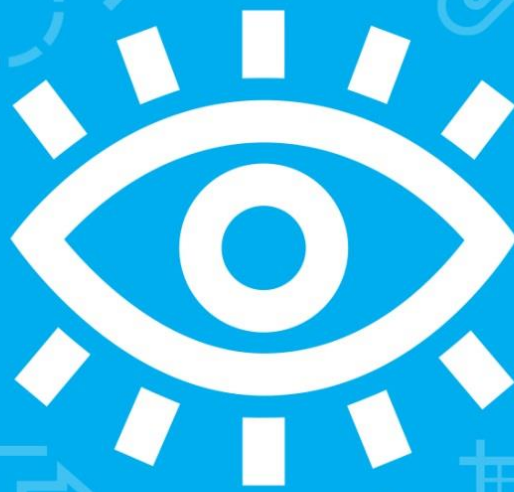


SL



DIGITAL FUTURES

LEARNING NOTES

Welcome!

Dear teachers, parents and community leaders,

As the central hub for our *Digital Futures* program, we are pleased to announce the next offering in the SLQ Gallery: the *Digital Futures Lab*. Part laboratory, studio, game space and exhibition, the *Lab* offers provocations and experiences for visitors of all ages. Visitors can discover smart cities and digital bodies, real life robots and risky algorithms. They can immerse themselves in virtual worlds, learn mindfulness from a machine, and share their dreams and predictions for the future.

We welcome you to participate in the experiences the *Lab* offers, and hope you enjoy your time in this immersive, participatory space.

Linda Barron

Executive Manager, Community Engagement

signatureprogram@slq.qld.gov.au



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A list of videos and other resources of interest

OVERVIEW

Introduction to Digital Futures

Each year State Library of Queensland presents a theme of interest to the Queensland community. Throughout 2017, we invite you to join us in exploring Digital Futures.

Technology has given us new tools through which to question, understand, imagine, re-imagine and improve the world in which we live. Not only is technology substantially changing our economy but also our leisure activities, our political processes, and how we communicate with each other. Digital literacy has opened up new frontiers for collaboration, connection, and sharing. We are witnessing a change in the nature of work, people are living longer and healthier lives, and new kinds of activism and internationalism are emerging.

As we hurtle through the digital age and amass huge amounts of data, the implications to our freedoms, rights, privacy, security and responsibilities, and how we respect, protect and connect with each other must be considered. Who will own the digital future? What values will we take with us?

Join us throughout 2017 to investigate the future and examine what it means to be a digital citizen in today's changing world.

For a full list of Digital Futures events visit:

www.slq.qld.gov.au/digitalfutures

Join the conversation online by using #digitalfutures



/statelibraryqld



@slqld



@statelibraryqld

TOUR DETAILS

Digital Futures Lab is open 10am to 5pm daily

11 February - 5 November, 2017

Tour availability: Group tours available by request 10am to 5pm Monday to Friday. Bookings required.

How to book: <http://www.slq.qld.gov.au/whats-on/school-and-group-tours>

Duration: 30 minute tour. Allow a minimum of 1 hour in total to include time for further exploration and engagement with activities after your tour.

Cost: Free

Age: 10+. Younger children are welcome to visit the Lab however the tour program is targeted at ages 10+.

Minimum Capacity: 8 participants per tour

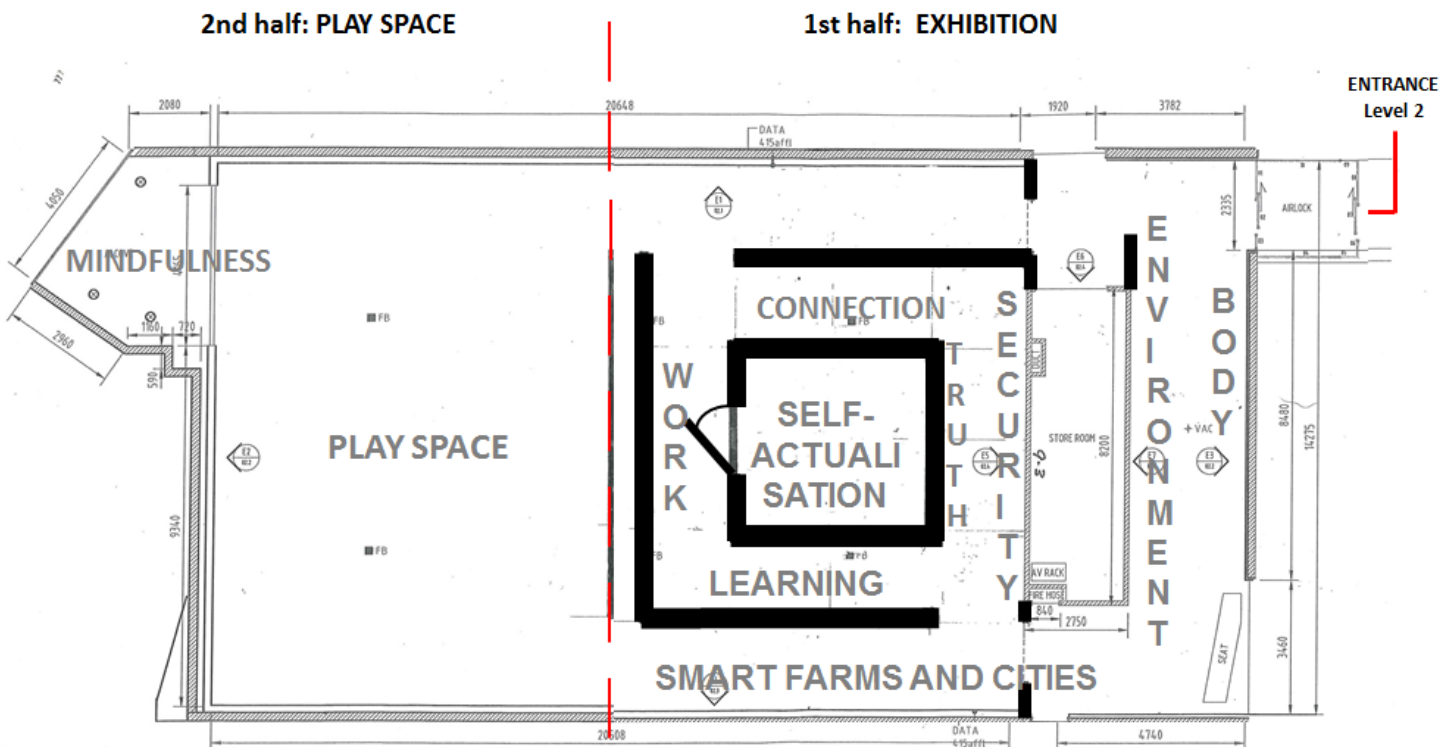
Maximum Capacity: 30 participants per tour

