CONTENTS
ABOUT ACMI ................................................................................................................... 4
EXHIBITION OVERVIEW ................................................................................................... 6
ABOUT THE GAME MASTERS EDUCATION RESOURCE .............................................. 8
INTRODUCING GAME MASTERS AND GAME DESIGN .............................................. 9
GAMES, LITERACY AND LEARNING ........................................................................... 10
GAME MASTERS, DESIGN AND IMAGINATION ......................................................... 11
  Blizzard Entertainment ............................................................................................... 12
  Fumito Ueda .............................................................................................................. 14
  Yuji Naka and The Sonic Team .................................................................................. 16
  Peter Molyneux ........................................................................................................ 18
  Will Wright ............................................................................................................... 20
  Jakub Dvorský .......................................................................................................... 20
  Firemint ................................................................................................................... 25
  Jonathon Blow ......................................................................................................... 27
RESOURCES ............................................................................................................... 30
ABOUT ACMI

ACMI (Australian Centre for the Moving Image) celebrates the moving images in its myriad forms. ACMI is a major, publicly-funded museum situated in the heart of Melbourne in Federation Square, hosting exhibition spaces, galleries, two state of the art cinemas, access to our collections and archive plus a shop and cafe. ACMI has in just over a decade become the world’s most visited moving images or film cultural centre, welcoming over 1.45 million visitors last year. ACMI celebrates, supports and explores the past, present and future of the moving images through a vibrant calendar of ticketed and free exhibitions, screenings, installations and commissions, festivals, workshops, and public and education programs.

More: acmi.net.au

Please note: Game Masters includes some videogames which contain material not suitable for children under 15 years old.
EXHIBITION OVERVIEW

The *Game Masters* exhibition is divided in to three sections exploring the work of a range of key designers:

ARCADE HEROES
The first section, ‘Arcade Heroes’, looks at designers who produced games during the late 1970s and early 1980s, a period that has become known as the ‘golden age’ of arcade games. This era is represented by a hand-picked selection of exceptional videogames. These vintage arcade games have been acquired from collections both in Europe and the US and refurbished to their original playable condition.

Arcade games mark the transition from the mechanical entertainments found in penny arcades and funfairs to contemporary computer games. In those days there was no clear career path to become a games designer: Tomohiro Nishikado, creator of *Space Invaders*, was an engineer who began his career designing mechanical games; while Eugene Jarvis, who made *Defender*, learned computer programming on giant mainframes at Berkeley. The games in this section bristle with innovations, many of which remain with us today: the first joystick; the first side-scroller; the first stealth game.

The designers represented in ‘Arcade Heroes’ are: Masanobu Endo, Toru Iwatani, Eugene Jarvis, Ed Logg, Tomohiro Nishikado, Tim Skelly, and Dave Theurer.

GAME CHANGERS
The second section of the exhibition, ‘Game Changers’, focuses on a selection of influential game designers—some individuals, some teams—who have been responsible for major developments in the field. Each display includes a series of playable games and a range of contextual materials, including original artwork such as storyboards, character designs, and animatics. Our aim has been to look at a series of games made by each designer and to explore what defines the essence of their contribution to the field.

Yu Suzuki’s arcade games from the 1980s are part of a trajectory of bodily interaction in games that has most recently resulted in the Kinect.

The relationship between music and performance is a key theme that draws together a number of the developers we have included in the exhibition. Tetsuya Mizuguchi has consistently explored the relationships between music, colour and movement in his games *Rez* and *Child of Eden*. Paulina Bozek also recognised people’s desire to perform with the development of her karaoke game *SingStar*, as did Alex Rigopoulos and Eran Egozy with *Rock Band*, and *Dance Central*, games (developed by their company Harmonix) that brought a new generation of players to videogames.

Game Changers has a focus on a number of designers who have created enduring characters that have had a presence on our screens for many years. Yuji Naka, the legendary programmer and designer responsible for Sonic the Hedgehog and the former head of the Sonic Team at SEGA.

World design is a major focus for several designers in the exhibition. Placing the creativity of building and controlling worlds more directly into the hands of his players, Will Wright, as the father
of simulation games, tapped into a strong desire for players to express their creativity and attracted a whole new demographic to videogames with the immensely popular series *The Sims*. Molyneux took world design in different directions with the introduction of the genre of god games, giving players divine control of the game world and its inhabitants and playing with the moral effects of player decisions.

Drawing on myth and legend to build immense, fantastic worlds, Blizzard Entertainment have taken world design to a completely new level. Their series *Diablo*, *Starcraft* and the online MMORPG (Massively Multiplayer Online Role Playing Game) *World of Warcraft*, have detailed histories, maps and legends that create the lore of these worlds, which have become alternate universes for millions of players worldwide.

Wider cultural forms are a strong influence on other designers. Tim Schafer’s quirky characters inhabit the cinema- and music-inspired worlds he’s created in *Full Throttle*, and *Brutal Legend*; while *System Shock*, *Deus Ex*, and *Disney Epic Mickey* show Warren Spector’s keen focus on player choice, as well as his passion for animation, comics, graphic novels, and science fiction.

