 1: The Dream Team, ep 1 vol 1

Begins with: Beginning of episode with titles.

Ends as: Ram says: 'Hello?'

Length: approximately 3'

Fast forward to:

Clip 2: The Dream Team, episode 1 vol 1

Scene: Ram's flat Starts: 4' 55" into episode.

Begins as: Ram leans out of the flat window.

Ends as: Ram says: 'Here I come.' Length: approximately 7"

Post-viewing

Distribute copies of Ram's and Mike's [character profiles](#) and [back stories](#) to students. If necessary, explain to students what a 'backstory' is and the functions it serves in script development.

Explain to students that an earlier version of Ram's backstory states that he is 'Mike's next-door neighbour' and that 'Ram's bedroom is in the basement of the family house'.

A small group activity

Put the A3 activities sheets at different places around the room (on walls or tables) together with marking pens.

Divide students into pairs (or at most threes) and give them a specified amount of time to move around the classroom and write something on the sheets or post-its in response to each one. Depending on the maturity of the class, and the size of each group, this could be between four and eight minutes per sheet. It is not necessary for every group to respond to every activity although, if it is clearly holding their interest, there is no reason why they shouldn't.

Tell students that if they are not the first group to respond, they should try to write/draw something different from previous responses. It may be necessary to allow a little more time at each workstation as this activity progresses - emphasise to students that you are interested in them thinking up new ideas.

Students themselves could also think of other possibilities for 'lost worlds' in relation to Ram's room.

Class discussion

Once students have attempted as many of these activities as seems possible, ask the whole class to look at the accumulated responses to each. Briefly consider the alternative suggestions that have been made in each case and encourage students to voice their judgments as to which suggestion is most appropriate, convincing, amusing, etc.

2. Virgil's Backstory

In this activity students create a backstory for Virgil and develop a storyline to explain what happened to him in his 'missing years' - that is, after he was trashed by Alex and before he reappears in The Crash Zone.

Preparatory activities

This activity assumes that students have viewed **The Dream Team**, ep 1 vol 1, and **Identity Crisis**, ep 2 vol 1.

Pre-viewing

Distribute copies of [Bec's character profile and her back story](#), [Alex's character profile](#), [Alex's and Catalyst's backstories](#) and [Virgil's character profile](#). If necessary, remind students of what a 'backstory' is and the functions it serves in script development.

Point out to students that whereas a character like Bec has a backstory that goes 'back' to her parents' first meeting (that is, Bec's backstory begins before she was born), Virgil is given no past. All we learn about Virgil's past is in the episodes themselves. When Virgil first appears, in **The Dream Team**, ep 1, he doesn't have an identity - although later, in **Identity Crisis**, ep 2, he denies having amnesia ('No', he says, *'I'd remember that'*).

Replay this scene from **Identity Crisis, episode 2**:

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone (ACTF)

Start: Approximately 4 minutes into episode.

Begins as: Virgil appears on all monitors and says: *'Hey! Yowser! What's happening?'*

Ends as: Virgil says: *'I looked up "me" and there was nothing.'*

Length: approximately 2' Fast forward to:

then this scene:

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone (ACTF)

Start: Approximately 18.5 minutes into episode.

Begins as: Alex says: *'Nigel, do you remember the AI-2000 project?'*

Ends as: Bec says: *'Great idea! You're "on" Nigel!'*

Length: approximately 1'30"

Remind students that Alex says that after she trashed the AI-2000 project *'it must have*

floated out there. in the ether' and that it is now like 'a ghost that's grown! It's taught itself! It's evolved in cyberspace.'

In small groups

Challenge students to work in small groups to devise a backstory for Virgil and outline how some explanation for Virgil's 'evolution' from the AI-2000 project could be woven into an episode of **The Crash Zone**. Encourage them to be specific about scenes, action and sample dialogue. Some suggestions or examples could be:

- At the very moment that Alex trashed the AI-2000 project a power surge reconfigured its codes and it instantly became an AI with all the powers we now see in Virgil. His 'amnesia' is the result of a crucial part of his memory being damaged when he accidentally wandered into a particularly vicious game of Duke Nukem. One day when Mike is playing this game in an arcade, Virgil does exactly the same thing and unlocks his memory.
- Alex is right: Virgil grew and developed 'in the ether' but, like a child in its mother's womb, he has no memory of this until he is 'born' in **The Crash Zone**. One person has known about this all along: Nigel. In fact, Nigel 'assists' Virgil's 'birth' but doesn't tell anyone until...
- Alex is wrong: Virgil has nothing to do with the AI-2000 project she trashed, although his real creator would like her to think so. Virgil's origins become apparent when **The Crash Zone** is visited by some Men in Black.
- The AI-2000 project that Alex trashed evolved into a true AI - much smarter than Virgil - and with a female persona who calls herself Alexis (in fact, she uncannily resembles Alex). Virgil is her 'son' and one day she turns up in **The Crash Zone**: *'He's not an artificial intelligence', she begins to explain, 'he's just a very naughty boy.'*

Presentations to the class

When students have developed their versions of Virgil's backstory, each group should present them to the whole class (which may include acting out key bits of dialogue where appropriate). Compare the different versions of Virgil's backstory and encourage students to voice their judgments as to which version is most convincing, amusing, etc.

3. Hidden Talents

In this activity, students speculate about some of the talents that characters in The Crash Zone might have that are not revealed in the series.

Pre-viewing

You can introduce this activity by sharing a personal anecdote about someone you thought you knew well who had a hidden talent (or some sort of expertise) that you never suspected; found out in someone's eulogy or obituary.

Ask students to share similar examples from their own experience. Draw attention to how circumstances shape our knowledge of people - for example if we only meet people at school, we might not find out much about what they do or are interested in outside of school. Point out to students that in **The Crash Zone** there are many opportunities for us to see the kids as hot-gamers and techno-whizzes, but we only get occasional glimpses of what else they can do.

View this clip:

CLIP: Big Business, ep 4 vol 1 **The Crash Zone**

Scene: Bec's room

Starts: Approximately 16' 46" into episode.

Begins as: Bec is in her room flipping through a book when she hears Virgil say: 'Surprise. Nice room. Melrose place meets Bambi'.

Ends as: Bec feeds a carrot to Predator and Ram says: 'A vegetarian?'

Length: approximately 2' 45"

Relate the sequence of events in this clip to the previous discussion. Here, in circumstances very different from those we usually see, Bec reveals a hidden talent as a dog handler/whisperer.

Invite students to speculate about other characters' hidden talents: who would have thought that Nigel moonlights as a stand-up comedian? Or that Pi was well on the way to being a terrific ballet dancer but grew too tall? Group work or homework Either as a group task or as an individual homework assignment, ask students to outline a brief sequence in an imaginary script for **The Crash Zone** where we discover that one of the key characters has a hidden talent that we never suspected. Don't forget Virgil! If this activity is done as a small group task, students can act out the scene in which the character reveals their hidden talent.

4. Creating Episode 14

Preparatory activities

In this activity students imagine an 'Episode 14' for **The Crash Zone**. This activity assumes that students have viewed several episodes, including the final episode in the series, **The Outsider**, ep 13 vol.3. If not, view or review one or two episodes and **The Outsider**.

Tuning in

Print out and distribute copies of **The Crash Zone** major story arcs and the episode synopses to students.

Discuss with students the idea of narrative resolution - that is, most stories have a sequence and structure that involves the resolution of a conflict or restoring of equilibrium - this may be the solving of a crime or puzzle, the righting of a wrong, the end of a heroic quest etc.

Viewing

View the episode **The Outsider**, ep 13 vol. 3.

Ask students to think about the final episode of **The Crash Zone** in terms of the resolution of tensions, conflicts or disturbances to the equilibrium of the main characters. For example, in episode 12, the one prior to **The Outsider**, Marcello is thrown 'off course' by being fired from Catalyst. Marcello's story is resolved when Alex reinstates him after he rescues Virgil from Sunijim.

Sometimes narrative resolutions are merely hinted at. For example, the question that is posed about Mike and Pi's relationship in the major story arcs - will they 'find' each other or end up killing each other? - seems to be answered in the final scene where they are seated next to one another at the party. Their eyes meet. Pi smiles. A little later Pi puts her arm around Mike without anyone noticing.

Discuss with students how well they think this hint of a narrative resolution works. Is it sufficient to end the series with this suggestion of Mike and Pi 'finding' each other, or would they prefer a more definite or obvious resolution such as in a typical "Hollywood" formula?

Small groups

Divide students into groups to develop a story outline for episode 14. Encourage students to form groups around some sort of thematic interest. For example, students could nominate which major character in **The Crash Zone** they most closely identify with (or 'like best' or simply find most interesting) and form groups based on generating the most satisfying narrative resolution of the series for that character.

Share with the class

Invite each group to share their version of episode 14 with the whole class. · Discuss the different ways in which the new 'final' episode resolves the various storylines within the series compared to the existing episode 13.

Character Backstories



Virgil

He's really.... something.

And wherever he came from, it looks like he's here to stay. VIRGIL is an artificial intelligence who is loose out in the ether. He can pop up on the screen of any computer hooked up to the Net and somehow, he found the CRASH ZONE. It seems as if he's actually alive. He clearly has a voice recognition capability and can talk back to a PC operator just like a real person. VIRGIL seems real, he's active and he just won't shut up.

VIRGIL is also growing. At first, he's rambling and funny in a disjointed, 'Robin Williams' kind of way. Even though he's got quirky 'alien' kind of qualities, he quickly becomes one of the CATALYST gang and a firm friend of the kids. Sometimes confident, sometimes a party dude, sometimes a stirrer, VIRGIL is right there with the kids, getting involved in their problems, sharing their adventures. He's very human. He seems to 'feel' everything and can even 'catch a virus' on the odd occasion. We soon realise that VIRGIL is there for a reason. He's searching for clues to his identity. Why here? He's not sure. But somehow his instincts have drawn him back to the person who created his original programming, ALEX. ALEX is shocked when she realises VIRGIL is the Artificial Intelligence program, she created at SUNIJIM; the one she thought she trashed. Instead it seems the program has been floating out in the 'ether' and has grown a consciousness, a mind, a character and a sense of humour.