Curriculum links: Technologies, Humanities and Social Science

PRE-VISIT

What to Expect

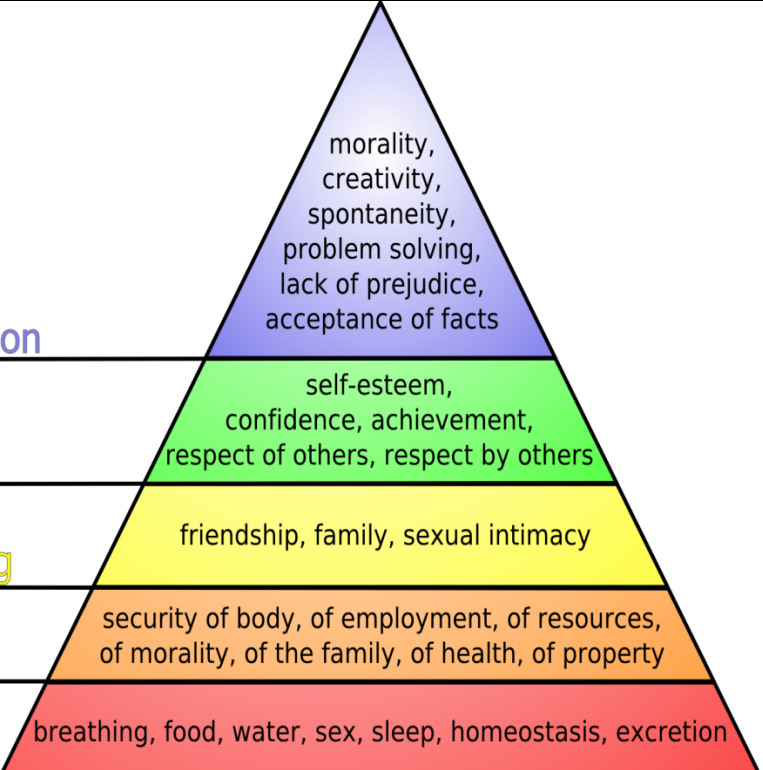
- This is not an 'exhibition' in the traditional sense. It is part laboratory, part game, part studio, part creative space
- The aim is to create an immersive and experiential space that will present concepts and ask questions of visitors, so that they start thinking about some of the issues surrounding our 'digital future'
- The gallery is divided into two halves:
 - The first section as you walk in provides a series of provocations based around Maslow's hierarchy of needs, exploring how digital technologies are changing the way we meet our human needs.
 - The second half is a relaxed and flexible space where visitors can engage with some digital 'toys', watch TED Talks, experience virtual reality, digitally meditate and join in our workshop program.



ACTIVITY:

Introducing Maslow's Hierarchy of Needs

1. Brainstorm human needs in groups. Collate ideas to paper or a digital platform of your choice.
2. Explain the idea of Maslow's pyramid with basic needs on the bottom moving up to more complex needs. More info: <http://www.simplypsychology.org/maslow.html>
3. Provide a large triangle and ask students to place their ideas where they think they fit on the pyramid.
4. Label each level using the categories below. Use the exhibition categories, Maslow's original categories, or both.
5. Discuss as a class and reposition contributions as decided by the group.
6. Ask students to select one level of the pyramid and write a reflection on how this area may be affected by changes in technology in the future.
7. Share in groups or as a class.
8. To extend further, ask students to design a digital innovation that could be used to improve life in respect to the category selected for reflection.