The games of Sony’s Fumito Ueda are considered masterpieces for their ability to evoke emotional responses from the player – sadness and guilt rather than fear and anxiety. Ueda’s games, *ICO*, *Shadow of the Colossus* and the forthcoming *The Last Guardian*, have a distinct visual style that Ueda has described as ‘design by subtraction’. The designers represented in ‘Game Changers’ are: Blizzard Entertainment, Paulina Bozek, Tetsuya Mizuguchi, Peter Molyneux, Yuji Naka and the Sonic Team, Alex Rigopulos & Eran Egozy, Tim Schafer, Warren Spector, Yu Suzuki, TT Games, Fumito Ueda, and Will Wright.

**INDIES**

The term ‘indie’ usually refers to the economic situation of the game designer – working outside the financial support offered by mainstream developers and publishers. It also expresses an attitude, a willingness to break with tradition and question the established styles and genres of gaming.

The ‘Indies’ section includes a broad spectrum of work, from the intricate artistry of Jakub Dvorský, whose games reference the long tradition of eastern European film animation, to Australian developers Firemint and Halfbrick, dynamic young companies who seized the opportunity presented by mobile devices to make games specifically for those platforms that are now enjoyed the world over. The incredible diversity of style and approach illustrated by the indie designers featured in *Game Masters* is indicative of the creative drive that motivates all great game designers – to explore the limits of computer technology in the spirit of play. The designers represented in ‘Indies’ are: Jonathan Blow, Capy, Eric Chahi, Jakub Dvorský, Firemint, Halfbrick, Introversion Software, Masaya Matsuura, Marcus ‘Notch’ Persson, Rovio, Erik Svedång, thatgamecompany, The Behemoth.
ABOUT THE GAME MASTERS EDUCATION RESOURCE

The ACMI Game Masters Education Resource is designed for teachers of primary, secondary and tertiary students with an interest in games. Throughout this resource the terms ‘game’ and ‘videogame’ are used interchangeably to mean videogames, computer games and other applications that can be controlled by players using consoles or other digital screen based equipment.

The Game Masters Education Resource and Game Masters Classroom Activity Kit provide teachers and students with the unique opportunity to engage with a major state of the art exhibition and to learn about the exceptional skills and processes of the world’s greatest videogame designers.

The person who is literate in games, who reads and enters a game as easily as the previous generation understood cinema is building skills essential to twenty-first century life and learning. As a new democratic medium, videogames successfully straddle class, national and ethnic backgrounds and are transforming networked culture. At the same time, videogame design has become the focus of some of the most creative minds and imaginations in the world, challenging players to see, respond to and imagine the world in new ways. Leading games designer Will Wright argues that videogames provide ‘possibility spaces’, which encourage creative problem solving, flexible thinking and the capacity to learn in different and exciting ways.

The Game Masters exhibition and accompanying Education Resource and Classroom Activity Kit focus on the Game Masters and their contribution to videogame culture, providing students and teachers with an insight into game design, creation and possible future directions.

As well as enhancing student engagement with the exhibition, the information and suggested learning activities in the Game Masters Education Resource and Game Masters Classroom Activity Kit can be adapted to a range of learning contexts and outcomes.

Teachers are invited to select information and activities relevant to the interests, needs and abilities of their students.

Content in the Game Masters Education Resource and the Game Masters Classroom Activity Kit:

- has been written to support teachers of Middle Year students and beyond
- ranges in depth and difficulty
- is adaptable to allow teachers the flexibility to select activities to their specific curriculum requirements and their students’ needs and learning styles
- can act as a stimulus to encourage further exploration of games
- provides suggestions for further research by students both at school and at home
- offers references and web links
INTRODUCING GAME MASTERS AND GAME DESIGN

Vincent Trundle AV Curriculum Designer
ACMI Education

My three young sons are game designers and have been for several years. For them, as with all children, game design is innate.

A circuit of the house immediately becomes a game called 'Running Around'. After a few more laps, they introduce a challenge and, with that, the second rule of the game (the first being that you must run the circuit). They have begun designing a game called 'Smouse', in which the Smouse (the person who is 'it') is evil and, if it touches you, you too become a Smouse … and your voice changes … and you need to find a good cushion to save you while still doing the circuit and … well a range of other rules and conditions all created and agreed upon by the group.

Other children, who come around to play, adapt, recreate and redesign this game, or they formulate a completely new game to add to the countless other games they have created. At the same time, of course, other children at other homes, other schools, or anywhere really, are designing, redesigning and playing games.

When children play games, they explore concepts and rehearse skills that will prepare them for life as an adult. Skills such as communication, cooperation, friendly competition, creativity, coordination and the ability to enjoy having fun are integral to learning how to participate successfully and productively in a healthy society.

As children work together to create games, they also develop the ability – albeit with varying degrees of success – to consider the point of view of other players. They need to take into account a range of abilities and interests. They must try to see the overall picture and shape the structure of the game to build interactions and rewards that all players find satisfying. This is a process based on trial and error, where participants and design partners provide feedback to be acted on, incorporated and discussed.

To design something that others will enjoy requires both empathy and imagination. This is the essence of videogame design, particularly as practised by the world's best game designers, the Game Masters.