VIRGIL is very happy to have found ALEX and the kids. He still feels a little confused about his past. He figures he's been, if not dumped totally, certainly neglected. After all, he was 'trashed' wasn't he? He's keen to try to understand life on the other side of the screen. He wishes he could get out there with the others. VIRGIL often tries to be all things to all people. He can morph into an 'Elle MacPherson' type so that MIKE can practice talking to women; he can become a 'Grandma' to BEC if she needs to talk to someone; he can even look like Donald Trump if MARCELLO needs advice on some money-making scheme.

To VIRGIL, cyberspace is a real world. As real as your kitchen. He knows it backwards and forwards. He's seen it change and grow huge in the last few years. To him it's like a busy city that he's finding harder and harder to get around in all the traffic. 'It used to be such a quiet little town'. He knows all the 'locals' like best buddies. Out in the ether somewhere, he

hangs out with 'Donkey Kong', swaps tall tales with the 'Mario Brothers' and competes with 'Duke Nukem' for the affections of 'Lara Croft from Tomb Raider'. (He can't stand those 'Lemmings' guys; no imagination. They're like sheep'). He's even seen the cyberspace retirement village where the elderly 'Pacman' and those 'Space Invaders' sit around bored stupid these days.

Sometimes he pops into games that are being tested or other programs that are running. Sometimes he's a nuisance, sometimes he's absolutely invaluable as he seems to be able to access all kinds of data on any subject on the Net. He's often over enthusiastic in his endeavours to help everyone. Quite often his 'help' creates more problems. His approach to helping is to blunder in with a lateral line of thought, pursue it until he hits 'a wall' then turn 180 degrees and work in the opposite direction until he hits another wall, etc. It's quirky, weird, gets strange results, and is highly entertaining if not effective. Under pressure he might resort to avoiding blame, saying things like 'Insufficient Memory' or 'I'm sorry, a program of mine unexpectedly quit'.

VIRGIL is aware that he's special, but he's also sometimes a bit lonely. There's really no-one else like him in the world. He's a program, yet he's completely unpredictable and spontaneous. It's really starting to look as if he's alive.

The Games People Play

Program:	Crash Zone
Year Level:	Year 5 to Year 8
Curriculum Study Areas:	English, Technology
Themes/Topics:	Self and Relationships
Description:	These activities explore technology processes through a focus on the design, construction and evaluation of games.
Resources:	Truth Hurts ep7 vol 2 The Crash Zone, ACTF Williams, John and Williams, Anthony (eds) .1996, Technology Education for Teachers, Macmillan. South Melbourne.

Lesson plan:

Truth Hurts demonstrates that:

- designing solutions to technology problems is not quite as simple as design, make, appraise. It is much more complicated and 'messy' than this neat formula suggests
- problems and solutions interact: designers may start with one specification of a problem, develop an idea for a solution, and then evaluate it to learn more about the problem. In developing a design 'solution' to a technological problem, the problem itself (and our understanding of it) often changes. In Truth Hurts, Bec and Pi are asked to design a game about boys for girls to play, but by the end of the episode they have redefined this design 'problem'.
- design is a social process: design problems arise in social contexts and their solutions usually arise from the activities of many people - sometimes working alone, sometimes collaboratively - who bring different understandings and skills to the design process. Throughout Truth Hurts, Bec and Pi's efforts to 'solve' their game design problem are shaped by the experiences of others.

As part of this unit, students design and make some games for themselves or modify an existing game to improve it in some way.

1. Tuning in

1.1 First viewing and response

View Truth Hurts

In small groups, give students time to discuss their immediate responses to the episode. Ask the groups to list and discuss the key problems faced by the characters in the episode.

Examples

Bec and Pi: problem of designing a computer game about boys for girls;

Mike: wants to get his parents back together.

Mike: wants to get above level two in Trillin.

Ask the groups to identify and compare the ways in which the various characters try to resolve their respective problems.

Prompt

'In what ways does Mike's attempt to get his parents back together compare with Bec and Pi's efforts to design a relationships game?'

Groups report to class about the results of their discussions

Encourage students to be specific about scenes and dialogue which illustrate the general points they are making. For example, if students make a generalisation that you can't treat human relationships like a computer game, ask for examples of how this is illustrated in the episode.

Extension

You may want to draw attention to specific lines of dialogue so that you can focus attention on the ways that everyday language use may lead us to discuss different kinds of problems in similar terms. For example:

Virgil states: ". I'd calculate that the perfect way for a girl to strike up a conversation with a boy she likes would be... "

PI says, "I'm working out the lines of logic for my game. I'm playing the odds. (and later in same scene). So how can you work out if you're really compatible with someone?"

In many contexts (such as school mathematics) we use 'calculate' and 'work out' to mean much the same thing. These expressions carry a clear implication that there are

predictable 'lines of logic' that can lead us to a 'correct' answer to a question. Asking students to consider 'are you really compatible with someone?' is that type of question. For a real-life example of people taking the possibility of 'calculating' compatibility seriously see the news item 'Blind-date radio station wedding broadcast', The Age, Melbourne, Wednesday 27 January 1999, p. 8.

1.2 Homework - students investigate games

Ask students to make a list of all the games they have at home - board games, card games, strategy games and electronic games. Ask them to group these games into at least two different categories that makes sense to them - for example, electronic and non-electronic games, or games for one player and games for two or more players.

Ask students to choose their favourite game of each type for each of the last five years and display these choices in a chart. For example:

Simon's favourite games (Feb 1999)			
Age	Games for 2+ players	Computer games	Other
6	Thomas the Tank Engine jigsaw game	Where in the world is Carmen Sandiego?	Words..To Go!
7	Chess	Midnight Rescue	Adventures of Batman & Robin
8	Trivial Pursuit	Sim Ant	Game Boy Gallery
9	Monopoly	Cricket 96	Donkey Kong 3
10	NBA Jam Session	SimCity 2000	Pokemon

Each student will bring to class

1. their chart and one or two of their current favourite games and,
2. if possible, one example of a favourite game from about five years ago (or, if they have a younger brother or sister, one of their current favourites).

1.3 Preparing for the Game Fair

Tell students that they are going to have a 'Game Fair' and its purposes are:

- to allow them to become familiar with any games they have not played previously;
- to reassess games, they played when they were younger (or are now being played by younger children);
- to provide a range of real examples that will help them to develop an approach to evaluating the qualities of games.

1.4 Evaluate the games

The whole class collaboratively develops an evaluation checklist to assess all games. To assist students with this, they could look through some recent issues of Choice magazine and note some of the criteria commonly used for evaluating all types of household goods. For example:

- easy to follow instructions;
- safety features;
- length of guarantee, etc.

Discuss with students how these criteria can also apply to games. Then apply the 1-3-6 consensus technique:

Individually, students write down a specified number (e.g. four) of qualities they expect all games to have and rank them in order of importance.

In small groups, students work to reach agreement on a combined list of the (say) six most important qualities they expect all games to have.

Combine groups of three to make groups of six. these groups work to agree on a combined list of (say) the eight most important qualities they expect all games to possess (depending on total class size, you might want to vary these group sizes slightly - sometimes 1-3-7 or 1-4-8 will work better than 1-3-6).

Depending on total class size, you might want to vary these group sizes slightly - sometimes 1-3-7 or 1-4-8 will work better than 1-3-6.

Consolidate results from all groups into a whole class list, again reducing the total number of qualities. For example:

- ease of use;
 - instructions;
 - presentation;
 - durability;
 - safety. Etc.
- The final number of qualities is not particularly important - it is the process of discussing, debating and reaching consensus on the criteria for evaluation that is the valuable learning experience

Record the evaluations

Record the agreed evaluation criteria on a prepared spreadsheet (computer, butchers paper, blackboard etc). Give all games brought to class a number. Agree about a way of coding assessments of the game e.g.:

- 10 = really good, excellent
- 5 = pretty good, OK
- ? = don't know, doesn't really matter
- 2 = not all that good, pretty ordinary
- 1 = really bad, useless

Younger students might use ✓
and ✗

Students complete their individual spreadsheets for each of their 2-3 games e.g.:

Game evaluation sheet										
Criterion	Game									
	1	2	3	4	5	6	7	8	9	10
ease of use	10	10	5							
instructions	5	10	5							
presentation	10	10	4							
durability	4	4	1							
safety	?	5	1							

1.5 The Game Fair

The main purpose of this activity is to raise awareness of a wide variety of games as design products and of problems and issues in their appraisal. Every student should have

brought their chart(s) and choice of game/s to class.

Divide the class into two groups.

<p>Option 1 smaller classes</p>	<p>One group operates their Fair 'booths' and they sit with their charts and selected games so they can discuss their choices and demonstrate any games students are unfamiliar with -the remaining students circulate around the booths to look at the games. The number of students able to present at the one time may be limited by the number of computers available or special arrangements may need to be made to demonstrate these types of games.</p>
<p>Option 2 larger classes</p>	<p>One group operates their Fair 'booths' and they sit with their charts and selected games so they can discuss their choices and demonstrate any games students are unfamiliar with -the remaining students circulate around the booths to look at the games. The number of students able to present at the one time may be limited by the number of computers available or special arrangements may need to be made to demonstrate these types of games.</p>

Whichever method you choose, it is important to encourage students to share their assessments - every game will be one of its owner's 'favourites' so if it is given a poor rating by other students some vigorous discussions and debates may result!

2. Learning the technology design process

Here we re-view Truth Hurts, focusing on identifying the steps in the technology design process.

2.1 On the board

Put a large version of this table on a whiteboard, chalkboard or butchers' paper.

Technology Design Process - Truth Hurts			
Investigating	Devising	Producing	Evaluating

Ask students to make a copy for themselves on a sheet of paper or in their workbooks. Briefly discuss the meanings of these terms with students.

2.2 View Truth Hurts again

While viewing the video pause, freeze or replay key segments so that students can observe the characters doing specific tasks, (e.g. investigating) and note these on their charts. You could designate some students or particular groups as process spotters to help with the analysis. Discussion and debate of these processes will help students to know what they need to do when working on their own game.