Exhibition Categories	Maslow's Original Categories
Virtual vs Physical Self	 <p>Self-actualization morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts</p>
Work and Learning	<p>Esteem self-esteem, confidence, achievement, respect of others, respect by others</p>
Connection	<p>Love/Belonging friendship, family, sexual intimacy</p>
Information Security	<p>Safety security of body, of employment, of resources, of morality, of the family, of health, of property</p>
Body and Environment	<p>Physiological breathing, food, water, sex, sleep, homeostasis, excretion</p>

DURING VISIT

On Arrival

- **Meeting point:** reception on the ground floor of the library.
- **Amenities:** Toilets and water bubblers located on each floor
- **Bags:** You are allowed to take bags upstairs however for convenience we recommend you check backpacks at reception.
- **For More:** www.slq.qld.gov.au/visit-us

In the Gallery

- Take as many photos as you like. These can help with your post visit activities. Avoid taking photos of others unless you have sought permission.
- Feel free to share on social media using #digitalfutures
- Use the worksheet on p11 with your students. Print and copy as required.

Available Experiences

There are a diverse range of experiences on offer in the Lab. This list can help you identify which experiences you want to prioritise. Let us know when you arrive and we can help you achieve your aims. A full list of the videos in the exhibition (including hyperlinks) is listed under resources.

BODY: Who will have access to cyborg technologies and what new skills will these give us?	
Adaptive technologies Fashion Innovation/ Future Business	Video screens x 2
ENVIRONMENT: Can digital technologies and data enhance the natural world in which we live?	
NASA data visualisations Natural environment	Touch screen x 1 Video screen x 3
Large interactive touch screen from Seqwater exploring water grid	Water Globe

SMART CITIES AND FARMS: Who controls the technology and data of smart cities and do we have a right to opt out?	
Smart farms – using data to improve practices Smart cities – how smart cities communicate	Video screen x 2
Data collection and surveillance	Wall graphic
Data Visualisation Geography Interactive technologies Urban planning	Augmented Reality Sandpit
SECURITY: Big data and open data are here. Does this herald the end of privacy and does it even matter anymore?	
Data Visualisation Information security Fake News	Framed network diagrams
Predictive search Information security	Video screen x 1
TRUTH: As the boundaries of truth blur, how can we stay informed and maintain a view of the world outside our own ‘filter bubbles’?	
Filter bubbles Information security Fake news	Physical structure of the walled garden plus didactic panel
CONNECTION: What effect will the digital future have on our relationships and the need to connect with others?	
The effect social media has on our brains Texting that saves lives Emotional Robots	3 x video case studies
Live Twitter feeds. Contribute by tweeting online #DigitalDetox #RUOK #robots	3 x live Twitter feeds
Social Robots - See volunteers to request a cuddle	PARO robotic seal
WORK: Is there a golden age approaching? Are robots taking our jobs? Is capitalism dead?	
Future of work Sharing economy Changing business models	Video screens x 3 Mind map of ideas

LEARNING: Will digital technology replace classroom learning altogether?	
Evolution of technology over time Educational games in virtual reality, iPad and on a windows 3.1 PC from the early 1990s	Oculus Rift VR 2 x iPads Windows 3.1
Design thinking and technologies	Books
360 degree videos- Turn your own phone (or borrow ours) and turn it into a virtual reality headset	Google cardboard
THE SELF: So who are you in the digital future and who is there with you? What places do you frequent and where does your life unfold?	
Interactive/ tech based art installation exploring our worries and dreams for the future in a physical network of copper wire vines	Hive Mind art installation
Immersive video experience	Inside the walled garden
MINDFULNESS: Can we leverage the excitement of digital technologies to help us unwind, focus and increase mindfulness?	
Interactive mindfulness apps to explore Future business ideas Evolution of relaxation	iPads x 3 Video screen x 1
PLAY SPACE	
Ted talks channel	Projector 1: Ted Talks
Control computer with your body. - Play sports such as bowling or table tennis	Projector 3: Xbox 360 with Kinect
Control computer with your mind - use your powers of concentration	Projector 4: Brainwave Headset
Room size virtual reality. So many experiences! Future Business and future learning Eg. Tilt brush to draw in 3D- applications for rapid prototyping OR Blue – future of education/tourism	Virtual Reality
Interactive Timeline: Visitors can contribute ideas - evolution of technology over time - predictions for the future	Timeline
OPTIONAL EXTRAS	
Ozobot robots: These can be brought out on request. A great introduction to coding	Ozobots

DIGITAL FUTURES

These questions are designed to get you thinking. There are no right or wrong answers, just ideas. Explore each section of the *Digital Futures Lab* and write your response here.

NAME:

DATE:

THE BODY	What new skills will these technologies give us? Who do you think will have access to cyborg technologies?
ENVIRONMENT	Can digital technologies and data enhance the natural world in which we live? Why or why not?
SMART CITIES AND FARMS	Who should control the technology and data of smart cities? Do we have a right to opt out? Why/ why not?
SECURITY	Big data and open data are here. Does this herald the end of privacy? Why/ why not? Does privacy even matter? Why/ why not?
TRUTH	As the boundaries of truth blur, how can we stay informed? How can you maintain a view of the world outside your 'filter bubble'?



#digitalfutures

www.slq.qld.gov.au/digitalfutures

NAME:

DATE:

CONNECTION	What effect will the digital future have on our relationships and how we connect with others?
WORK	Is there a golden age approaching? Are robots taking our jobs? Is capitalism dead? Pick one and explain why/ why not.
LEARNING	Will digital technology replace classroom learning altogether?
THE SELF	Who are you in the digital future and who is there with you? What places do you frequent and where does your life unfold?
MINDFULNESS	Can we leverage the excitement of digital technologies to help us unwind, focus and increase mindfulness? Why/ why not?

