SCREEN WORLDS
THE STORY OF FILM, TELEVISION & DIGITAL CULTURE

EDUCATION KIT
Student Activities

acmi
AUSTRALIAN CENTRE FOR THE MOVING IMAGE
CONTENTS

DURING YOUR ACMI VISIT ..................................................................................................................1

SECTION ONE: EMERGENCE .............................................................................................................. 2
  Focal point: Lumière Cinématographe c.1895 .................................................................3
  Focal point: Arrivée d'un train (à la Ciotat) (Arrival of a Train at La Ciotat) .................... 4
  Focal point: Page to Screen ............................................................................................... 5
  Focal point: Fragility of film touchscreen interactive ...................................................... 6
  Focal point: Mechanical Television based on John Logie Baird demonstration set .......... 7
  Focal point: Satellite Technology ....................................................................................... 8
  Focal point: Videogames .................................................................................................. 9
  Focal point: Social Media ................................................................................................. 10

SECTION TWO: VOICES .................................................................................................................... 11
  Focal point: Representing Australia .................................................................................... 11
  Focal point: Community Voices ....................................................................................... 12
  Focal point: Dreaming in Colour ...................................................................................... 13
  Focal point: Spotlights and Australian Showcase ........................................................... 14
  Focal point: Interactive Locations Map ............................................................................. 15

SECTION THREE: SENSATION ........................................................................................................ 16
  Focal point: Muybridge ...................................................................................................... 16
  Focal point: The Faulty Fandangle ................................................................................... 17
  Focal point: Pong vs Tennis ............................................................................................. 18
  Focal point: Ty the Tasmanian Tiger™ Zoetrope .............................................................. 19
  Focal point: Timeslice ...................................................................................................... 20
Screen Worlds provides many story panels, fact files, objects, posters and screen-based clip packages that will all compete for your attention. In fact, the exhibition has more than 630 screens showcasing significant ideas, moments and developments in the history of the moving image.

Each education tour and accompanying kit introduces a number of Focal Points that will help teachers navigate the exhibition in a focussed manner, initiate discussions and encourage students to engage with the exhibition and associated learning activities.

The learning activities are designed to help you make discoveries about the development and impact of the moving image, raise questions and contribute to discussions. You could use a digital stills camera or a mobile phone camera to gather images as you explore the exhibition and engage in activities.

List three things you hope to see or to find out while exploring Screen Worlds.

1. 

2. 

3.
SECTION ONE: EMERGENCE

In 1824, British physician Peter Mark Roget presented a paper and performed experiments to explain a visual phenomenon called ‘persistence of vision’, in which he theorised that a series of still images set in motion can create an illusion of movement. This was the first step towards the evolution of cinema as we know it today.

The experiments of scientists, entertainers and inventors inspired new ways of tricking the eye, paving the way for the greatest magic show of all: cinema. The 19th century development of simple optical toys and mechanical inventions related to motion and vision were precursors to the birth of the motion picture industry.

From the first cinematograph projections by the Lumière Brothers in the 1890s, to the emergence of national film industries in India, Australia, Japan and the USA, to the invention of television that beamed the 1969 moon landing directly into lounges as well as changed the course of the Vietnam War, to the development of videogames such as Space Invaders, followed by the impact of the world wide web and mobile digital technology, the story of the moving image is never static.

Draw or describe the first thing that catches your eye in Emergence.
Focal point: Lumière Cinématographe c.1895
Emergence Table: Arrival of Film

In the 1890s the Lumière brothers invented the Cinématographe, the first motion picture apparatus that was used as both a camera and projector.

After seeing Edison’s Kinetoscope, Louis and Auguste Lumière were inspired to design their own camera.

On February 13th, 1895, the brothers patented the Cinématographe in both their names. Their film camera was manufactured by Jules Carpentier and could simultaneously function as both a film projector and developer. The Cinématographe that you see in Screen Worlds is displayed open in its projection mode.

Image credit: Cinématographe Lumière film poster, circa 1895 Courtesy: Australian Centre for the Moving Image

Use a diagram and labels to show three differences between the cinématographe and a modern camera.
Focal point: *Arrivée d’un train (à la Ciotat)* (*Arrival of a Train at La Ciotat*).

Emergence Table: Arrival of Film

In 1895 when the Lumières screened a film showing the arrival of a train at a station, the audience apparently jumped back as if they were afraid of being run over by the train.

Image credit: Film still from *Arrival of a Train at La Ciotat*, Director: Louis Lumière, Courtesy: Kobal Collection/Picture Desk

---

a) Explain why the audience may have reacted in fright to this film.

---

b) Imagine you had created the first film to screen in public. Draw an image or write a description of what you would have selected to screen.
Focal point: Page to Screen
Emergence Table: Arrival of Film

Winsor McCay was one of the pioneers of animation. Known for his vividly drawn Sunday newspaper comic strip, *Little Nemo in Slumberland*, which ran between 1905 and 1927, McCay also created animated short films. Each frame in these shorts was hand-drawn by McCay and each film required thousands of frames.