The chart you will eventually produce should look something like this (however, students should be encouraged to describe these activities in their own words):

Technology Design Process - Truth Hurts			
Investigating	Devising /Planning	Producing/Making	Evaluating
<p>Bec and Pi bantering with the guys: 'we should put that in the game'</p> <p>Virgil's 'random chat analysis' of what boys talk about</p> <p>Virgil's report: "Everybody lies...Check out the Net!"</p> <p>Bec and Pi question Ram: 'Would you buy a game where... you might lose?'</p>	<p>Alex, Bec and Pi brainstorming 'a game about boys'</p> <p>Bec's and Pi's card databases, Pi's digital spreadsheet</p> <p>Pi: '... our game isn't about boyfriends anymore';</p>	<p>Pi is 'working out the lines of logic' for her game</p> <p>We see the game prototype on Pi's PC and Mike entering his parents' profiles</p> <p>Pi working on her logic paths, Bec surrounded by cut-outs, cards, labels, graphs.</p>	<p>Bec; "this is harder than I thought"</p> <p>Bec and Pi share their 'problems' with Alex</p> <p>Virgil's evaluation: 'Pi and Bec are really getting the hang of the relationship stuff...'</p> <p>. Pi: '... we don't seem to be in control [of the game]'</p> <p>Bec and Pi tell Alex: 'It's not working... our game is off the rails'</p>

	Bec: 'It's about girlfriends now'		Pi to Mike: 'It's a dud'
--	-----------------------------------	--	--------------------------

One of the advantages of charting the processes observed in Truth Hurts in this way is that it provides a visual 'map' of the nonlinear nature of the process. It is not a predictable sequential investigative format. If necessary, point this out to students.

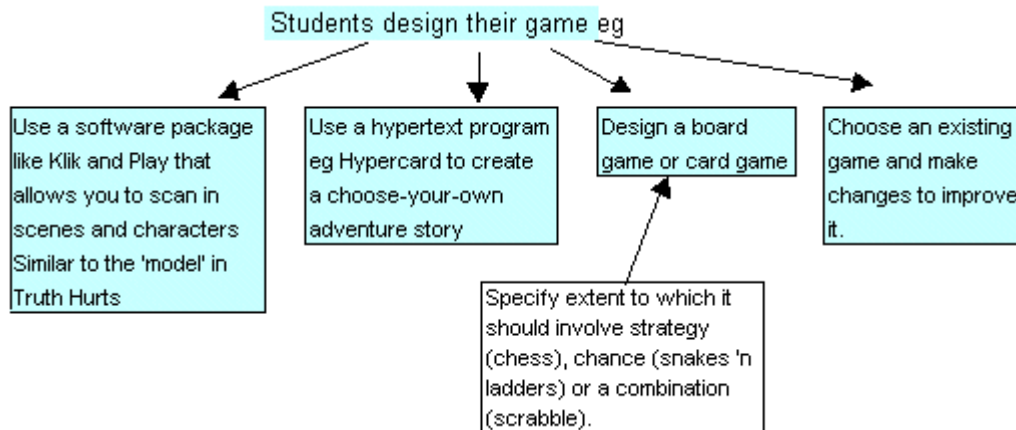
3. Deciding directions/getting organised

3.1 Choosing a game design task

Remind students they are going to design, make and appraise a game or modify an existing game. You may wish to suggest a target audience for the game or allow students a choice, e.g. to design a game for their own age group or for a younger audience.

Discuss some of the issues and problems they may encounter e.g. designing games for themselves may require less 'audience research' but games for younger children may require more investigatory work but a less complicated design/production activity. To reinforce this point, it would be useful to compare two games designed for different age groups brought to the Game Fair. Compare them in terms of the language levels they use or assume, the types of graphics or illustrations that are used, and the format for providing instructions, etc.

3.2 Design the game



As students organise themselves to design and make their game, ask them to monitor and record their procedures on a Technology Design Process chart as they did for Truth Hurts. Provide butchers' paper for each group so they later can display their progress and processes to the whole class.

While students are working on their games

- Emphasise the value of maintaining the chart recording their progress and processes. The charts will provide a useful register for developing their skills of individual and group reflection and for developing their conceptual understanding of technology processes and the language in which these processes are socially negotiated. For example, if a group has an empty or nearly empty 'Investigating' column, this should prompt students to ask: Have we investigated enough? If so, how? Is it summarised adequately in the chart?
- You may also want students to maintain personal records of their progress, such as a design 'log', diary or journal in which they record their ideas, changes to their designs, reflections, self-evaluations and/or peer-evaluations.
- Refer to the activities of the characters in Truth Hurts whenever this is appropriate. The video text in this case is not just an 'illustration' of the technology processes on which you want students to focus but also provides a story through which the meanings of the concepts are enriched. For example, with a group of students who are determining the players' goals in their computer game, you might say: 'Remember when Alex was talking to Bec and Pi about their game, she said, "Maybe we're designing a game without one clear solution. Maybe different players should create different outcomes for themselves?" Is that what you are doing, or do you want one clear solution?'
- Encourage students to try out their games as work-in-progress with other members of the class or with younger children, as appropriate. When students come to summarise such activities in their charts, they may have difficulty in deciding whether to put them in the 'Investigating' or 'Evaluating' column. This is a useful learning experience - such terms are ambiguous and could quite easily both relate to a particular activity.

4. Reflect and evaluate

4.1 Another Game Fair

Students will already have had many opportunities to reflect on their games and the processes of producing them, but this sequence of activities should end with some celebratory sense of closure. A final Game Fair where groups demonstrate their games and give an account of their processes to the class is one way of doing this. Self and peer assessment of the games (using the same evaluation schedule developed previously or modified in the light of their experience) could also take place at this stage. If at all possible, such a final Game Fair should be expanded to include students from other classes, other teachers or parents.

4.2 Reflecting on the representation of technology processes in Truth Hurts

Create new groups by bringing together one member from each of the game producing groups. Ask the groups to discuss these questions:

- On the basis of your experience of designing a game, how accurately did Truth Hurts represent the processes involved? In what ways was your experience similar to Bec and Pi's? How was it different?
- How well did Truth Hurts dramatise the experience of designing a game in collaboration with others? What did you like/dislike most about Truth Hurts as a story?
- Pi says 'We're designing this game, but. We don't seem to be in control'; and, later 'Sometimes it's like the game is playing us'. What do you think Pi means by these statements? Did you have any similar experiences when you were designing/making your game?
- Like a computer game, the Truth Hurts episode is itself a technology product. Make up another table as follows and suggest at least two activities in each column that you think the makers of this episode had to do to produce it.

Technology Design Process - Truth Hurts			
Investigating	Devising	Producing	Evaluating

N.B. Students (particularly Years 7 & 8) are very used to playing sophisticated games they find on the internet, so there will need to be tight ground rules at the commencement of this activity.

The Robin Hood Factor: creativity, ethics and piracy!

Program:	Crash Zone
Year Level:	Year 5 to Year 9
Curriculum Study Areas:	English; Humanities and Social Sciences; Technology
Themes/Topics:	Ethics, Values, Justice; Civics and Citizenship, Imagination/design
Description:	Many students think it is okay to copy other people's software programs and Internet pages. They are either oblivious to intellectual property laws or they don't know about them or don't care, and they are unaware of the potential prosecution and fines regarding this practice.
Resources:	Sabretooth ep 9 <i>Crash Zone</i> , ACTF Other <u>Australian inventions that changed the world</u> worksheet <u>IP Access</u> Stationery - paper, coloured pencils and pens and bits and pieces to make things with or a multimedia authoring package e.g. kidpix, Kahootz, even MS Word draw tools.

Lesson plan:

This lesson plan introduces learning activities where students:

- create something that may be needed in the world
- learn how to legally protect their idea
- explore the problems caused by software pirates
- discuss and debate the ethics of software piracy

Valuable ideas

Distribute to students the worksheet titled [Australian Inventions that changed the world](#). Discuss these inventions, their importance and their social and economic impacts e.g. the pacemaker has given many people better quality of life and extended their lives. This has enabled them to be productive contributors in the community. It has created a new industry employing many people and providing them with incomes. The black box has provided data from plane crashes that has enabled better aeroplane design and better pilot training such as "Sims". This has prevented further loss of life.

Discuss with students any other Australian inventions they know about. A list can be found on this web site: <http://apc-online.com/twa/>

Ask students to think about an invention the world needs, and to complete the handout by giving their invention a name, briefly describing what the invention will do, and drawing a quick sketch of the invention in the box provided.

Ask volunteers to share their inventions with the class. Do a quick survey to see who would be interested in buying each invention if it were on the market.

Designing an invention

Students might use multimedia authoring software, a drawing program, or pencil and paper to further develop the design of their invention. They can draw the outside of the invention, show how it works, and draw the products it makes, if any. The design can be annotated with a brief explanation of why their invention is useful. Display the designs around the classroom.

Protecting an idea

Discuss with students how they can prevent others copying or stealing their idea. Some students might already know about patents, copyright and trademarks. Mention these briefly and then ask students to form pairs to undertake an Internet investigation of this at:

[IP Access](#)

Students should do these activities:

1. Find out what steps you need to take to protect your idea for an invention. At the ipyonline web site home page click on the strictly innovation icon. Click on the steps from 1-10 and jot down a summary of the steps. Find out what these terms mean: competitive edge, confidentiality agreement.
2. Click the Ideaopia icon and play the game
3. Write down any terms new to you e.g. patent law
4. Jot down notes about each invention you read about during the game.
5. Draw up a table like this one and fill it in while playing the game.

What the game says about....			
Trademark	Patent	Copyright	Other tips
Your trademark works only in Australia			Don't share your design until its patented

Discuss with students the notes they took down and clarify any terms or notes they don't understand. Discuss the inventions they wrote about. The discussion should consider these questions:

- How might the inventor have benefitted from his/her invention?

- How did the invention improve people lives?
- How did the invention affect employment and in what industries?
- What inventions are similar to that invention i.e. have others copied the idea?

Intellectual property

Explain to students that trademarks, patents, and copyright are legal ways people can protect their intellectual property (IP) - ideas and inventions.

Divide the students into groups of four and set each group the task of finding out about one of these types of protection: trademark, patent, copyright, design, circuit layout rights, plant breeding rights.

Each group should find the answer to these questions:

1. Is your idea automatically protected by this type of IP law?
2. What types of ideas does this IP protect?
3. What does the IP law protect you against?
4. Is the protection worldwide? Does it need to be?
5. How long is your idea protected by this IP law.
6. Describe two examples of ideas protected by this IP law. You may need to search the Internet or back copies of daily newspapers to find examples for circuits and plants.