POST VISIT

Discussion Points

1. What did you enjoy the most and why?
2. What did you enjoy the least and why?
3. What surprised you and why?
4. What did you learn about our digital future?
5. How do you feel when thinking about our digital future and why?
6. What would you like to know more about?

Activity Suggestions

1. Ask students to look back at the reflection they wrote before visiting the Lab and identify anything unexpected, reflecting on what they enjoyed and what they learnt through their experience.
2. Ask students to reflect on the digital innovation they created before their visit and identify what they would change.
3. Ask students to select a time period (10, 20 or 50 years in the future) and write a diary entry for a day in the life of a high school student of the future.
4. Develop activities from the ideas presented in the Learning Projects.

LEARNING PROJECTS

Overview

This section outlines a series of ideas for in-depth learning projects with strong links to the Australian Curriculum. The information provided is designed to inspire you to develop a unit of work around selected concepts presented in the Lab.

Years 7 & 8

1. Smart Cities: Planning for the Future (Geography)
2. Develop a Business for the Future (Business and Economics)
3. Visualising Data (Technologies)

Years 9 & 10

4. Develop a Business for the Future (Business and Economics)
5. Monitoring our Environment (Geography)
6. Making Information Accessible (Technologies)

Project 1: Geography, Years 7-8

Smart Cities: Planning for the Future.	Curriculum Links
<p>Research the causes and consequences of urbanisation, drawing on a study from Indonesia, or another country of the Asia region.</p> <p>Research the concept of smart cities and how such a concept can be beneficial to those living in the urbanised world.</p> <p>Identify technologies being used in smart cities in both Australia and Europe.</p> <p>Propose a smart cities innovation that specifically enhances liveability for young people living in an Australian urban environment.</p>	<p>Humanities and Social Sciences- Geography</p> <p>KNOWLEDGE</p> <ul style="list-style-type: none"> • Causes and consequences of urbanisation, drawing on a study from Indonesia or another country of the Asia-Pacific region (ACHGK054) • Management and planning of Australia’s urban future (ACHGK059) <p>SKILLS</p> <ul style="list-style-type: none"> • Observing, questioning and planning Strategies used to enhance the liveability of places, especially for young people, including examples from Australia and Europe (ACHGS047) & (ACHGS055) • Reflecting and responding Reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal (ACHGS054) & (ACHGS062)
Key Resources	
<p>Inside Digital Futures Lab</p> <p>GENERAL: Explore the context within which urbanisation is happening</p> <p>BODY: <u>CITIES UNLOCKED: Augmented Reality Video</u>. 5:04 minutes</p> <p>ENVIRONMENT: SEQWATER: Water Globe – interactive screen about water grid</p> <p>SMART CITIES & FARMS</p> <ul style="list-style-type: none"> • Introduction to smart cities and farms including infographic • <u>MICROSOFT AND THE YIELD: Transforming the Agricultural Industry</u> • <u>VINCI ENERGIES: What is a Smart City?</u> 3:27 min • SEQWATER: Augmented reality sandpit – unique data visualisation 	<p>WORK</p> <ul style="list-style-type: none"> • Future of work wall including a mind map of ideas • <u>SBS, ‘THE FEED’: Jobs of the Future: What Will Yours Be?</u> 3:57min • <u>JACOB MORGAN: The 5 Trends Shaping the Future of Work</u> 3:36 min • <u>REINVENT: An Animated Overview of the Sharing Economy</u> 3:45 min <p>Other Online Resources</p> <p><u>Smart Cities Video:</u> Predictions for future innovations around business, technology and smart cities</p> <p><u>The Future of Social Media Video:</u> A simple introduction to how social media is changing the way we connect and some predictions for the future</p>

Project 2: Economics and Business, Years 7-8

Develop a Business for the Future	Curriculum Links
<p>Research the influences on the ways people work and factors that might affect work in the future.</p> <p>Develop a business proposal for a business of the future. What services or products does your business offer? Who does it employ and how does it function?</p> <p>Present your proposal using evidence based arguments and data visualisations where appropriate.</p>	<p>Humanities and Social Sciences- Economics and Business KNOWLEDGE</p> <ul style="list-style-type: none"> Types of businesses and the ways that businesses respond to opportunities in Australia (ACHEK030) Influences on the ways people work and factors that might affect work in the future (ACHEK031) <p>SKILLS</p> <ul style="list-style-type: none"> Interpretation and analysis Interpret data and information displayed in different formats to identify relationships and trends (ACHES023) & (ACHES034) Communication and reflection Present evidence-based conclusions using economics and business language and concepts in a range of appropriate formats, and reflect on the consequences of alternative actions (ACHES026) & (ACHES037)
Key Resources	
<p>Inside Digital Futures Lab GENERAL: Explore the context within which business innovation is happening.</p> <p>BODY: <u>CITIES UNLOCKED: Augmented Reality Video</u>. 5:04 minutes</p> <p>SMART CITIES & FARMS</p> <ul style="list-style-type: none"> <u>MICROSOFT AND THE YIELD: Transforming the Agricultural Industry</u> <u>VINCI ENERGIES: What is a Smart City?</u> 3:27 min SEQWATER: Augmented reality sandpit – unique data visualisation <p>CONNECTION: PARO, a robotic seal used in therapeutic care</p> <p>WORK</p> <ul style="list-style-type: none"> Future of work wall including a mind map of ideas <u>SBS, 'THE FEED': Jobs of the Future: What Will Yours Be?</u> 3:57min <u>JACOB MORGAN: The 5 Trends Shaping the Future of Work</u> 3:36 min <u>REINVENT: An Animated Overview of the Sharing Economy</u> 3:45 min 	<p>LEARNING: iPad with interactive apps for inspiration. See full listing in Resources</p> <p>PLAY SPACE</p> <ul style="list-style-type: none"> INTERACTIVE TIMELINE: a timeline that tracks the evolution of technology including visitors' predictions for the future. VIRTUAL REALITY, BRAINWAVE, KINECT – what businesses could you offer within virtual reality? How could you incorporate gaming technologies? <p>MINFULNESS ROOM: Interactive apps for inspiration</p> <p>Other Online Resources</p> <ul style="list-style-type: none"> <u>Smart Cities Video</u> - Predictions for future innovations around business, technology and smart cities <u>The Future of Social Media Video:</u> A simple introduction to how social media is changing the way we connect and some predictions for the future <u>Open Data Institute of Queensland:</u> What is open data and where to find it. Excellent portal to open data sources, lessons, explanations etc