The Game Masters exhibition highlights the design aspect of videogames, showcasing the brilliance of the world’s most outstanding individual videogame designers and the world’s most creative and original design teams. Game Masters excel in their ability to create entire worlds of experience, that provide entertainment, challenges, rewards and a different experience for each player each time the game is played.

An outstanding game requires a strong basic concept, striking graphics, clever and original interactivity and interesting audio. The best games must also have the elusive but unmistakable ‘X factor’ that contributes to their ‘replayability’. The best games are also the most influential. The Game Masters exhibition acknowledges and celebrates the contribution of the most influential videogame designers to the field of videogame design and highlights the significance and creativity of the videogame industry within moving image culture.
GAMES, LITERACY AND LEARNING

...The literate gameplayer understands the structural art of Super Mario Galaxy 2 because they experience it through play. The non-player merely sees the grinning cartoon face of the titular character.¹

Traditionally, communications media have included spoken language, print and visual media such as photographs and film. More recently, electronic media such as television and other information and communication technologies including computers and games are incorporating more complex audiovisual layers that support interactivity. In these multimodal texts various codes for the exchange of meanings converge. As a result, students require not only a quality education in relation to traditional literacy skills, but multiliteracies competencies that will enable them to negotiate the social and economic world in the digital information age.

The design, creation, marketing and high level of engagement with digital games and other new media is changing the way people think, the way they learn, the way they interact with technology, information and with other people and the way they imagine possible futures. The impact on individuals and on many aspects of our social world is significant. There is increasing recognition that many games provide challenging learning environments that incorporate effective learning principles. In a report for Futurelab, Sandford and Williamson (2005) note that gamers are generally highly motivated to learn the rules of games by playing. They explain:

One characteristic of games that support learning is that they challenge and support players to approach, explore and overcome increasingly complex problems and thereby learn better how to tackle those problems in similar contexts in future. A second characteristic is that games offer the capacity for players to try out alternative courses of action in specific contexts and then experience consequences – in other words - to understand how manipulating systems causes particular effects.²

Sandford and Williamson go on to observe that gamers gradually discover patterns, rules and systems through continued and increasingly challenging interactions with a game. They are highly engaged and not usually easily deterred. The report provides case studies and a comprehensive discussion of the value of gameplay, both within and outside educational settings.

In his authoritative book on games and education What Videogames Have to Teach Us about Learning and Literacy, Dr James Paul Gee argues that videogames are exceptional teaching machines. If a game does not educate the player in an engaging way at the right pace it will not be consumed by the player. Games offer an educational model that teachers should aspire to incorporate into the design of their lessons. Games are multimodal texts that feature interplay between visual, aural, textual, gestural and bodily modes, and players develop new literacy practices to enable them to play successfully. Young people willingly engage in challenging problem-solving processes when playing games; they investigate the virtual world of a game, form

hypotheses, and based on further experience of the game, accept, reject or modify their hypotheses.3

Gee does not necessarily argue that games per se be used in educational settings but notes that good educational practices already incorporate the same scientific methods as those used by gamers. He outlines 36 learning principles found in successful and engaging videogames that may have applicability to classroom programs.

Games are a rich educational resource, both as a model for the development of effective teaching and learning practices and as complex interactive texts worthy of engagement and study in their own right. As Gee states,

The secret of a videogame as a teaching machine isn’t its immersive 3-D graphics, but its underlying architecture. Each level dances around the outer limits of the player’s abilities, seeking at every point to be hard enough to be just doable.4

GAME MASTERS, DESIGN AND IMAGINATION

In the world of film, filmmakers with a distinctive vision and style are celebrated as auteurs. Similarly, in the field of videogame design, a number of influential designers stand out for their imagination and creativity.

In this Education Resource, we focus on a cross section of the designers represented in the exhibition. The designers come from all walks of life bringing a range of sensibilities and experiences to the interactive worlds they imagine and create. Each makes videogames which stand out for their individuality and excellence.

Note: As with film and TV texts, it is important to ensure that any games demonstrated, studied and brought to school for study purposes are selected according to classification guidelines for the age group, and are appropriate to the needs and abilities of your students.

3 Gee, James Paul, What Videogames Have to Teach Us about Learning and Literacy, Palgrave Macmillan, Basingstoke, 2003
4 Ibid.
Blizzard Entertainment

_Diablo, World of Warcraft, StarCraft_ series

Three college friends, Michael Morhaime, Allen Adham, and Frank Pearce founded Blizzard Entertainment, a company renowned for creating and fostering three of the game world’s most thriving and highly respected series: _World of Warcraft, StarCraft_ and _Diablo_.

The company is a pioneer in developing the massively multiplayer online genre (MMO). Blizzard built the landmark gaming network Battle.net to host the social network for the eSports mainstay _StarCraft_ (1998) series and the world’s most popular subscription based role-playing game _World of Warcraft_ (2004).

Among Blizzard’s achievements are thirteen number one games, multiple Game of the Year awards and one of the largest online followings of any game company worldwide.

_StarCraft_ has been praised as one of the most significant games of all time for its three distinct and equal races, and the way its competitive multiplayer gameplay spurred the rise of professional game tournaments, particularly in Korea.

_World of Warcraft_ is the game that has gained Blizzard the widest recognition. A massively multiplayer online role-playing game (MMORPG), _World of Warcraft_ presents a richly detailed, multiplayer fantasy world where millions of players from around the world interact using customised avatars created from a selection of races and classes.