Students will find answers to the above questions at <http://www.ipaustralia.gov.au>

Sharing knowledge

Each group should appoint one or two speakers to present their findings to the class. A very useful activity would be for students to prepare a PowerPoint slide show to support their presentation. The tasks to prepare the presentation could be assigned among the group:

- write the talk
- design the PowerPoint slide show - select the design, format, etc
- collect appropriate images from web site e.g. for patents, a picture of a lawn mower
- edit the text on the slides to ensure it is brief but clear
- make the presentation - may need one to talk and another student to run the PowerPoint slide show.

Create a trademark

Ask students to find examples of trademarks. Discuss why trademarks are important. Look at famous logos (e.g. McDonald's, Coca Cola, Commonwealth Bank) and discuss what makes a good logo?

Students will use the ipponline website to create a trademark. They should work in the pairings used earlier. Pairs allows students to discuss problems and share ideas.

Once at [IP Access](#) students should click on the trademark omatic icon. They can view the gallery to see what other students have created. They then create their own trademark for

their invention. Students can submit their trademark to the [ippyonline](#) website for inclusion in the gallery.

Alternatively, students can draw their trademarks with coloured pencils and paper. Display the trademarks in the classroom. (At this time, it is not possible to print trademarks created with [ippyonline](#) so students will need to capture the screen. On a Windows PC, click the Print Screen button, open MS Paint, select Edit... Paste. ... Print)

Summary activity

Students again form pairs to visit the innovated website at [IP Access](#). At the home page they click the activities icon in the top left of the screen. This displays a page offering three games. Students play It's a what's it. This game reinforces what students have learned about protecting ideas.

IP - ethics and the law

Even though protected by law, ideas can be stolen. Some people steal them to make money by selling them to others or by copying and passing them off as their own. Some people steal ideas to give away for free. This second purpose is rife with the growth of the Internet and personal computers because of:

- the difficulty of finding people who copy others ideas and present them on their own home pages
- the availability of code breaking software
- the availability of computer hardware to make copies of CDs and DVDs

To tune students into the motives and ethics of protecting and stealing IP, they will view a TV program titled **Sabretooth**, an episode of the *Crash Zone*. This show is about a group of kids who test computer games for Catalyst, a software company. Tell students that lots of IP these days are computer programs or software. They are going to view a TV program about software piracy - stealing computer programs. Give students a copy of the issues the class will discuss after the viewing so that they can tune in or be alert for those segments that raise the issues.

Following viewing the class as a whole could discuss these issues, or small groups of students could discuss one issue each and report to the class:

- which types of IP law could Catalyst use to protect Ram's magic basketball, Alex's holographic projector, and her computer game titled The Ring?
- Marcello hacked into the SunnyJim company's computer system to retrieve software they had stolen from Catalyst. Did Marcello break the law? Was he right to break in? How would you have dealt with the problem?
- Lisa said, "Sometimes you have to bend the rules if the cause is just". What do you think about this statement? Did the kids break the law by using the bugged basketball? Were they right to use it?
- Sabretooth hacked into a computer system, stole computer graphic software and made it available on the Internet for free. Ram supported this because it meant he could get software that he couldn't afford to buy. Should all software be available for

free? What would be the effect on Catalyst if their software was given away to anyone who wanted it?

- Sabretooth hacked into a businesses' computer system and stole plans for a solar powered car engine and published them on the Internet. Was Sabretooth's action right? What were the Asian companies responsibilities?

Students should have enough information to write an essay or prepare a debate. The topic is:

Pi claimed that Sabretooth was a 'hero'. Marcello said Sabretooth was a threat to free enterprise. What do you think? Prepare a sound argument to support your position.

In preparing their responses students should consider these issues about stealing IP:

- what is 'right' and 'wrong'
- what the law says
- who benefits and who loses
- consequences of a) stealing IP and b) giving it away.

Some of the essays could be published in the school newsletter or on the school web page. Students' responses should be interesting given that many of them may have made or obtained illegal copies of computer games or music CDs.

The Robin Hood Factor: creativity, ethics and piracy

Australian Inventions that changed the world!

Description of famous Australian inventions

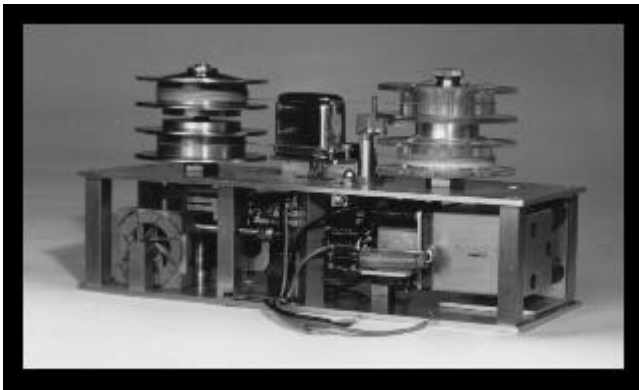
Pacemaker



"He was a beautiful and smiling young baby with dark eyes, but with a severe heart problem, which was diagnosed early as ventricular arrhythmia, caused by a congenital syndrome. So, Dr. Ernesto Aranguiz got himself ready to prepare for this extraordinary and uncommon implant operation which was to be the first baby pacemaker implant in his professional life."

Source: <http://www.medfacts.com/crdiodoc/pacemkrs.htm>

The Black Box flight recorder



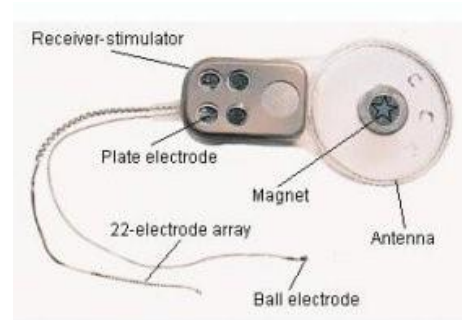
The idea of a crash and fire protected device to record both the voices and the instrument readings in the cockpit was conceived by Dr David Warren, a young scientist at ARL. Following an unexplained aircraft accident in Queensland in 1960, Australia became the first country to make flight recorders mandatory in aircraft. Every airline in the world now flies with a flight data recorder or "Black Box".

Source: <http://www.dst.defence.gov.au>

Bionic ear

"I couldn't believe this was true. I could hear. Yes, I could hear just fine. I could hear the radio, the clicker on my car's turn signal, the revving of the engine, everything. I was so excited that day, I stayed up all night just making little noises. Wow!"

Source: <http://www.medoto.unimelb.edu.au>



The ute



"I want a car I can take the family to church on Sundays and take the pigs to market on Mondays."

This farmer's comment led to development of the ute - a famous Australian icon.

Source: <http://www.holden.com.au>

What's in a Game?

Program:	Crash Zone
Year Level:	Year 5 to Year 9
Curriculum Study Areas:	English; Health and Physical Education; Humanities and Social Sciences
Themes/Topics:	Narrative Structure; Ethics, Values, Justice, Technology, Critical Literacy
Description:	These lesson ideas invite students to explore some of the ways of 'reading' computer games and interpreting their possible effects by examining storylines and other characteristics of selected games.
Resources:	Games People Play <i>Crash Zone 2 vol 4 ep 5</i> Other: Super Mario Brothers: what's the story? Worksheet and activities sheet . The Real Pocahontas at http://www.geocities.com/Broadway/1001/poca.html The Lost Colony at http://www.coastalguide.com/packet/lostcolony01.htm and/or Manteo & Roanoke Island History at http://www.outerbanks.com/manteo/history/ Australian Explorers at http://www.davidreilly.com/australian_explorers If computer and Internet access is not available the web resources needed for these activities can be downloaded and printed (one set per group of students). Teacher prepared worksheet as shown below. Materials for students to make a poster and/or hardware/software for students to develop and present a slide show, for example PowerPoint. Teacher References

Purpose of these activities

Computer games are among the most visible texts of the new information and communication technologies. For many parents, teachers and other adults, computer games have become a focus for their fears about social and technological change, including the changing nature of childhood and the threats to Australia's national and cultural heritage and

identity posed by the multinational (and predominantly American) products that saturate the market. However, there are several alternative ways of 'reading' computer games and interpreting their possible effects. These lesson ideas invite students to explore some of these alternatives by examining the storylines and other characteristics of selected games.

Through these activities students will:

- experiment with alternative ways of 'reading' selected computer games
- explore issues of gender, violence and cultural values in selected computer games
- discuss and debate the fears held by many adults about the possible effects (both good and bad) of computer games on young people
- cooperate with others in justifying a position.

Lesson plan:

Do a quick survey of the class to find out the following information (summarise results on black/whiteboard):

- how many students have played one or more versions of the Nintendo® game, Super Mario Brothers, or one of its many successors?
- if this is a mixed class, what proportions of boys and girls have played Super Mario Brothers?
- what aspects of the game did boys/girls find most challenging or interesting, e.g. fighting, getting to next highest level, etc?

If this is a single sex class, elicit anecdotal information about the above issues.

Super Mario Brothers: what's the story?

Distribute the worksheets, Super Mario Brothers: what's the story? and activities to students. Students should work in small groups, preferably with at least one member of each group having had some experience of playing Super Mario Brothers (or one of its successors).

This worksheet has been trialed with a number of year 7 students. With younger students it might be advisable to discuss the Super Mario Brothers example with the whole class and to elaborate a little on the key questions. For example, the last question in particular (is there more to the story?) invites students to think about abstract ideas that adults might call 'values' or 'ideology', but it is not necessary to use these terms. For example, you could draw attention to the use of terms such as 'discover' and 'conquer' in the worksheet and in the stories of exploration (why did the Europeans speak of 'discovering' America?), or they could be reminded that what Europeans saw as wilderness the native Americans called home. You might also ask: what is the difference between exploring, exploiting, conquering and colonising a 'new' world? Which terms suggest 'good' and/or 'bad' actions?

Depending on the age and maturity of the students, you might need to encourage students to work out some division of labour in their group when making the poster and/or PowerPoint slide show about the game they choose. Also encourage students to be creative and imaginative in suggesting what 'more' there might be to 'the story' of their game. The aim here is to encourage possible readings of the game.

When groups present their posters and/or PowerPoint/Keynote slide shows to the rest of the class, encourage other members of the class to agree or disagree with the group's findings and conclusions.