Project 3: Technologies, Years 7-8

Visualising Data	Curriculum Links
<p>Research big data and the impact it is having on 21st Century lives.</p> <p>Acquire environmental data from a range of sources on a specific event or phenomenon.</p> <p>Evaluate authenticity, accuracy and timeliness and select one data set for presentation.</p> <p>Develop 3 different ways to visualise your selected data and present the information to others.</p>	<p>Technologies SKILLS</p> <ul style="list-style-type: none"> • Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025) • Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026) • Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)
Key Resources	
<p>Inside Digital Futures Lab GENERAL: Explore a variety of ways to present data and the power data visualisation has to increase understanding.</p> <p>ENVIRONMENT</p> <ul style="list-style-type: none"> • NASA Climate Time Machine - Interactive visualization • NASA Total Sea Level Change between 1992 and 2014, 1:02 min • ED HAWKINS Global Temperature Change, 2016, Animated GIF • TED Sylvia Earle: My Wish – Protect Our Oceans 2009, 18:16 min • SEQWATER: Water Globe – interactive touch screen about water grid <p>SMART CITIES & FARMS</p> <ul style="list-style-type: none"> • Introduction to smart cities and farms including infographic • SEQWATER: Augmented reality sandpit – unique data visualisation <p>SECURITY: Series of printed data visualisations</p>	<p>LEARNING: Ipad with interactive apps- see Earth Viewer in particular</p> <p>Other Online Resources</p> <ul style="list-style-type: none"> • Open Data Institute of Queensland: What is open data and where to find it. Excellent portal to open data sources, lessons, explanations etc

Project 4: Economics and Business, Years 9-10

Develop a Business for the Future	Curriculum Links
<p>Research the influences on the ways people work and factors that might affect work in the future.</p> <p>Develop a business proposal for a business of the future. What services or products does your business offer? Who does it employ and how does it function?</p> <p>Present your proposal using evidence based arguments and data visualisations where appropriate.</p>	<p>Humanities and Social Sciences- Economics and Business KNOWLEDGE</p> <ul style="list-style-type: none"> The ways businesses respond to changing economic conditions and improve productivity through organisational management and workforce management (ACHEK054) <p>SKILLS</p> <p>Economic reasoning, decision-making and application</p> <ul style="list-style-type: none"> Apply economics and business knowledge, skills and concepts in familiar, new and hypothetical situations (ACHES047) & (ACHES059) <p>Communication and reflection</p> <ul style="list-style-type: none"> Present reasoned arguments and evidence-based conclusions in a range of appropriate formats using economics and business conventions, language and concepts (ACHES048) & (ACHES060)
Key Resources	
<p>Inside Digital Futures Lab</p> <p>GENERAL: Explore the context within which business innovation is happening.</p> <p>BODY: <u>CITIES UNLOCKED: Augmented Reality Video</u>. 5:04 minutes</p> <p>SMART CITIES & FARMS</p> <ul style="list-style-type: none"> <u>MICROSOFT AND THE YIELD: Transforming the Agricultural Industry</u> <u>VINCI ENERGIES: What is a Smart City?</u> 3:27 min <u>SEQWATER: Augmented reality sandpit – unique data visualisation</u> <p>CONNECTION: PARO, a robotic seal used in therapeutic care</p> <p>WORK</p> <ul style="list-style-type: none"> Future of work wall including a mind map of ideas <u>SBS, 'THE FEED': Jobs of the Future: What Will Yours Be?</u> 3:57min <u>JACOB MORGAN: The 5 Trends Shaping the Future of Work</u> 3:36 min <u>REINVENT: An Animated Overview of the Sharing Economy</u> 3:45 min 	<p>LEARNING: iPad with interactive apps for inspiration. See full listing in Resources</p> <p>PLAY SPACE</p> <ul style="list-style-type: none"> INTERACTIVE TIMELINE: a timeline that tracks the evolution of technology including visitors' predictions for the future. VIRTUAL REALITY, BRAINWAVE, KINECT – what businesses could exist in virtual reality? How could you incorporate gaming technologies? <p>MINFULNESS ROOM: Interactive apps for inspiration</p> <p>Other Online Resources</p> <ul style="list-style-type: none"> <u>Smart Cities Video:</u> Predictions for future innovations around business, technology and smart cities <u>The Future of Social Media Video:</u> A simple introduction to how social media is changing the way we connect and some predictions for the future <u>Open Data Institute of Queensland:</u> What is open data and where to find it. Excellent portal to open data sources, lessons, explanations etc