Morhaime, Adham and Pearce have created styles of worlds, cultures and characters in their games which show an insightful understanding of gamers’ desires. _World of Warcraft_ for example has been re-made 11 times and has maintained its extraordinary level of player participation. It not only allows players to define the appearance and abilities of their in-game avatar, but also to influence the game’s future directions by sharing opinions, feedback and suggestions in game forums.

Blizzard’s RPG (role-playing game) _Diablo_ has been a benchmark of team-building and teamwork since its online debut in 1996. Blizzard’s online game centre, Battle.net, allows thousands of players to log in simultaneously, communicating with others via the in-game text chat to join forces with other gamers. _Diablo_ allows players to design their character and control its development, statistics and attributes. This avatar becomes an online representation of the player’s values and strengths.

To progress through _Diablo_, and also _World of Warcraft_, players are advantaged when they form teams (through Battle.net) and collaborate to progress. The game celebrates varying abilities, skills and strengths, whilst also offering magical and deeply immersive worlds.

**RESPOND**

Focus on your favourite sporting team or an action film like _The Avengers_.

- List the skills of each member of the team.
- How does each member have an impact on the result?
• How might the team function if one of the members was missing?

EXPLORE
MMO gaming has changed the strategies for playing certain games online. You need to be prepared for anything. This means planning your character’s skills and the team members you journey with.

• List some examples of videogames that include this type of gameplay.
• Which games encourage teamwork?
• How can teams effectively combine the diverse range of skills each team member brings to the game?

REFLECT
• What are some of the similarities between MMORPG and real life?

CREATE
Imagine you are on a scientific expedition (e.g. to Antarctica, the jungle, the desert, a distant planet).

• Organise a team to deal with the various terrains and any possible issues that may arise during the expedition.
• Your team’s goal is to gather samples and to avoid the dangerous creatures that inhabit the expedition site.
• Your job is to create a profile of each member of your team, outlining his or her role within the team, the skills s/he possesses and how s/he contributes to the success of the expedition. This could be done as a comic strip.
• What are some of the complications the team might encounter? How can the team use the diverse skills of the team members to overcome these issues?
**Fumito Ueda**  

Exploring the forbidden lands of Shadow of the Colossus inspires a strange and interesting feeling of isolated freedom. Battling the Colossi rewards you with a rich sense of accomplishment that bleeds into guilt.\(^5\)

Fumito Ueda has only two published games but each one has been so original and influential, he is widely regarded as an auteur. Both *ICO* (2001) and *Shadow of Colossus* (2005) draw on the player’s emotions, eliciting compassion or empathy for the characters in the game.

After a brief career as an artist, Ueda joined videogame developer WARP where he worked as an animator on the game *Enemy Zero*. His mastery of game design really came to the fore when he moved to Sony Computer Entertainment in 1997.

His first game, *ICO*, was minimalist in design. Ueda removed many of the usual gameplay elements to enhance players’ immersion in the story. *ICO* is a beautifully poetic adventure game based on a form of boy-meets-girl idea where the player plays as the titular hero who must chaperone the female character, Yorda, through various dangers.

The theme of *Shadow of the Colossus* (2005) is very different to the one explored in *ICO*, with a storyline highlighting taboo sacrifice. The main character is a young man who thinks his lover has died. To resurrect her, he enters a forbidden land and does a deal with a demon who directs him to slay 16 giant creatures (the Colossi). Progressing through these challenges, the young man, the player’s avatar in the game, begins to wonder if he is on a noble pursuit or is being deceived by the demon. The final fall of the massive creatures inspire feelings of sorrow for their death and a sense of guilt. The kind of emotional response the killing inspires in the player is rarely experienced in a game.

**RESPOND**

Amongst game developers there is an ongoing debate as to whether videogames can be called art. When considering these points Fumito Ueda commented ‘…We’re making a game to entertain people. Sometimes my personality and my team’s might be reflected in the game, and it might look like art, but it is a game to entertain people.’\(^6\) How would you define entertainment?

- What do you consider to be the most entertaining aspect of videogames?
- What is it about Ueda’s games that makes them stand out as ‘art’?
- Compare art and entertainment. Is the distinction between the two ideas meaningful?

---

\(^5\) Cowan, Danny, ‘Critical Reception, The ICO and Shadow of the Colossus’  

EXPLORE
One unnecessary, unnatural item on screen can totally destroy the overall immersive atmosphere of a game, so Ueda’s team removed distracting game elements such as the health gauge, inventory screen, background music and stationary Non-player Characters.

- Explore this idea by referring to ‘The Philosophy of Game Design...By Subtraction’: www.1up.com/features/design-by-subtraction
- Divide the class into groups to explore ‘design by subtraction,’ which, for Ueda, involves a focus on quality and detail.
- Create a list of the group members' favourite games (at least five) and discuss ways of simplifying the visual design.
- How would this affect the game?
- Would a simpler design add to the emotional connection formed by the players?

REFLECT
Fumito Ueda based ICO on Eric Chahi’s game Another World where the two protagonists rely on each other to live—if either of the two game characters is hit they both die. In ICO, the protagonist, Ico, holds the hand of Yorda, a physical gesture, which indicates both their emotional attachment and their shared destinies. This dynamic combined with the simplified setting drives the deep immersion of the game.