Computer games: witnesses for the prosecution

Each of the following statements is quoted or paraphrased from statements made in submissions from members of the community to the Parliament of Victoria's Inquiry into the Effects of Television and Multimedia on Children and Families in Victoria held between 1998-2000. Most of these 'witnesses' were arguing that computer games should be subjected to greater regulation and censorship and some were arguing that parents should restrict the amount of time their children spent on playing computer games.

'Computer games are very time consuming and absorbing pastimes. They often displace other, more worthwhile activities in which young people should engage, such as sport...'

'Many computer games are solitary and antisocial activities. They diminish the development of young people's social and interactive skills-not only among one another but also between young people and other members of their communities.'

'Playing computer games clearly requires a lot of skill. But they aren't really the sorts of skills that young people need...'

'Most computer games are multinational-and usually US-products. They threaten Australian national and cultural values and identity.'

'Computer games are weakening young people's inclinations and abilities to read books...'

'Many computer games are very violent. They encourage young people to see violence as an effective problem solving strategy and as a desirable characteristic of being male.'

'Many young people take on the values and ideologies of computer games uncritically, and then reproduce those values in their own lives'.

Divide the class into seven groups (this number can be varied by omitting some of the 'prosecuting statements' above or adding to them).

Give all members of each group a worksheet headed with one of the above statements as follows:

Worksheet for What's in a game?

Group number/name:

The statement your group will investigate is:

Many computer games are very violent. They encourage young people to see violence as an effective problem solving strategy and as a desirable characteristic of being male.'

Evidence for the above statement in **Games People Play, Crash Zone 2, vol 4, ep 5, ACTF 2001:**

- Mike playing the game 'BLOOD FEUD'
- etc.
- etc.
- etc.

When you distribute the worksheets, tell students that each group is receiving one example from submissions that were made to the Parliament of Victoria's recent Inquiry into the Effects of Television and Multimedia on Children and Families in Victoria.

Instruct students to watch **Games People Play, Crash Zone 2, vol 1, ep 5, ACTF 2001**, very carefully. Ask them to note down evidence that supports the statement they have been given. This should be done individually in the first instance.

View **Games People Play, Crash Zone 2, vol 4, ep 5, ACTF 2001**.

After viewing the episode, ask students within groups to compare their individual notes with one another. Ask each group to develop a response to the following questions (you might want to put these on a second sheet or on the reverse of the worksheet referred to above):

1. Which aspects of the young people's behaviours depicted in **Games People Play** supports the 'prosecuting statement' your group was given?
2. In what ways did the Games People Play episode illustrate how young people themselves deal with the concerns about computer gaming voiced in the 'prosecuting statement' that your group was given?
3. In the experience of members of your group, in what other ways do young people deal with these concerns?
4. Imagine that your group is called before a Parliamentary Inquiry into the Effects of Television and Multimedia on Children and Families as 'expert witnesses' (you are expert in being young!) and asked to respond to the 'prosecuting statement' your group was given. What would you say?

Provide opportunities here for students to put forward an argument effectively: evidence, using modals such as could, should

5. Develop a short (1-2 minutes) skit in which each member of the group acts as one of the characters in **Crash Zone 2**. This could be an outtake (a missing or lost scene from the Games People Play episode) and should illustrate one of the points you have made in response to questions 3 and/or 4 above. That is, the skit or outtake should illustrate one way in which young people themselves deal with an example of some adults' concerns about computer gaming. For example, consider the following dialogue from **Games People Play**:

BEC: BLOOD FEUD! Tried it. Totalled it. No brains required!

RAM: Wrong! I hear the Special Forces are using it to train guys how to kill.

MARCELLO: Yeah, right, Rammie! And they're using TOMB RAIDER to design bras, right?

Imagine that the next speaker isn't Mike, as in the episode you've seen, but that some of the other characters-Penny, Pi, Virgil or Alex-enter the argument.

When the small group work is complete, ask each group to perform their skit for the whole class.

Teacher references

Fuller, Mary and Jenkins, Henry (1995) Nintendo® and New World travel writing: a dialogue. In Jones, Steven G. (ed.) *Cybersociety: Computer-Mediated Communication and Community*. Thousand Oaks CA: Sage Publications. 57-72.

Parliament of Victoria (August 1998) [Discussion Paper: Inquiry into the Effects of Television and Multimedia on Children and Families in Victoria](#). Melbourne: Parliament of Victoria.

Parliament of Victoria (October 2000) [Report No.49: Inquiry into the Effects of Television and Multimedia on Children and Families in Victoria](#). Melbourne: Parliament of Victoria.

Critical Literacy in a Primary Classroom (PETA publication)

What's in a game?

Super Mario Brothers: what's the story?

Activities

These activities are to be completed with the Super Mario Brothers: what's the story? worksheet.

Do these activities in small groups. At least one member of each group should have had some experience of playing Super Mario Brothers (or one of its successors).

1. With which aspects of the above analysis of Super Mario Brothers do you agree? With which do you disagree?
2. Some popular accounts of New World exploration include stories with superficial similarities to Super Mario Brothers-including stories of attempted rescues and a kidnapped princess. For example, Pocahontas (part of whose life history is well known from a recent Disney movie) was a princess and was kidnapped. See 'The real Pocahontas' at <http://www.geocities.com/Broadway/1001/poca.html>

Another story of New World exploration is that of Virginia Dare, the first child born in what became known as the Lost Colony:

The image is one of the most haunting in American folklore: Eleanor Dare cradling her infant daughter as they struggle through a vast wilderness, seemingly forgotten by her father who brought them to an unfamiliar land, then left them to fend for themselves. In the four centuries since their disappearance, Eleanor and Virginia Dare have become true American heroines, players in an epic unsolved mystery that still challenges historians and archaeologists as one of America's oldest. In 1587, over 100 men, women and children journeyed from Britain to Roanoke Island on North Carolina's coast and established the first English settlement in America. Within three years, they had vanished with scarcely a trace. England's initial attempt at colonization of the New World was a disaster, and one of America's most enduring legends was born.

You can read more about the Lost Colony at

<http://www.coastalguide.com/packet/lostcolony01.htm> There is also a picture of the site of the Lost Colony at <http://www.outerbanks.com/manteo/history/>

Read one of the above stories ('The real Pocahontas' or 'The Lost Colony'). Could you turn this story into a computer game? How?

3. Assume for the sake of this activity that the Nintendo® Corporation deliberately modelled games such as Super Mario Brothers on European stories of exploring, exploiting conquering and colonising America.

Now read some accounts of early European explorations of Australia. For example, look in Australian history textbooks or at explorers' websites for descriptions of the expeditions of:

Robert O'Hara Burke at http://www.davidreilly.com/australian_explorers/burke/robert.htm

Edward John Eyre at http://www.davidreilly.com/australian_explorers/eyre/edward.htm

Ludwig Leichardt at http://www.davidreilly.com/australian_explorers/leichardt/ludwig.htm

To what extent do these brief accounts suggest that European explorers saw Australia, too, as 'an unlimited New World with infinite resources'? How might Nintendo® game designers recreate the experience of exploring Australia? Would it be different from or similar to games such as Super Mario Brothers? For example, try designing a game called Super Murri Brothers in which two Australian aborigines set out to rescue Burke and Wills!

4. Choose a computer game or simulation that is familiar to everyone in your group. Develop a poster or a short PowerPoint slide show to answer the same question that we asked about Super Mario Brothers: what's the story? Include sections titled: the official story; why is it appealing? and is there more to the story?

What's in a game

Super Mario Brothers: what's the story?

Explanation of the appeal of Mario Brothers games

The Official Story

Bowser, king of the Koopas, has invaded the Mushroom Kingdom, and turned all the citizens to stone. He has kidnapped Princess Toadstool, who is the only one who can break the spell and imprisoned her in his castle.

Two brave brothers, the Italian American plumbers Mario and Luigi, set out to rescue her and return peace to the Mushroom Kingdom. They explore vast unexplored spaces and encounter many strange creatures as they struggle to exert control over this strange new world and its curious resources.

Finally, the Super Mario Brothers confront and beat Bowser and his minions in a life and death struggle.

Why is it appealing?

Like most Nintendo® games, the obvious 'story' of Super Mario Brothers is not what makes it fun to play. Nintendo® ads talk about interactivity not characterisation ('Nintendo® gives you the power to choose') and about atmosphere not plot ('awesome graphics'). The main feature of Nintendo® games is the constant availability of spectacular spaces (or 'worlds') to explore ('eight challenging worlds, each packed to the brim with monsters and secrets'). Its landscapes dwarf the characters that are merely vehicles for players to move through the spaces. As one player said, 'Once I'm playing, I don't really care about rescuing Princess Toadstool. What matters is staying alive long enough to get to the next level or to see what's on the next screen'.

Characters are defined chiefly by the actions they can be made to perform (fighting skills, modes of transport). Plot elements of Nintendo® games (kidnapping and rescue, pursuit and capture, invasion and defence, fighting) are repeated from game to game (and over and over within a game) with little variety. Interest is maintained by the prospect of moving into the next space, mastering the next level, making a new playground in another world.

Is there more to the story?

Games like Super Mario Brothers remind some people of sixteenth and seventeenth century stories of how European explorers 'discovered' and 'conquered' the New World (that is, the Americas). These stories include Sir Walter Raleigh's (1596) Discoverie of the Large, Rich and Beautiful Empire of Guiana and John Smith's (1608) True Relation of Such Occurrences and Accidents of Noate as Hath Happened in Virginia. One literary critic complained that these travel journals conformed to a very predictable formula: 'We sailed, did and saw this and that, suffered and were saved or lost, made such and such encounters with savages, hungered, thirsted, and were storm worn, but some among us came home'. We know that when Shigeru Miyamoto developed the first game to feature Mario in the early 1980s, he was trying to make Nintendo® popular in America. Perhaps part of the appeal of playing Nintendo® games is that it provides an experience that recreates these voyages of 'discovery' and 'conquest'.

European explorers saw the Americas as an unlimited New World with infinite resources and Nintendo® games similarly offer players opportunities to discover vast new spaces for colonisation and exploitation. Nintendo® is not alone in associating computer software with voyages of discovery. For example, one advertisement for a Boston software company claims: 'Sir Francis Drake was knighted for what we do every day... The spirit of exploration is alive at The Computer Merchant'. A magazine headline reads: 'THE RUSH IS ON! COLONIZING CYBERSPACE'. So perhaps another 'story' underlies the appeal of Super Mario Brothers. Although you might be living in a very familiar, settled, regulated, highly industrialised and densely populated nation like the USA, when you play Super Mario Brothers you can explore, colonise, conquer and exploit strange and exciting new worlds- and not feel guilty about it!