Project 5: Geography, Years 9-10

Monitoring our Environment	Curriculum Links
<p>Digital technologies are currently being used to gather vast quantities of data about our environment, but how can we use this data to plan for the future?</p> <p>Collect and analyse environmental data about a specific event or phenomenon.</p> <p>Identify a government or non-government agency that would be interested in the findings of your research.</p> <p>Write a report to a government or non-government organisation involved in improving human wellbeing with a set of recommendations for action.</p> <p>For example, at a local level, you could analyse the CO₂ levels in the air in a particular suburb and develop recommendations for the Department of Main Roads to create arterial roads that divert traffic away from schools and suburban homes.</p> <p>For a more international perspective, you could use global temperature data to write recommendations for an aid organisation such as Oxfam.</p>	<p>Humanities and Social Sciences – Geography</p> <p>KNOWLEDGE</p> <ul style="list-style-type: none"> • Geographies of Human Wellbeing The role of international and national government and non-government organisations’ initiatives in improving human wellbeing in Australia and other countries (ACHGK081) <p>SKILLS</p> <ul style="list-style-type: none"> • Collecting, recording, evaluating and representing Represent multi-variable data in a range of appropriate forms, for example scatter plots, tables, field sketches and annotated diagrams, with and without the use of digital and spatial technologies (ACHGS065) & (ACHGS074) • Interpreting, analysing and concluding Interpret and analyse multi-variable data and other geographical information using qualitative and quantitative methods, and digital and spatial technologies as appropriate, to make generalisations and inferences, propose explanations for patterns, trends, relationships and anomalies, and predict outcomes (ACHGS067) & (ACHGS076)
Key Resources	
<p>Inside Digital Futures Lab</p> <p>GENERAL: Explore a variety of ways to present data and the power data visualisation has to increase understanding.</p> <p>ENVIRONMENT</p> <ul style="list-style-type: none"> • NASA Climate Time Machine - Interactive visualization • NASA Total Sea Level Change between 1992 and 2014, 1:02 min • ED HAWKINS Global Temperature Change, 2016, Animated GIF • TED Sylvia Earle: My Wish – Protect Our Oceans 2009, 18:16 min • SEQWATER: Water Globe – interactive touch screen about water grid 	<p>SMART CITIES & FARMS</p> <ul style="list-style-type: none"> • Introduction to smart cities and farms including infographic • MICROSOFT AND THE YIELD: Transforming the Agricultural Industry • VINCI ENERGIES: What is a Smart City? 3:27 min • SEQWATER: Augmented reality sandpit – unique data visualisation <p>SECURITY: Series of printed data visualisations</p> <p>LEARNING: iPad with interactive apps- see Earth Viewer in particular</p> <p>Other Online Resources</p> <p>Open Data Institute of Queensland: What is open data and where to find it. Excellent portal to open data sources, lessons, explanations etc</p>

Project 6: Technologies, Years 9-10

Making Information Accessible	Curriculum Links
<p>Identify an existing information system that could be improved. Eg bus timetable, study options for high school graduates</p> <p>Evaluate this system considering functionality, accessibility, usability, and aesthetics, as well as safety and legal responsibilities.</p> <p>Design an online service that offers a new way to share this information to a particular audience and build your online solution in small groups.</p> <p>Evaluate your project as well as those of your peers considering functionality, accessibility, usability, and aesthetics, as well as safety and legal responsibilities.</p> <p>For example, you could develop a new way to share bus timetable information specifically for those with vision impairment OR an online survey that assists high school graduates to identify and/or compare study options of interest.</p>	<p>Technologies KNOWLEDGE</p> <ul style="list-style-type: none"> Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems (ACTDIK034) <p>SKILLS</p> <ul style="list-style-type: none"> Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039) Evaluate critically how student solutions and existing information systems and policies, take account of future risks and sustainability and provide opportunities for innovation and enterprise (ACTDIP042) Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043) Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability (ACTDIP044)
Key Resources	
<p>Inside Digital Futures Lab</p> <p>GENERAL: Explore a variety of ways to present data and the power data visualisation has to increase understanding.</p> <p>ENVIRONMENT</p> <ul style="list-style-type: none"> NASA Climate Time Machine - Interactive visualization NASA Total Sea Level Change between 1992 and 2014, 1:02 min ED HAWKINS Global Temperature Change, 2016, Animated GIF TED Sylvia Earle: My Wish – Protect Our Oceans, 2009, 18:16 min SEQWATER: Water Globe – interactive touch screen about water grid <p>SMART CITIES & FARMS</p> <ul style="list-style-type: none"> Introduction to smart cities and farms including infographic MICROSOFT AND THE YIELD: Transforming the Agricultural Industry 	<ul style="list-style-type: none"> VINCI ENERGIES: What is a Smart City? 3:27 min SEQWATER: Augmented reality sandpit – unique data visualisation <p>SECURITY: Series of printed data visualisations</p> <p>LEARNING: iPad with interactive apps, see Earth Viewer in particular</p> <p>Other Online Resources</p> <p>Open Data Institute of Queensland: What is open data and where to find it. Excellent portal to open data sources, lessons, explanations</p> <p>Microsoft Accessibility Portal: An overview of Microsoft accessibility products as well as in depth tutorials. Great to get students thinking about how to make information accessible.</p>

RESOURCE LISTS

General Resources

- A non-exhaustive list of resources which you may find useful, including the various iPad apps in the Lab.