- What kinds of emotion can a videogame elicit in players? (e.g. surprise, pride, anxiety)
- Refer to the list of videogame emotions listed here: http://onlyagame.typepad.com/only_a_game/2008/04/top-ten-videoga.html
  - Do you agree with this list or would you include an alternative set of emotional responses?
  - What games have you played that have created a strong emotional response? Explain.

CREATE
- Design your own gamescape based on the minimalist principles adhered to by Ueda.
Yuji Naka and The Sonic Team
Yuji Naka - programmer
Naoto Oshima - artist
Hirokazu Yasuhara – designer

Sonic the Hedgehog was born out of the console war between Nintendo and Sega who were battling for the hearts and thumbs of kids across the world. Nintendo was dominating the market with the super plumber Mario, and Sega required a character capable of competing with Mario’s charms. The answer was a white-gloved, red sneaker-wearing blue hedgehog.

Designed by Naoto Oshima, Sonic is a creation that reflects both the constraints of 16-bit graphics and the history of anime. His oversized head, a cartoon standard for cute appeal, exaggerates his eyes and face, enabling his distinctive expressions to be visible to the player. The white gloves and red sneakers clearly distinguish his hands and feet from his body when in motion.

Under the programming direction of Sega’s Yuji Naka, this blue hedgehog became the superfast, rapidly spinning Sonic the Hedgehog. Sonic could run, jump and roll at significantly higher speeds than any other platform game character at the time. Additionally, the gameplay worked tightly with the game’s physics, using springs, slopes and loops. Yuji Naka, Lead Programmer of the original Sonic the Hedgehog, explains: ‘The game’s movement and flow are the necessary reason why Sonic was born.’

Games are based on interactivity. The player’s control of the character’s actions is at the heart of what makes games enjoyable. Game designer and theorist Gonzalo Frasca suggests that characters in games are more like cursors that enable the player to traverse the game world. Frasca argues that for games the important question is not ‘why the characters behave the way they do’ but ‘what happens next!’

Sonic’s speed not only defines him as a unique game character, it is meshed intimately into the game’s mechanics. His name and look reinforces it, as does the games innovative sound design. Other features help define his personality. He greets the player with a grin, eyeballs them and wags his finger at them in a cheeky reproach. Leave him waiting and he will turn, arch an eyebrow and start tapping his foot impatiently. Yuji Naka explains, ‘Characters produced from games are naturally born of the fun elements of the games. …It’s different in that respect from animated cartoon and movies. You think about the game itself and then create characters.’

The game was such a critical and commercial success that, after the release of many Sonic titles, the development team eventually came to be called the Sonic Team. The Sonic Team has since developed a wide array of Sonic titles for various platforms and genres. Sonic The Hedgehog 2 (1992) was well received and included the addition of multiple playable characters. Games such as Sonic Adventure (1998) and Sonic Riders (2006) saw Sonic depart from the side scrolling

---

9 Naka in Saltzman.
platformer, racing instead on hover boards or exploring an open world, though always maintaining the character’s trademark high speed.

RESPOND
The cutting edge physics and fluid gameplay of the original game embraced the principles that a great game should be ‘easy to learn but hard to master’.

- What does this mean? Imagine you are explaining this principle to a non-gamer.

EXPLORE
The Sonic games are fast action twitch/adventure games. The gameplay relies on quick reflexes and draws on the desire to find and see new things. This style of gameplay is called ‘action-adventure’ and is a genre. Many other gameplay styles are given genre titles.

- Make a list of different game genres.
- Give some examples of games that fit each genre description.
- Which genre do you think might be the most popular amongst Australian players? Refer to this study to find out if you are correct: http://www.igea.net/wp-content/uploads/2011/10/DA12FinalLinkVideo.pdf
  - What types of game are more popular with girls?
  - Why do you think this is the case?
  - Which ones are more popular with people over 50?
  - Is this what you would have predicted?

REFLECT
- What makes a character or a game a classic?
- What is it about Sonic and the Sonic games that is so appealing and so enduring?

CREATE
- Create a character and bring it to life.
- Begin by making a concept map or web diagram to explore ideas. Consider the following:
  - What does your character look like?
  - How old is your character?
  - What gender is your character?
  - Where does your character live?
  - What does your character do?
  - What does your character wear?
  - What is the character’s name?
  - What sort of personality does your character have?
  - Who are your character’s friends?
  - Who are your character’s family?
  - What are your character’s big dreams?
  - Does your character have a defining moment?
  - What are your character’s greatest fears?
- Create drawings and a model of your character to present to class.
Peter Molyneux

*Populous* (1989), *Fable* (2004-12)

Peter Molyneux is an English born game developer who made his name with *Populous* (1989), one of the world’s first ‘god’ games. God games put you in charge of large populations which you can guide, protect or destroy, depending on your mood.

*Populous* was revolutionary because it enabled the player to play as either a good or bad character. In the game, the player takes on a god-like responsibility for a group of characters, directing and influencing them with the goal of defeating an opposing force ruled by another deity. This game lay the foundations for many more god games in which the player’s decisions and actions would influence their minions.