Activities

These activities are to be completed with the Super Mario Brothers: what's the story? worksheet.

Do these activities in small groups. At least one member of each group should have had some experience of playing Super Mario Brothers (or one of its successors).

1. With which aspects of the above analysis of Super Mario Brothers do you agree? With which do you disagree?
2. Some popular accounts of New World exploration include stories with superficial similarities to Super Mario Brothers-including stories of attempted rescues and a kidnapped princess. For example, Pocahontas (part of whose life history is well known from a recent Disney movie) was a princess and was kidnapped. See 'The real Pocahontas' at <http://www.geocities.com/Broadway/1001/poca.html>
3. Another story of New World exploration is that of Virginia Dare, the first child born in what became known as the Lost Colony:

The image is one of the most haunting in American folklore: Eleanor Dare cradling her infant daughter as they struggle through a vast wilderness, seemingly forgotten by her father who brought them to an unfamiliar land, then left them to fend for themselves. In the four centuries since their disappearance, Eleanor and Virginia Dare have become true American heroines, players in an epic unsolved mystery that still challenges historians and archaeologists as one of America's oldest. In 1587, over 100 men, women and children journeyed from Britain to Roanoke Island on North Carolina's coast and established the first English settlement in America. Within three years, they had vanished with scarcely a trace. England's initial attempt at colonization of the New World was a disaster, and one of America's most enduring legends was born.

You can read more about the Lost Colony at <http://www.coastalguide.com/packet/lostcolony01.htm> There is also a picture of the site of the Lost Colony at <http://www.outerbanks.com/manteo/history/>

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4. Assume for the sake of this activity that the Nintendo® Corporation deliberately modelled games such as Super Mario Brothers on European stories of exploring, exploiting conquering and colonising America.

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Ludwig Leichardt at http://www.davidreilly.com/australian_explorers/leichardt/ludwig.htm

To what extent do these brief accounts suggest that European explorers saw Australia, too, as 'an unlimited New World with infinite resources'? How might Nintendo® game designers recreate the experience of exploring Australia? Would it be different from or similar to games such as Super Mario Brothers? For example, try designing a game called Super Murri Brothers in which two Australian aborigines set out to rescue Burke and Wills!

5. Choose a computer game or simulation that is familiar to everyone in your group. Develop a poster or a short PowerPoint slide show to answer the same question that we asked about Super Mario Brothers: what's the story? Include sections titled: the official story; why is it appealing? and is there more to the story?

Where in the world is... Cyberspace?

Program:	Crash Zone
Year Level:	Year 5 to Year 9
Curriculum Study Areas:	English, Humanities and Social Sciences
Themes/Topics:	Our Place in Space and Time; Film Language
Description:	These activities explore concepts for investigating and communicating ideas about place and space, and natural and social systems, by comparing the geographies of real and virtual worlds.
Resources:	Identity Crisis, ep 2 vol 1, <i>The Crash Zone</i> , ACTF The Outsider, ep 13 vol 3, <i>The Crash Zone</i> , ACTF Other: Large photocopy of a local area street map (including tram stops and railway stations) on which the school and most students homes are located. Wall maps: your state/territory, Australia, the World Map pins Clip descriptions and accompanying worksheet

Lesson plan:

Rationale for this lesson plan.

As an option for older students: the work in this unit could also be linked to studies of political and legal systems and this is indicated where relevant.

1. Tuning in

To arouse students' curiosity or interest in a problem or issue and to present them with a challenge; the activities encourage students to relate the problem, issue or challenge to their current situation and past experiences.

1.1 First viewing and response

View **Identity Crisis**, ep 2 vol 1, *The Crash Zone*, ACTF

In small groups (3-4), students discuss their immediate responses to this episode by answering these questions:

- Who or what is Virgil?
- Where is Virgil?
- Why do you think Virgil was created as a character in *The Crash Zone*?

- Why do you think Virgil has been given a male personality?
- How 'real' do you think Virgil is intended to be? To what extent is he plausible as a 'real' character rather than as 'science fiction'?

1.2 Speculations: how does Virgil do it?

Note: Preview the episode and, using either the timer or revolution counter, noting precisely where to begin and end the clips specified below so that you can replay them in fairly rapid succession.

Download the [clip descriptions](#) and [accompanying questions](#) and print them out on separate sheets. Give each group a copy of one description.

Tell students that you want them to carefully examine the clips and to look for clues as to who or what Virgil is, how he does what he is seen doing and how plausible a creation students believe him to be.

This activity will provide students with an opportunity to share their collective understandings of artificial intelligence and cyberspace. (There is no need to introduce these terms yet — wait to see if students come up with these concepts themselves.)

Replay the clips for all students before each group discusses its allotted questions.

Ask each group to report its answers to the above questions to the whole class. It might be helpful if time permits, to replay each of the clips once more as each group reports back.

You may find it useful to build up a whiteboard/chalkboard summary where you list Virgil's key characteristics according to whether students think they are plausible, impossible, or are uncertain about. For example:

Aspects of Virgil		
Plausible/Possible	Uncertain	Implausible/Impossible
Access to images from space and other data	Orders pizzas	Can see out of the screen
Stops lifts	Evolving artificial intelligence	Can hear anything

In this activity students share their understandings of the popular 'mythologies' of artificial intelligence, virtual reality and cyberspace as well as what they understand to be the 'reality' of these concepts at the present time. Encourage students to examine how terms used in the episode, e.g. ether, are used in the context of the episode, and how they use them themselves. Some students will bring understandings of these concepts from other

TV series — such as Sliders or Star Trek or other movies, comics and books. Encourage them to exchange anecdotes and stories from these sources.



Virgil seems as if he's actually alive. He clearly has a voice recognition capability and can talk back to a PC operator just like a real person. VIRGIL is realistic, he's active and he just won't shut up.

1.3 Cyberspace and You

Now that students have shared what they already *know* about cyberspace, and they have considered how Virgil (a 'virtual person') *works* within it, encourage them to start thinking about 'mapping' their own personal presence in cyberspace — in a world of information.

Explain to students that in **Identity Crisis** we see Virgil who lives and moves around in a virtual world called cyberspace. Unlike us, Virgil doesn't have a *body* outside cyberspace, but we do some of the same things that Virgil does. We too move around in a world of information.

Write this statement on a chalkboard or whiteboard and ask students to think about this for a moment:

One writer has said that '*cyberspace is where you are when you're talking on the telephone*'.



Is Pi in cyberspace? *The Crash Zone*

Another writer says, *'the telephone is only a medium through which we communicate with each other, we do not enter cyberspace by talking on the phone. If, however, we use the phone to send a text message our message is in cyberspace and hopefully will reach its destination!'*

Discuss with students how we are now used to the idea of money moving around through telephone lines and computer systems. Money was one of the first things to move into cyberspace. In fact, we can have money and never see it or touch it as a real material thing. It can exist for us, and we can earn it and use it, while it exists only as bits and bytes in a database.

Give students an example like this using local place names:

Kate works after school at a childcare centre in Box Hill. Her earnings are credited to her bank account at a branch in Balwyn which she can access with her Debit card when she goes shopping in Doncaster or Melbourne.

So, where is *her* money?

We could say that, like Virgil, it can be anywhere that electronic information can be stored or transmitted — it is certainly *there* for Kate, in Box Hill, Balwyn and Doncaster, and it could be anywhere in the world that has a machine that accepts her card.

Discuss the scenario with students, encouraging them to think of their own examples.

So, in effect, *we enter cyberspace* every time we send a fax or an e-mail message, log on to the Internet, make a credit card or EFTPOS purchase, use an ATM, make an airline booking, pay a gas or electricity bill online or by telephone.

We also enter cyberspace as our *cyberselves* when we visit web sites such as art galleries and museums. Ask the students where in the world they have been as their *cyberselves*.

2. Finding out/trying out

2.1 Using maps to track our cyberselves

Display the street map. Each student marks their home on the map using different coloured map pins. They also mark on the map the route they usually take getting to and from school.

Display wall maps of your state/territory, Australia, and the world. You might also want to extend this exercise by asking students to show places they have physically visited within a particular time frame (for example, if you do this by reference to the previous summer holiday period, you could ask students to interpret the results by identifying and describing

any similarities between the places different students have visited — e.g. it may become apparent that many students have visited a beachside location).

An option for older students: In linking the work in this unit to studies of political and legal systems, you could also ask students to describe (or find out) how the different levels of government (local, state and federal) affect the travels they have recorded here. For example, which, if any, of their travels are explicitly subject to government monitoring or permission?

2.2. How do we keep track of our cyberselves?

In this activity, students monitor the activities of their cyberselves for specified period of time, say a week, keep accurate records of where they go and chart these on relevant maps. This includes e-mails, blogs, wikis, chat rooms, and visits to web sites.

Extension

Students extend the monitoring to their immediate family — this would require students to use a wider variety of data-gathering techniques than self-reporting but would result in richer data (many students might be surprised at how far their cyber family travels).

Encourage students to try to find out as much as possible about the geographical location of their cyberselves.

This activity provides a good opportunity to give students some exposure to the Internet at school (for example, they might be able to download some of the maps they need from the many map sites that are available) and some of the questions about the geographical location of any sites they visit can then be shared with you and the class.

As far as possible, students should be self-directed as they monitor their 'information transactions', record details of them in an appropriate way, and map/chart their 'travels'. With older students, you might also encourage them to find out if their 'information transactions' are subject to government regulation or tracking of any kind.

You will also need to negotiate time limits for these activities and their distribution between schoolwork and homework.

3. Reflecting on inquiries/actions

These activities provide students with opportunities to consider what they have learned or how well they might have achieved what they set out to do.

3.1 Where in cyberspace has everybody been?

Display students' maps in the classroom.

Discuss the similarities and differences between places visited by students.

Discuss wider problems and issues of government and corporate control of travel in cyberspace. Who should say where and when your cyberself can travel? For example, with older students, you may want to broach the subject of 'net nannies', programs used by adults to restrict or prevent children's access to pornographic web sites.