Videos

- Complete list of videos from *Digital Futures Lab*, organised to reflect the order presented in the gallery. Can be reviewed before or after visit.

TED Talks

- Full list of TED Talks included in TED Talks Channel. Concepts often more suited to senior or adult audience; however, may still be useful depending on your students and topics of study.

GENERAL RESOURCES

** Keywords highlighted in blue

Data, Future Business

Open Data Institute of Queensland

<http://queensland.theodi.org/>

- What is open data and where to find it. Excellent portal to open data sources, lessons, explanations etc

Data, Geography, Communicating Information

Seqwater

<http://www.seqwater.com.au/education>

- Interactive resources, lesson plans, and heaps of information about how water is managed in South East Queensland

Accessibility, Business, Innovation

Microsoft Accessibility Portal

<https://www.microsoft.com/enable/default.aspx>

- An overview of Microsoft accessibility products and in depth tutorials. Get students thinking about how to make information accessible.

Innovation, Smart Cities, Future Business

Smart Cities Video - Nordic Media Lab

<https://vimeo.com/128392905>

- Predictions for future innovations around business, technology and smart cities

Social Media, Innovation, Future Business

The Future of Social Media

<https://www.youtube.com/watch?v=KQjqtLWEu3s>

- A simple introduction to how social media is changing the way we connect and some predictions for the future

Social Media

Prince Ea Music Video

<https://www.youtube.com/watch?v=dRI8EIhrQjQ>

- A creative presentation of social networks as anti-social networks. Introduces students to some of the downfalls of social media, suggesting we all take time to switch off.

Innovation, Future Business, Data Visualisations

List of iPad apps presented in Digital Futures Lab in LEARNING and MINDFULNESS areas of exhibition

- LYNDA.COM: Expert led courses on a huge range of topics with adult learners in mind. Free membership for SLQ members.
- KHAN ACADEMY: Learn almost anything for free. Exam revision, exercises and plenty of explanations. Designed for ages 12+
- TINY BOP EXPLORERS: An award winning package of apps for children aged 4+. Beautifully designed, highly interactive and covers a wide range of topics from the body to skyscrapers to simple machines.
- DUOLINGO: Learn a new language in an engaging and interactive way. You can even practice with a robot, so no need to feel shy! All ages.
- EARTH VIEWER: A fully interactive time machine for exploring the Earth's geological history. See how continents and oceans have changed over time. All ages.
- GOOGLE EARTH: Incredible satellite imagery and integrated street view. Explore distant lands or reacquaint yourself with your childhood home.
- SMILING MIND: Smiling Mind is a modern meditation app designed to make mindfulness accessible to all.
- BLOOM: Developed by ambient pioneer Brian Eno and musician / software designer Peter Chilvers, Bloom offers an intuitive and beautiful experience of music.
- STARRY STARRY NIGHT: Re-discover the iconic flows of Vincent Van Gogh's "Starry Night" in this hypnotic and interactive animation.

VIDEOS

BODY

MICROSOFT and GUIDE DOGS UK

Cities Unlocked: A Voyage of Discovery 2015, 5:04 minutes

<https://www.youtube.com/watch?v=Wm-AAkAKoTc&t=2s>

MICROSOFT

Sadam 2:37 minutes

<https://vimeo.com/193470835>

AUSTRALIAN INSTITUTE OF SPORT

Can data help us achieve more Olympic gold? 2:33 minutes

<https://www.youtube.com/watch?v=6QxpEGyG1Us>

AEG

The Next Black – A Film About the Future of Clothing 46:55 minutes

<https://www.youtube.com/watch?v=XCsGLWrfE4Y>

ENVIRONMENT

NASA

Total Sea Level Change between 1992 and 2014, 1:02 minutes

<https://www.youtube.com/watch?v=m1M3q6TkYUk>

NASA

Climate Time Machine - Interactive visualization on touchscreen

<http://climate.nasa.gov/>

ED HAWKINS

Global Temperature Change (1850-2016), 2016, Animated GIF

<https://www.youtube.com/watch?v=wXrYvd-LBu0>

TED

Sylvia Earle: My Wish – Protect Our Oceans 2009, 18:16 minutes

www.ted.com/talks/sylvia_earle_s_ted_prize_wish_to_protect_our_oceans

SMART FARMS AND SMART CITIES

MICROSOFT AND THE YIELD

Transforming the Australian Agricultural Industry 2016, 3:15 minutes

<https://www.youtube.com/watch?v=0EK15i7CUy&t=3s>

VINCI ENERGIES

What is a Smart City? 3:27 minutes

<https://www.youtube.com/watch?v=Br5aJa6MkBc>

CONNECTION

EIPHEO.TV

Nicholas Carr: What the Internet is Doing to our Brains, 3:53 minutes

<https://www.youtube.com/watch?v=cKaWJ72x1rl>

TED

Nancy Lublin: Texting That Saves Lives, 5:24 minutes

https://www.ted.com/talks/nancy_lublin_texting_that_saves_lives

TED

David Hanson: Robots that Show Emotion, 4:57 minutes

https://www.ted.com/playlists/434/what_can_robots_teach_us_about

WORK

SBS, 'THE FEED'