McCay also went on vaudeville tours and interacted with his animated films, performing tricks such as holding his hand out to ‘pat’ his creations, including Gertie the Dinosaur.

a) View *Gertie the Dinosaur*.

b) Twenty-four frames are required to create one second of life-like animation. *Gertie the Dinosaur* is 12 minutes in duration. Calculate the number of frames McKay would have drawn to create this film. Remember there are 60 seconds in one minute!
Focal point: Fragility of film touchscreen interactive
Emergence Wall: The Arrival of Film

Preservation of Australia’s film heritage came too late for many of our silent feature films which have been lost through either film decomposition or carelessness.

Nitrate film decomposition, which can be seen on the final reel of *The Story of the Kelly Gang*, accounts for the loss of about 90% of Australia’s silent film heritage. The occasional discovery of footage from seminal works has highlighted the importance of and the need for film conservation.

Image credit: Film still, *The Story of the Kelly Gang*
Director: Charles Tait. Courtesy: National Film and Sound Archive of Australia

a) View *The Story of the Kelly Gang*.

b) When was this film created?

c) Explain how this film may have become damaged.
Focal point: Mechanical Television based on John Logie Baird demonstration set
Emergence Table: Arrival of Television

Although the introduction of television in Australia followed years of delay and debate, it wasn’t long before TV became a true mass medium.

In 1926, John Logie Baird succeeded in transmitting instantaneous moving pictures of living people. His demonstration television combined both the transmitter and the receiver in one unit. A wireless transmitter sent images recorded by the revolving scanning disk to a receiver, where a similar combination of aperture and disk reproduced the image.

![Image of Baird's demonstration television](image.png)

Image credit: Philo T Farnsworth stands next to his large-screen direct view cathode-ray electric television, 1934. Courtesy: Tom Genova

a) Examine the reproduction of Baird’s demonstration television.

b) Create a sketch and use labels to show how the mechanical TV operated.
Focal point: Satellite technology
Emergence Table: Arrival of Global Broadcast

In 1969, people were united across the globe in a simultaneous, collective viewing experience. This display looks at the arrival of satellite technology and the broadcast of the moon landing around the world and via a relay in Australia. It shows how the event became a globally shared memory.

“One small step for man. One giant leap for mankind.” Six hundred million people, or one fifth of humankind at the time, watched Neil Armstrong’s first steps on the moon.


a) Create a sketch to help you explain why Australia was central to the broadcast of the moon landing.
**Focal point: Videogames**

Emergence Wall: The Digital Age, Emergence Table: Arrival of Video Games

Videogames emerged in three different forms during the 1970s: arcade gaming, home consoles for television play and programmable consoles and computers.

Home consoles were seen mainly as family entertainment. Computer games were often promoted for educational content, while arcade games were largely used by young people.

a) Draw or make notes to demonstrate things you notice about the earliest game consoles.

Shigeru Miyamoto redefined videogame design in 1981 when he created *Donkey Kong*. *Super Mario Bros.*, another of Miyamoto’s creations, is one of the best-selling games of all time with over 40 million copies sold worldwide.

b) What is the name of the well-known plumber character created by Shigeru Miyamoto?

c) Design your own game characters.
Focal point: Social Media
Emergence Table: Arrival of the Net

In the early 1990s, computers and the internet became more sophisticated and more accessible. The digital revolution brought with it technological changes that continue to enable people across the world to browse content of all types, to shoot, edit and distribute film within the space of a day and to engage in innovative virtual videogame worlds and a range of continually evolving online social activities.

a) List similarities and differences between the simultaneous, collective viewing experience of the moon landing in 1969 and the capabilities of today’s information and communication technologies.

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) How would you change YouTube if you had the opportunity?


c) Write your predictions for the future of the moving image.


SECTION TWO: VOICES

Focal point: Representing Australia
Voices: Sounds of Aus

The 1932 film *On Our Selection* opens with a ‘bush symphony’ of sound effects and birdsong from the Australian countryside. While the first seventy years of Australian film was often set in the bush or the outback, more recent films have featured the suburbs and the city.

a) Create a concept map showing sounds that you think reflect Australia today.

Diverse Australian landscapes and cultures inspire, define and provoke a sense of nation and identity on the screen. There is not just one single Australian voice represented in the moving image, but many.

b) Draw or make notes to show how you would represent Australia in film today.
Focal point: Community Voices
Voices

Since the birth of the moving image, people have made their own films outside the mainstream industry – for many reasons and using all sorts of content.

a) Create a title for a film you would like to make or would like to see made and exhibited in the Community Voices section.

b) What would your film be about?

c) Sketch the opening scene of your film.
Focal point: Dreaming in Colour
Voices: Strangers with Cameras, Subject Speaks Back, Blak Wave

Indigenous Australians have been a part of moving image history from the beginning. In 1898, anthropologist A.C. Haddon worked with Mer Islanders to film their traditions. Since then, Indigenous Australians have taken part in thousands of film and television productions. However, they have not always had control over the selection of stories or their representations.