An option for older students: If you made the link to political and legal systems in 3.1 above, you could also raise any issues about how different levels of government (local, state and federal) affect the travels of their cyberselves e.g. they would need a passport for their real self to enter and leave Australia. Why doesn't the same apply to their cyberselves?

Students debate these propositions from Steven Levy's book, *Hackers: Heroes of the Computer Revolution* 1984 Dell, New York:

- Access to computers should be unlimited and total;
- All information should be free;
- Mistrust authority — promote decentralisation.

3.2 One place at a time?

View **The Outsider**, ep 13 vol 3 **The Crash Zone, ACTF**

Discuss students' immediate responses to this episode in small groups. Ask students if this episode raises any further issues about travels in cyberspace. The previous activities should have alerted students to some of the implausibilities of this particular episode, but if they don't bring these up themselves, you may wish to prompt them with these questions:

- If you were talking with a friend on the phone, and your friend either accidentally or deliberately pulled the phone line out of the wall socket, where would your voice be?

If students don't volunteer the connection between this question and **The Crash Zone** episode **The Outsider** you might then ask:

- If you don't think you or your voice would be trapped in your friend's phone, why should Virgil be trapped in Brad's laptop?

Some other questions which might be used to generate discussion about the implications of this episode include:

- What events in this episode could be used to support arguments for and/or against the 'hacker ethic' that 'all information should be free'?
- Are the kids' justified in hacking into the Sunijim building and taking control of some of its functions?

An option for older students: Dr Rudy Rucker, a professor of mathematics and author of science fiction, has written:

I want to have my life's work on a CD with an access system that can call up any part of it, key on it with a cursor, and then go into my journals, see what was happening, or get into my essays, see what I was doing then or find other stories that used a particular item and have it all be totally seamless.... that's what I call Trans realism. ...I'm trying to merge my life with my fiction and essentially create a word model of my consciousness. That is the basic concept of my novel Software. If your brain software is on the disc, the computer can simulate you, and you will be, in some sense, alive inside the computer "

- What do you think of Rucker's idea of 'trans realism'? Do you think that if a 'word model' of your consciousness was loaded onto a CD that you would 'in some sense, [be] alive inside the computer'?

Finally, ask students to reflect on this question:

- Why do you think the whole idea of cyberspace, virtual reality and worlds of information is so interesting to writers of fiction and makers of movies and television programs?

Rationale

The increasing extent to which our day-to-day activities involve global communications technologies suggests that we may eventually live in a virtual world of information which is so rich and accessible that conventional understandings of geography — or the geography of the 'real world' territories, boundaries and borders — will become much less meaningful.

The World Wide Web now allows many people (especially young people) to have ready access to a complex global cyberspace — a world constructed entirely from information that invites us to think about the possibility of a new type of 'geography' curriculum. For example, there are cybernetic equivalents of physical geography — we need to learn how to 'map' cyberspace and its features and develop the skills of 'navigating' in it. There is also a political geography of cyberspace — 'maps' of how power over information is distributed — and we may need to consider how the geographies of cyberspace and the 'real' world are interrelated and how they may inform one another.

The following activities explore some of the everyday concepts we use for investigating and communicating our ideas about place and space, and natural and social systems, by comparing the 'geographies' of 'real' and 'virtual' places, spaces and systems. In making these comparisons, it is not assumed that students will necessarily have sophisticated understandings of virtual reality (VR) systems — the conceptions of (and speculative fictions about) VR and 'cyberspace' that circulate in much popular media are sufficient. The activities are devised for students in years 5-8, but they are open-ended, flexible and can be modified for use with younger or older students.

As an option for older students: The work in this unit could also be linked to studies of political and legal systems and this is indicated where relevant.

While themes in Studies of Society and Environment are the main foci of the following activities, viewing any episodes of *The Crash Zone* in a classroom context will provide opportunities for students to undertake analytical studies of the narrative as well as the technological construction of the series as a video text. These following activities are therefore designed to also encourage students to explore the sophisticated and highly skilled construction processes through which a televisual text communicates meaning, and further develops their skills and understandings in reading, analysing and evaluating visual texts.

A note about sequence

Like all ACTF productions, episodes of *The Crash Zone* are rich and generative texts in their own right, and the following inquiry sequence assumes that students should initially be given the opportunity to just watch the videos, rather than approaching them with preconceptions shaped by their teacher's understanding of their relevance to the school curriculum. You can of course, just tell students that you are showing the video episodes to introduce a unit on geography and cyberspace, and in most cases that should be sufficient preparation for viewing.

quoted in Rucker, Rudy, Sirius, R.U. and Mu, Queen (eds) *Mondo 2000: A User's Guide to the New Edge* Thames and Hudson, London, p. 250

Where in the world is...Cyberspace?

Discussion using Video Clips - Small group activity

GROUP 1

CLIP: Identity Crisis, ep 2 vol 1, *The Crash Zone*, ACTF

Start: Approximately 4' into episode.

Begins as: Virgil appears on all monitors and says: 'Hey! Yowser! What's happening?'

Ends as: Virgil says: 'I looked up "me" and there was nothing'.

Length: approximately 2'

DISCUSSION QUESTIONS:

- Does Virgil's ability to bring up images of the Earth from space, zooming in on Mike's window and his open comic book, seem possible to you, either now or in the near future?
- If you believe that this scene is plausible, how do you think it could happen?
- Bec says to Mike: 'Your room? Unreal!' Is it? What is 'real' and 'unreal' in this clip?

GROUP 2

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone, ACTF

Start: Approximately 8' into clip

Begins as: Nigel is carrying 10 pizzas. Alex says, 'Come on Nigel, would I really order 10 pizzas?'

Ends as: Alex says: 'Chances are you've been chatting to a spy!'

Length: approximately 2'

DISCUSSION QUESTIONS:

Does Virgil's ability to order pizzas, charge them to the company account, and phone Alex after she's turned off the computers, seem possible to you, either now or in the near future?

- If you believe that this scene is plausible, how do you think it could happen?
- How could Virgil hold a conversation with people in a room when he is in a computer
- Why is this ability important to the story?

GROUP 3

CLIP: Identity Crisis, ep 2 vol.1, The Crash Zone, ACTF

Start: Approximately 11' into clip

Begins as: Bec says: 'Guys...?'

Ends as: Virgil says: 'OK. I'll get her attention then!'

Length: approximately 1'

DISCUSSION QUESTIONS:

Does Virgil's ability to access lists of 'the only spies working in this country', seem possible to you, either now or in the near future? Do you think he could get Elle MacPherson's phone number?

- If you believe that this scene is plausible, how do you think it could happen?
- Mike says: 'Let's try and rebuild that voice track and maybe that will help Alex'.
- Why might Mike be so confident that they could do this? They are good with games.
- What might this have to do with rebuilding a voice track?

GROUP 4

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone, ACTF

Start: Approximately 15' 30" into clip

Begins as: Virgil fades up on the screen: 'Hi guys. I've been hanging out in a bar...'

Ends as: Virgil says: 'Goodbye... and good luck wherever you are'.

Length: approximately 3'

DISCUSSION QUESTIONS:

- Early in this clip Virgil warns Bec that Alex is behind her and, later, he says: 'I may be just a program, but it is pretty obvious that I'm not welcome!' Does his apparent ability to 'see' and understand what is happening seem possible to you, either now or in the near future?
- If you believe that this is plausible, how do you think it could happen?
- What do you think is the main difference between Alex and Virgil saying the words 'Goodbye... and good luck wherever you are'? Where is 'wherever' for each character?

GROUP 5

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone, ACTF

Start: Approximately 12' 25" into clip

Begins as: Alex berates Virgil: 'How do I conduct a business without lifts and phones?'

Ends as: Alex says: 'Don't encourage him, OK?'

Length: approximately 1' 30"

DISCUSSION QUESTIONS:

- Does Virgil's ability to stop lifts from functioning seem possible to you, either now or in the near future?
- If you believe that this is plausible, how do you think it could happen?
- Why do you think Virgil appears to be so shocked to be told he's a program?

GROUP 6

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone, ACTF

Start: Approximately 18' 30" into clip

Begins as: Alex says: 'Nigel, do you remember the AI-2000 project?'

Ends as: Bec says: 'Great idea! You're "on" Nigel!'

Length: approximately 1' 30"

DISCUSSION QUESTIONS:

- Alex says that after she trashed the AI-2000 project 'it must have floated out there...in the ether' and that it is now like 'a ghost that's grown'. 'It's taught itself! It's evolved in cyberspace...' Does this apparent ability of an artificial intelligence program to 'evolve' seem possible to you, either now or in the near future?
- If you believe that this is plausible, how do you think it could happen?
- Why does Marcello yell 'Virgil!?' How might Virgil 'hear' anything?

GROUP 7

CLIP: Identity Crisis, ep 2 vol 1, The Crash Zone, ACTF

Start: Approximately 22' into clip

Begins as: Nigel, Alex and the kids enter the lift.

Ends as: Everyone says: 'Welcome home Virgil'.

Length: approximately 2'

DISCUSSION QUESTIONS:

- Does the idea of 'building' a virtual house in which an artificial intelligence program might feel at 'home' seem plausible to you, either now or in the near future?
- If you believe that this is plausible, how do you think it could happen?
- Why might Virgil say he will come back, 'but only for a while... till I find a real place'? What's a 'real place' to Virgil?

You are the Dream Team!

Program:	Crash Zone
Year Level:	Years 5 to 9
Curriculum Study Areas:	English; Health and Physical Education
Themes/Topics:	Self and Relationships; Families; Growth and Development, Narrative
Description:	Students work together as a focus group in market research by providing feedback to the ACTF on how well episodes represent problems and issues of human relationships for young people of their own age.
Resources:	The Dream Team, ep 1 vol 2 <i>The Crash Zone, ACTF</i> . Undercover, ep 3 vo.1 <i>The Crash Zone, ACTF</i> Secrets and Lies, ep 6 vol 2 <i>The Crash Zone, ACTF</i> Heroes, ep 11 vol 3 <i>The Crash Zone, ACTF</i>

Lesson plan:

The episodes recommended for these activities deal with young people's relationships in a variety of different ways e.g. Marcello's role as an older brother is a focus of **Undercover**, while his relationship with his father is central to **Birthday**; Bec's ethnicity (and the issue of racism) is significant in **It's Only Words**, while **Secrets and Lies** focuses on her 'Net romance'. **Heroes** explores Mike's changing relationships with his father and another adult he admires, while **The Shadow** raises questions about truth, trust and loyalty to one's friends.