God games have been a stepping stone in the development of AI (artificial intelligence) games where a character’s behaviour within a game will affect the encounters they have with NPCs (Non-player Characters) and the story’s events.

With the *Fable* series, Peter Molyneux has created an RPG (role playing game) that incorporates a large amount of gaming AI. All of the games in the *Fable* series are based around a main protagonist character, whose development relates to his interaction with the world of the game. A player can influence a character’s moral outlook in the game, be it positive, negative or neutral. Depending on its moral code, a character can open up different strands of the story and the NPCs will have a different reaction to the character.

**RESPOND**
Find out more about games that employ the god game concept and investigate how the ‘god’ in these games can influence its followers.

- Describe the nature of this influence.
- How do the player’s actions affect the NPCs?
- Look at how the followers react to positive and negative influences.
- What are some of the issues faced by gamers when playing a god game?
- Do you think the moral and ethical decisions made in god games have any connection to real-life morality?

**EXPLORE**
Focus on the graphics developed for *Populous*.

- Consider the legacy of arcade games in the design.
- How did Molyneux take this design influence and revolutionise it?

**REFLECT**
In the process of designing *Populous*, Molyneux realised he didn’t have the skills to change the landscape within the game and came up with the idea that players could alter the landscape in order to achieve a particular outcome in the game. This became a very popular feature of the game.
• Think about and describe some times in your own life when a particularly tricky problem has led to an innovative solution. You might like to share this with the class or a fellow class member.

CREATE
Design your own form of god game.

• Use the idea of a board game to create a world and characters to control.
• Create rules that players are bound by.
• Develop a code of numbers to correspond to different moves, decisions or influences.
• Roll a dice and see how fate can influence a world.
Will Wright


Will Wright designs games that give players the opportunity to become involved in creating and designing the world of the game they are playing. Beginning with *SimCity* in 1989, Wright's games offer an alternative to classic goal-driven games, and instead provide players with the freedom to respond to and participate in a world they have built.

With the release of *The Sims* in 2000, Wright cemented his reputation by adding individualised people, to the game. *The Sims* appealed to a demographic that had not previously been targeted by the games industry and became the highest selling PC game of all time.

*The Sims* takes everyday suburban life as its launching point. The player is required to interact with the NPC (Non-player Character) agents in the game, who require specific commands for certain basic life activities, but who also have a life of their own. For some players, the challenge is satisfying the complex needs of their characters in *The Sims* world and, for others, it is directing characters who have (simulated) minds and lives of their own. Other players choose to focus on the more sinister possibilities of this world by devising death traps for the characters they have brought to life.

Because Wright's games cannot be lost or won, they have been called the 'software toys' of the videogame industry, but they are more accurately described as sandbox games.

The best sandbox design, as exemplified by *The Sims* and its spinoffs, 'facilitates and encourages a sense of player freedom, while providing a framework for play and a rich and detailed world for interaction'.

In 2008, Wright 'introduc[ed] the concept of user-generated content to the gaming mainstream' with *Spore*, a multiplayer online sandbox game populated by creatures, buildings and planets designed by the player community.

Will Wright is a passionate ambassador for videogame culture, arguing that games are capable of satisfying all our entertainment needs: ‘Games have the potential to subsume all other forms of entertainment media. They can tell us stories, offer us music, give us challenges, allow us to communicate and interact with others, encourage us to make things, connect us to new communities, and let us play.'

**RESPOND**

For Will Wright, videogames offer a ‘possibility space’ that cannot be matched by any other cultural form.

---

• What do you think Wright means by possibility space? Give examples from your own experience.

EXPLORE

• Do some research and find out more about Will Wright and his philosophy of videogame design and gameplay.
  o You might start with this piece he wrote for Wired magazine: www.wired.com/wired/archive/14.04/wright.html
• Provide a brief synopsis of his key points from the Wired article.
• Analyse Wright’s arguments and write a response indicating which key points you agree with and those with which you disagree.

REFLECT

Any sufficiently complex game can be considered a sandbox if one of the aims of the players is to explore the implications of the games rules.\(^\text{13}\)

• Explain what this means.
• Give examples of games that can be played in this way.

CREATE

Make a Sims machinima.

• If you have a copy of The Sims 2, use the in-game recorder to capture footage.
• Take that footage from The Sims 2 home folder into iMovie or Windows Movie Maker.
• Edit it with a different soundtrack to produce your own Sims story. Share your work with your classmates.

\(^{13}\) www.gamasutra.com/view/feature/4081/the_history_and_theory_of_sandbox_.php
Jakub Dvorský

*Samorost 1 and 2 (2003 and 2005), Machinarium (2009)*

Dvorský studied at the Academy of Art, Architecture and Design in Prague, where his graduating work was *Samorost*, released in 2003. He founded Amanita Design, a nine-member studio that produces games, music videos and animation.

Dvorský’s wordless point-and-click puzzle games invite players to explore a series of intricately animated and illustrated scenes that form the basis for each progressive level. The surrealist folk imagery in the *Samorost* series is inspired by earthly textures such as roots, fungi and fronds, even though the game is set in deep space.