Today a new generation of Indigenous Australians is continuing this effort by telling their stories their way. The ‘Blak Wave’ of moving image makers is winning recognition around the world for its talented pool of directors, cinematographers, writers and actors.

a) What did you see or hear in Screen Worlds that surprised or shocked you about the representation of Indigenous peoples both in the past and now?

Past

Now

b) How might the ‘The Subject Speaks Back’ section of Screen Worlds contribute to the future of the moving image in Australia? Why do you think this?
Focal point: Spotlights and Australian Showcase
Voices

a) List or draw three interesting things you discovered in the ‘Spotlights’ or the ‘Australian Showcase’ section of Screen Worlds. Why did you find these things interesting?

1.

2.

3.
**Focal point: Interactive Locations Map**

Voices: Representing Australia

From *Mad Max* in the Melbourne University car park to Skippy in Ku-ring-gai Chase National Park, the Interactive Locations Map can help you to explore over 50 places made famous on screen.

a) Touch the giant Interactive Locations Map to transport yourself to iconic film and TV locations.

b) Explore the Interactive Locations Map to discover some interesting information about the national park in which *Skippy the Bush Kangaroo* was set.

b) Draw or write something new that you discovered about Australia and its locations.
SECTION THREE: SENSATION

Focal point: Muybridge
Sensation: Time and Motion

When a horse gallops, do all of its hooves leave the ground at the same time? This question stumped scientists for years. A horse galloping moves too fast for humans to see their hooves with the naked eye – but it is not too fast for the camera.

a) Examine Muybridge’s series of images revealing a horse at every stage of its gallop – even mid-air - to write or draw your answer to the following question: When a horse gallops, do all of its hooves leave the ground at the same time?

b) Create a sequence of sketches showing a ball bouncing.

b) Create a sequence of sketches showing a person walking.
Focal point: The Faulty Fandangle
Sensation: Light and Shadow

Drawing upon the tradition of eighteenth century Indonesian shadow puppetry, this theatrical mixed media installation blends silhouette animation and kinetic sculpture.

a) Look through the peephole in this exciting new work by Oscar®-nominated Anthony Lucas (The Mysterious Geographic Explorations of Jasper Morello), combining animation with mechanical illusions and shadow play.

b) Draw what you see through the peephole.

c) Anthony Lucas uses a variety of techniques – for example, 2-D silhouettes – in The Faulty Fandangle (pictured above). What other techniques are used to create meaning?

d) Explain how this work connects moving image from the past with moving image of today.
**Focal point: Pong vs Tennis**

Sensation: Interactivity

*Pong* is a very early arcade tennis game that features two-dimensional graphics. The aim of the game is simply to defeat the opposing player by gaining a higher score. It was created by Allan Alcorn, manufactured by Atari and released in 1972.

This exhibit allows you to play videogame graphics across time in a full-body interactive experience. Player One has a retro-style paddle while Player Two has a fully motion sensitive wireless controller. Who will win?

a) Join up with a partner, but before you play, write down who you predict will be the winner:


b) What is the connection between Magnavox Odyssey and Pong?


c) Describe in words or create a diagram explaining the game play involved for Player Two, who uses the motion sensitive wireless controller, in *Pong vs Tennis.*


Focal point: Ty the Tasmanian Tiger™ Zoetrope
Sensation: Time and Motion

As the lights go down and the strobe kicks in, animation comes to life in this stunning 3D zoetrope featuring almost 200 characters.

Building upon nineteenth century origins, this zoetrope is based upon a videogame series starring Krome Studios’ superstar Ty the Tasmanian Tiger and his friends. This distinctively Australian zoetrope was commissioned especially by ACMI for Screen Worlds.

a) Write down the title and the year it was produced, of the original videogame on which the zoetrope is based.

b) The main character in the Ty the Tasmanian Tiger™ videogame is on a quest to find his lost family. What are the signature objects and the signature line used by this character?

c) Explain using words or drawing how a zoetrope uses a rapid succession of still images to create an illusion of movement.
**Focal point: Timeslice**
Sensation: Time and Motion

*The Matrix*, released in 1999, is the first of a series of science-fiction action films. The film features a visual effect known as ‘bullet time’ which allows the viewer to watch a moment progressing in slow-motion as the camera appears to orbit around the scene at normal speed.

Inspired by the iconic ‘bullet time’ sequence in *The Matrix*, this full-body interactive experience lets you keep a video clip of your special effect moment. Hugo Weaving will give you your instructions, as you get ready to perform for the array of 36 cameras.

Draw or describe what your video clip has captured.
Image credit: Ty the Tasmanian Tiger™ Zoetrope. Courtesy: Australian Centre for the Moving Image