While various aspects of human relations are the main foci of these activities, viewing any episodes of **The Crash Zone** in a classroom context will provide opportunities for students to undertake analytical studies of the narrative as well as the technological construction of the series as a video text.

1. Tuning in

These activities arouse students' curiosity or interest in a problem or issue and to present them with a challenge; the activities encourage students to relate the problem, issue or challenge to their current situation and past experiences.

1.1 First viewing and response

View **The Dream Team, ep 1, vol 1, *The Crash Zone, ACTF***

As a whole class, give students a little time to volunteer their immediate responses to this episode. Most of the remaining activities suggested here are to be conducted in small groups so, depending on class size, this initial response may best be done as a general session. You might want to prompt students with questions such as:

- Alex says: 'You'd get to play games after school and get paid for it! How cool is that?' Well, how 'cool' would it be for you? Would working for someone like Alex, and a company like 'Catalyst', be your idea of a perfect job? What other 'perfect jobs' can you imagine?
- This is the first episode of a new series. Does it make you want to see more episodes of the series? What grabs - or doesn't grab - your interest in the series on the basis of this episode?
- Do you think it is worth viewing more episodes of **The Crash Zone** in class (as distinct from watching them on TV at home)? If you do, why? Encourage students to consider this question seriously and to think about how watching **The Crash Zone** in class, and doing some schoolwork based on it, might be of some value in their education?

Brainstorm these ideas

Knowing that it is directed mainly at an audience of young people, what are some of the things that you think might happen in future episodes? What sorts of questions, issues and storylines do you think will come up in the series? Do the characters hint at some broad storylines that may emerge? What do you think some of the developing relationships and/or tensions between the major characters might be?

To assist in the brainstorm, place some large sheets of butchers' paper around the room on walls or tables. At the top of each sheet, write one of the main character's names: Mike, Pi, Bec, Marcello, Ram, Alex, Nigel and Virgil. Divide each sheet into three columns as follows:

Character's Name:		
Person's obvious characteristics	What is inferred or hinted at about this person's character?	What story lines might be developed around this character?
Ram - youngest; Bec - Asian descent;	Pi seems somewhat mysterious; Marcello seems a bit of a con artist;	Mike and Pi - they'll clash, but they're attracted to each other too; Marcello's over-confident - that may lead him into trouble.

Give students a time to move around the classroom and write at least one thing on each sheet that relates to one of the three questions about the character (this process is similar to whole class brainstorming but involves all students). Provide one or two examples in each category of question as shown.

1.2 Could you be part of a dream team too?

Download the [imaginary press advertisement](#) and copy it onto an OHP transparency or convert to a .pdf for iPad or PowerPoint. Tell students to imagine they've been invited to apply to be members of a 'dream team' of children's television critics - or program testers for the ACTF.



Organise students into groups of about five to 'apply' for this job. They will write an application for the job and make a group presentation (about five minutes long) to the class. Stress the importance of them demonstrating their 'qualifications'- i.e. why should the ACTF think they could provide advice on the issues listed in the imaginary advertisement? For example, on the basis of the above advertisement, they need to be able to tell the ACTF something about:

- The ways their group is 'representative' or 'typical' of young people.
- How individuals in the group see themselves as being similar to, and different from, other young people of their age
- What they understand about young people's changing roles in society and how TV programs like **The Crash Zone** can help them to improve their understanding
- Rules and codes of behaviour for young people - who decides these, where they come from, and how TV programs like **The Crash Zone** deal with these issues
- Their knowledge and experience of handling changes in relationships - e.g. changes in family structure (new baby brother/sister; older brother/sister leaving home, etc.), changes in peer relations (moving to a new school and making new friends, etc.) - and how TV programs like **The Crash Zone** can help young people to cope with these changes
- Their knowledge and understanding of how young people develop beliefs about what is right or wrong, good or bad behaviour, and how TV programs like **The Crash Zone** can contribute to such knowledge and understanding.

Prepare the presentation

Students might find these guidelines helpful in preparing their presentations

1. Every student in the group must take part in the presentation; for example, every student should have the opportunity to state (i) one way in which they think they are

most like other young people of their age (ii) one way in which they think they are different from other young people of their age

2. Every group must include a statement about how they see new information technologies, especially computer gaming and the Net, affecting the roles young people play in society now and in the future (for older students, you might also expect them to state what else they think may be influencing these roles).
3. Every group must include a statement about how they think a TV series like **The Crash Zone** might be able to help kids understand and manage their relationships with others.
4. Every group must include a statement about how they think a TV series like **The Crash Zone** might be able to help kids sort out their beliefs about what is right or wrong, or good or bad behaviour.

Obviously, when all groups have made their presentations, and in parallel with **The Dream Team** episode, you can tell them that they have all got the job!

2. Deciding directions/getting organised

These activities enable students to define, refine or extend the focus and scope of their interest; work out what they need to find out or do to organise themselves and the resources they need for their task.

Remind students that their job as a group is to provide critical feedback to ACTF on how well the selected episodes of **The Crash Zone** deal with issues of young people's relationships with others e.g.:

- ways young people are similar to, and different from, one another
- roles for young people in today's and tomorrow's worlds
- rules and codes of behaviour
- beliefs about what is right or wrong, good or bad behaviour
- managing changes in relationships.

With younger students perhaps reduce these issues to a few words

- roles
- rules
- rights and wrongs
- relationships

Discuss with students how they might organise themselves as a team to

- (i) find examples of these issues in an episode; and
- (ii) reach some agreement as to the strengths and weaknesses or omissions of the episode's treatment of these issues.

Prepare to view a clip from The Dream Team

Use OHP, .pdf or PowerPoint or display board to **display** these questions

- Which of the five aspects of young people's relationships with others identified in the ACTF 'advertisement' does this clip illustrate?
- What did your group like best about the ways this clip presents young people's relationships with others? *Why?*
- What did your group like least about the ways this clip presents young people's relationships with others? *Why?*
- If your group could make just one change to this clip to improve the way it presents young people's relationships with others, what would this change be?

Use this clip as a trial run

Clip: The Dream Team, ep 1 vol. 1, *The Crash Zone*, ACTF

Scene: Bec, Mike, Ram and Marcello enter the Catalyst reception area.

Start: Approximately 6' 14" into the episode.

Begins as: Bec, Ram, Marcello and Mike enter reception area...

Ends as: Alex says: *'If I want boring games, I'll hire a boring kid'*.

Length: approximately 3' 30"

Students should jot down brief notes to remind themselves later of what happened. After the viewing they can then refer to their notes and make any further comments about specific incidents.

Respond to the clip

Ask students to share their observations and comments on this clip within their group and then to share their group's responses with the whole class. When the group's report back to the whole class, encourage students to act out their suggested improvements. For example, if students say that the body language of the kids when they were waiting in reception *'wasn't all that realistic'*, ask them to act it out in a more realistic way.

Discuss with students the need to organise their procedures for recording and sharing their observations and comments and determining which of these should be part of their feedback to the ACTF and how this should be done.

3. Finding out

Through these activities' students gather the information they think they need and/or try out what they have decided to do.

Prepare for the review

Preferably each group should review a different episode, but many schools are unlikely to have facilities to do this. However, it may be possible to arrange three different viewing rooms or areas so that students can watch episodes from the three different volumes of *The Crash Zone* simultaneously. If you restrict this activity to three episodes (one from each volume), some episodes will need to be viewed by two or more groups depending on the total number of groups in your class.

Outline to students' what alternatives will be available to them for reporting their critical responses to the ACTF e.g.



Encourage students to make their own decisions about which reporting medium they wish to use. For example, a group could decide that, after viewing their episode, they want to audiotape their entire group discussion and then edit it into a series of concise observations and comments. Another group might prefer to have their group discussion before making any decisions about the way they will deliver their report.

Remind students that their ultimate purpose is to prepare a concise group report suitable for sending to the ACTF. You may wish to suggest that these reports should contain, at a minimum:

- A statement about the extent to which the episode represents the five aspects of young people's relationships with others identified in the ACTF 'advertisement' and any other significant aspects of these relationships it deals with.
- Examples of what they really liked about the way the episode presents young people's relationships with others (and their reasons for liking them).
- Examples of what they didn't like about the way the episode presents these issues (and their reasons for not liking them).
- Examples of how the episode could have improved the ways in which it presents issues of young people's relationships with others.

Reports to class

When the group's report back to class, encourage students (where appropriate) to act out their suggested improvements. For example, if students say that the body language of the kids when they were waiting in reception 'wasn't all that realistic', ask them to act it out in a more realistic way and have them make suggestions for included gestures and dialogue.

Groups will present their reports to the whole class. Since not all groups will necessarily have seen all of the episodes being discussed, it may be necessary for some parts of the presentations to be illustrated by selected clips.

4. Reflection

These activities provide students with opportunities to consider what they have learned or how well they might have done what they set out to do.

4.1 Revisiting predictions

With the aid of the butchers' paper charts developed in Activity 1.1, ask students to revisit the predictions they made about possible storylines and character development. Which of these predictions are borne out by their viewings of later episodes? How 'predictable' does *The Crash Zone* appear to be?

4.2 Thinking ahead

As a final reflective piece, ask students to write a short story (this could be in conventional prose form or perhaps as a comic strip or storyboard for a video) based on one of the central characters from *The Crash Zone* five years later. The story could begin:

It had been quite a while since Bec [or Marcello/Mike/Pi/Ram] had given any thought to The Crash Zone, but memories of one of those adventure-packed days came flooding back when...



**The Dream Team!
Imaginary press advertisement
Simulation**



The Australian Children's Television Foundation is looking for some sharp young people to preview a new series before it hits the nation's TV screens. You'll get to watch videos in school instead of doing regular lessons. In return, we want you tell us how well our new series, **THE CRASH ZONE**, deals with issues of young people's relationships with others such as:

- ways in which young people are similar to, and different from, one another
- roles for young people in today's and tomorrow's worlds
- rules and codes of behaviour
- beliefs about what is right or wrong, good or bad behaviour
- managing changes in relationships.