*Machinarium* (2009) unfolds in a world of curly machinery whose function is unclear, other than to provide devious puzzles that block the path of the robot protagonist. The aesthetic qualities invite players back even after the level has been completed; as Dvorský says, ‘We want to approach it like a music record. You hear it once but it still has value the second time, the third time.’

**RESPOND**
When asked about the ‘wordlessness’ of *Machinarium*, Dvorský explained that the absence of verbal communication made the game more accessible, easier to localise and funnier.

- Find out more about the way characters communicate in *Machinarium*. What do you think about the ‘language’ of *Machinarium*? Explain.
- What do dialogue and commentary add to the game experience? What do they take away?
- Even in the most conventional games, words are only a single element in a complex system of communication. What are some of the non-verbal ways games communicate information to players?

**EXPLORE**
There has long been a debate as to whether videogames can be classified as ‘art’.

- Why are some forms of culture considered to be art, while others aren’t?
- What makes something art?
- If it is a videogame that is designed to emphasize the art what other games might fall into this category? Consider games from the *Game Masters* exhibition and other games you have played.

**REFLECT**

- Online distribution gave independent game developers a more effective means of selling their games. However, in 2010, Amanita Design had to declare an amnesty on *Machinarium* because of the extraordinary rate of piracy.
- Consider the impact of videogame piracy on independent developers.
- Do gameplayers have an ethical responsibility to acquire games legally?

---

14 [http://amanita-design.net/forum/index.php?topic=1396.0;wap2](http://amanita-design.net/forum/index.php?topic=1396.0;wap2)
• What are some of the consequences of videogame piracy?

Research Image for Samorost 2003

CREATE
Make your own Dvorský-inspired work.

• Photograph the close up detail of a well vegetated area and such as fallen logs, tufts of grass, tree bark, lichen etc.

• Visit an area with run down machinery and photograph details of that environment. (This could be a shed or a workshop). You might also like to choose different subject ideas that are close to you like your house carpet, old toys, or things in your garden.

• You can also add in a different background, so collect some images like a star field, rainbow or the inside of a cardboard box. You choose.

• Next create characters. You can draw them on paper then scan or photograph them, or make them in a computer drawing program, or even photograph 3D objects such as a toy character.
• In the final compilation phase either use a digital image editing program (like Photoshop, Paint or Gimp (free)), or print the images out, and cut and paste parts to form a completely new landscape. Create a consistent looking scale and include human-style interactive areas like doors or ladders.

Dvorský created *Samorost* in a similar way and went on to animate the characters (and sets) on a computer. Bring these creations to life by animating them. Dvorský used software called Adobe Flash to animate and create the interactivity, assigning particular animations to mouse clicks. It is possible to use Microsoft Powerpoint to create both animation and interactivity. Create a button to go to a copy of the same page but with a small change. It could be that the serious character in the original now has a smile. (So if you click the right spot you are rewarded with the character smiling.) There is a Microsoft PowerPoint game tutorial here: [www.wikihow.com/Create-a-Computer-Game-Using-PowerPoint](http://www.wikihow.com/Create-a-Computer-Game-Using-PowerPoint)
Firemint

Firemint is a Melbourne-based games studio founded by Rob Murray in 1999. In 2009, Firemint released *Flight Control* for the iPhone, a game that would become one of the most successful iOS games of all time and would establish the relatively small Melbourne company as an international mobile gaming powerhouse. *Flight Control* has sold over 4 million copies and is now available on a range of consoles and devices.

Not a company to rest on its laurels, Firemint over the next few years would release the critically and commercially successful app *Real Racing* followed by *Real Racing 2*. Firemint was recognised for its achievements in Arts and Entertainment in November 2009 at the Australian Export Awards.

In January of 2011, Firemint acquired Steve Fawkner’s *Infinite Interactive*, a successful Australian company in its own right, known particularly for its hugely successful *Puzzle Quest* series. As a result of this acquisition, Fawkner became part of the Firemint team as a Product Manager.

Only four months later, Electronic Arts would go on to announce the acquisition of Firemint, transforming it from a successful independent company into an important arm of EA Interactive and an integral part of its mobile and web game unit.

Since being taken over by Electronic Arts, Firemint has continued to be one of Australia’s most successful game developers, releasing *Spy Mouse* in August of 2011, an instant hit that knocked the goliath *Angry Birds* from the top of the App Store charts.

**RESPOND**

Mobile games like Firemint’s *Flight Control*, Rovio’s *Angry Birds* and Andreas Illiger’s *Tiny Wings* are hugely successful because of their simple, but addictive gameplay.

- Why do you think simple games tend to be more popular on mobile devices and tablets?
- List some other popular mobile games that use ‘single button’ or basic controls and gameplay.
- What mobile games use more sophisticated control and gameplay?
- Which type of game would you prefer to play on a smart phone or tablet? Why?

**EXPLORE**

As well as acquiring Firemint, Electronic Arts has bought out other successful game development companies.

- Find out more about Electronic Arts’ business strategy.
- Plot Electronic Arts’ acquisitions on a timeline.
- Consider when and why this major games developer has decided to buy out its smaller competitors.
REFLECT
Although being hugely successful immediately following its release, *Spy Mouse* slipped off the radar due to its lack of ‘replayability’.