Jobs of the Future: What Will Yours Be? 2015, 3:57 minutes

<https://www.youtube.com/watch?v=yy7MH9TyZck>

JACOB MORGAN

The 5 Trends Shaping the Future of Work 2016, 3:36 minutes

<https://www.youtube.com/watch?v=LrhmHbDLM8o>

REINVENT

An Animated Overview of the Sharing Economy 2016, 3:45 minutes

<https://www.youtube.com/watch?v=yy7MH9TyZck>

TED TALKS

1	Aaron Koblin Visualizing ourselves ... with crowd-sourced data Single Channel Video, 18:10
2	Abha Dawesar Life in the "digital now" Single Channel Video, 11:57
3	Aimee Mullins My 12 pairs of legs Single Channel Video, 9:54
4	Alessandro Acquisti What will a future without secrets look like? Single Channel Video, 15:00
5	Alex Kipman A futuristic vision of the age of holograms Single Channel Video, 19:05
6	Amber Case We are all cyborgs now Single Channel Video, 7:45 minutes
7	Andrew Blum Discover the physical side of the internet Single Channel Video, 11:59
8	Anthony Goldbloom The jobs we'll lose to machines -- and the ones we won't Single Channel Video, 4:41
9	Blaise Agüera y Arcas How computers are learning to be creative Single Channel Video, 17:35
10	Clay Shirky How social media can make history Single Channel Video, 15:48
11	David Autor Will automation take away all our jobs? Single Channel Video, 18:37
12	David McCandless The beauty of data visualization Single Channel Video, 18:10
13	Erik Brynjolfsson The key to growth? Race with the machines Single Channel Video, 11:56
14	Fei-Fei Li How we're teaching computers to understand pictures Single Channel Video, 17:58
15	Helen Fisher Technology hasn't changed love. Here's why Single Channel Video, 19:05

16	Hugh Evans What does it mean to be a citizen of the world? Single Channel Video, 16:56
17	Hugh Herr The new bionics that let us run, climb and dance Single Channel Video, 18:56
18	Jeremy Howard The wonderful and terrifying implications of computers that can learn Single Channel Video, 19:45
19	Kevin Slavin How algorithms shape our world Single Channel Video, 15:15
20	Lorrie Faith Cranor What's wrong with your password? Single Channel Video, 17:37
21	Lucy McRae How can technology transform the human body? Single Channel Video, 3:52
22	Mallory Soldner Your company's data could help end world hunger Single Channel Video, 11:15
23	Malte Spitz Your phone company is watching Single Channel Video, 10:03
24	Meron Gribetz A glimpse of the future through an augmented reality headset Single Channel Video, 10:54
25	Mitchell Joachim Don't build your home, grow it! Single Channel Video, 2:49
26	Nancy Lublin Texting that saves lives Single Channel Video, 5:17
27	Nicholas Christakis The hidden influence of social networks Single Channel Video, 18:06
28	Nick Bostrom What happens when our computers get smarter than we are? Single Channel Video, 16:31
29	Oscar Schwartz Can a computer write poetry? Single Channel Video, 10:56
30	Pankaj Ghemawat Actually, the world isn't flat Single Channel Video, 16:56
31	Parag Khanna How megacities are changing the map of the world Single Channel Video, 20:34

32	Paul Root Wolpe It's time to question bio-engineering Single Channel Video, 19:35
33	Rachel Armstrong Architecture that repairs itself? Single Channel Video, 7:25
34	Rachel Botsman The currency of the new economy is trust Single Channel Video, 19:39
35	Rebecca MacKinnon Let's take back the Internet! Single Channel Video, 14:45
36	Regina Dugan From mach-20 glider to hummingbird drone Single Channel Video, 24:54
37	Rodrigo Bijou Governments don't understand cyber warfare. We need hackers Single Channel Video, 9:28
38	Sam Harris Can we build AI without losing control over it? Single Channel Video, 14:27
39	Sarah Bergbreiter Why I make robots the size of a grain of rice Single Channel Video, 6:06
40	Sherry Turkle Connected, but alone? Single Channel Video, 19:41
41	Stefana Broadbent How the Internet enables intimacy Single Channel Video, 9:47
42	Susan Etlinger What do we do with all this big data? Single Channel Video, 12:23
43	Todd Kuiken A prosthetic arm that "feels" Single Channel Video, 18:44
44	Wanis Kabbaj What a driverless world could look like Single Channel Video, 11:31
45	Ze Frank My web playroom Single Channel Video, 17:52
46	Zeynep Tufekci Machine intelligence makes human morals more important Single Channel Video, 17:42
47	Zeynep Tufekci Online social change: easy to organize, hard to win Single Channel Video, 16:12



**We look forward to seeing you in the
Digital Futures Lab!**



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Questions? Comments?

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