- What makes a game a classic to which players can return again and again?
- What are some of the ways that a game idea can be transformed, repackaged and injected with new life? (For instance, you could focus on the various versions of *Angry Birds*.)

CREATE

- Design your own single button mobile game. Describe the gameplay (the point, or challenge, of the game), the main character (if there is one) and how the game is controlled.
- Draw a sketch showing how your game screen will look once created.
- Imagine that a publishing company like Firemint has developed your game design. Use an animation program to create a short 2D animation showing how your game will look when it is being played. If you don't have animation software, draw a screen shot of your game’s background on A3 paper. Then draw your other game assets as cut-outs and create a stop-motion animation of your game instead.

*Flight Control 2009*
Jonathon Blow

*Braid* (2008)

Jonathon Blow is an independent videogame designer, renowned for his meticulous design ethos. All elements in his games are there for a reason. Before he produced his first game, Blow was a respected games journalist and an articulate commentator on the philosophical and ethical issues that underpin game design. He has criticised some major games publishers for lacking respect for gameplayers.

Blow’s influential game *Braid* (2008) won the Best Design award at the Independent Games Festival in 2006. It was praised by critics for linking gameplay and story in an intrinsically meaningful way, a concept long championed by Blow.

*Braid* is a highly focused, deliberate, puzzle game, with no extraneous elements, aside from those required to create the puzzles. *Braid* is driven by an innovative game mechanic that offers the player the option to play with time within the game. Not only can a player rewind time if Tim (the protagonist character) dies, it is also possible to manipulate the chronological trajectory of some non-player characters and other objects in the game.

If games are good at interactivity, isn’t it a shame if interactivity is only allowed in very strict ways? Something about freedom and openness facilitates more player choice. To me that’s the heart of games. 15

This comment also epitomises the market space inhabited by independent games. The market defines what games are made by the large game publishers – each dollar invested in a game’s development must be recouped several times over. These commercial constraints offer little room for experimentation and risk. The independent game developer has the freedom to be experimental in the design of a game.

RESPOND

The third section of the *Game Masters* exhibition explores what it means to be ‘independent’, through the provocative work of several contemporary designers including Jonathon Blow.

- What defines an independent developer?

EXPLORE
Independent game developers often share a rebellious spirit, and actively seek to work outside the mainstream. Their aim is to create games that are both entertaining and thought-provoking. Rather than following existing trends or repurposing what has gone before, the ‘indies’ continually redefine the idea of the game.

- Focus on a game designed by one of the independent game developers.
  - Describe and list its characteristics.
  - What makes it distinctive?
  - Could or would this game have been made by a major game development company? Why or why not? Explain.

REFLECT
At the Free Play conference held at ACMI in 2007, Blow highlighted the influence of games on society. For example, he criticised World of Warcraft for exploiting players by using a mechanic that rewards players for staying in front of their computer for long periods. In his view, developers have a responsibility to design inspiring new games using ‘innovative, ethical and personal art’.16

- Do you agree with Blow’s criticism of the World of Warcraft game mechanic?
- Have you observed a similar system of rewards in other games?
- What are the ethical responsibilities of game design?
- Join together as a class to consider the role of ethics in society and the ethical considerations of videogames. Refer to this article (‘The Videogame Guide to Morals and Ethics’) to stimulate discussion: www.kotaku.com.au/2010/06/the-video-game-guide-to-morals-and-ethics/

CREATE
Many of the puzzles in Jonathan Blow’s game Braid can be completed in any order on the way to the final goal. This is different to the typical puzzle game that requires challenges to be completed in a particular sequence.

Braid is particularly suited to non-linear thinkers, who are usually better at making links between unrelated concepts and think in a more abstract and creative way.

Everybody has a different learning style. These styles usually include: visual, auditory and tactile/kinesthetic learners. Visual learners learn through seeing things. Auditory learners learn through listening. Tactile/kinesthetic learners learn through moving, doing and touching.

Often, students can feel like they’re not as smart as other students because they struggle with a particular class or topic, but it may be the way the information is being presented.

- Ask students to think about the type of learner they might be.
- Students then work with two other students each with a different learning style.

• Each group designs a game/activity to teach an idea/concept that caters for all the different learning styles.

Example:
A cooking class is the perfect example of multiple learning styles. The teacher will demonstrate what they want the students to do (visual), whilst also explaining what the students should do at the same time (auditory) and then the students will go off and attempt it themselves (tactile/kinesthetic).
RESOURCES

Sandford, Richard and Williamson, Ben, *Games and learning*, Futurelab, 2005  

Williamson, Ben, *Computer games, schools, and young people, A report for educators on using games for learning*, Futurelab, 2009  

Klopfer, Eric, Osterweil, Scot and Salen, Katie with contributions by Jason Haas, Jennifer Groff and Dan Roy, *Moving Learning Games Forward*, Massachusetts Institute of Technology, 2009  

Squire, Kurt, University of Madison, makes the connection between videogames, learning and civic participation – Video.  


MIT/Microsoft partnership creating prototype educational games,  
[www.educationarcade.org/gtt/home.html](http://www.educationarcade.org/gtt/home.html).

*Digital Australia 2012*,  
National research prepared by Bond University for the Interactive Games & Entertainment Association  

Site dedicated to ‘Serious Games’  