Creating digitally rich resources for the classroom

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LOW-EMISSION TECHNOLOGY SERIES:

Introduction to carbon capture and storage

POWER - From Socket to Source

Sustainable Energy for All

Carbon Capture and Storage

For Kids

Global CO2 Capture

CSIRO

CarbonKids
EXPLORE DIGITAL MEDIA

COLLABORATE & COMMUNICATE

SOLVE PROBLEMS WITH EASE

ANALYZE DATA CRITICALLY
Blended Learning

• A portion of the learning is delivered through some kind of digital or online media.
• At least some of the learning is student-directed in terms of time, pace, path, and place.
• It is designed to provide an overall learning experience that is appealing to the digital student, and that delivers successful learning outcomes.

Become Austral top adventurer
Solution Fluency

• The *solution fluency* through six phases: Define; Discover; Dream; Design; Deliver and Debrief.

• The phases of the model are based on the 21st Century Fluencies created by Crockett et al. (2011).

• [http://globaldigitalcitizen.org/solution-fluency-video](http://globaldigitalcitizen.org/solution-fluency-video)
PROJECT BASED LEARNING TEACHES KIDS ABOUT WHAT POSSIBLE
The Scenario

Your advertising team has been approached by Dairy Australia to create a poster and e-Brochure to raise awareness about the sustainable practices in the dairy industry used to care for the environment; maintain healthy farms and healthy cows.

Your team should develop an understanding of:

• What dairy cows need to grow and survive and produce milk;
• How Australian dairy farmers raise and produce dairy cows, maintain healthy farms and care for the environment;
• The resources used on dairy farms; and
• The sustainable practices used on Australian dairy farms.
Continued

What happens when Australian dairy farmers strive to farm sustainably? Give dairy farming an update and communicate new ideas and innovations used in sustainable dairy farming in changing times.

Your task is to work in pairs or small groups, and design and produce a poster and an e-Brochure incorporating these topics.
Tech options: Poster

- **High Tech**: Students can use block-poster software to transfer high-resolution graphics and pictures to a wall-sized image.
- **Low Tech**: Students can use graphics and photo-editing software to produce a large poster.
- **No Tech**: Students can draw graphics and paste images from the Internet on poster board.
Digital tools

• Introduce students to Lucidpress, a free online poster maker. See https://www.lucidpress.com/pages/examples/free-online-poster-maker

• Highlight Glogster as another digital tool that can create posters at http://edu.glogster.com/

• Also see digital tools that are available at Cool Tools for Schools. See http://cooltoolsforschools.wikispaces.com/
Tech options: e-Brochure

- **High Tech**: Students can use software to transfer high-resolution graphics and pictures to produce a digital brochure.
- **Low Tech**: Students can use graphics and photo-editing software to produce a digital brochure.
- **No Tech**: Students can draw graphics and paste sourced images from the Internet on paper.
Digital tools

• Introduce ‘Canva’ a free digital tool that can assist create brochures, presentations and more! [https://www.canva.com/about](https://www.canva.com/about)

• Also see digital tools that are available at Cool Tools for Schools. [http://cooltoolsforschools.wikispaces.com/](http://cooltoolsforschools.wikispaces.com/)
Global Citizenship

Responsible digital users

6 principles
Respect themselves
Protect themselves
Respect others
Protect others
Respect intellectual property
Protect intellectual property
Share Our Toys!
Find great free resources to share at
globaldigitalcitizen.org/resources
Creative Commons

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Open sourced images

- Yes! You can copy, modify, distribute, and use the images, even commercially, without asking permission and without paying attribution.
- Pixabay
- MorgueFile
- Unsplash
- Freepixels
Free Music for Videos

http://mccoyproductions.net/mp-voice-over-blog/
Digital tools

- Flickr [www.flickr.com](http://www.flickr.com) a database for images and videos
- My Movie Moment [http://mymoviemoment.com](http://mymoviemoment.com) where you can add an image to a movie clip
- PicArtia [www.makeuseof.com/dir/picartia](http://www.makeuseof.com/dir/picartia) where you can create photo mosaics
- Google Earth [http://earth.google.com](http://earth.google.com) where you can locate places
- Google Maps [http://maps.google.com](http://maps.google.com) where you can find places of interest.
- Google SketchUp [http://sketchup.google.com/download](http://sketchup.google.com/download) a 3D modelling software
- Glogster [www.glogster.com](http://www.glogster.com) where you can mash up media
- Voice Thread [http://voicethread.com](http://voicethread.com) where you can upload video, record audio, add still images and create a digital story
The challenge

• The future isn’t what it used to be
• Learning and teaching has changed
• It’s a Web 2.0 world
• Schools have electronic whiteboards/digital devices in most classes or kids use their BYOD
• Teachers are time poor
• Think differently
The challenge – educational quality

• Alignment with the Australian Curriculum Content descriptions, CCPs and General capabilities
• Holistic approach
• Use of inquiry learning
• 21st century learning methodologies
Envision change

• Futures thinking
• Critical and creative thinking
• Participation and participatory learning
• Use of Web 2 tools
A different way of looking at education?

- **Possible characteristics**
  - Importance of context
  - Holistic approaches to knowledge
  - Interdisciplinary across most subjects
  - Critical thinking valued
  - Real world issues
  - Futures orientated
  - Participatory learning approaches
  - Place based learning
  - Action research
  - Use of Web 2 tools
  - Collective learning as well as individual
## Shifts with regard to curriculum and pedagogy

<table>
<thead>
<tr>
<th>From:</th>
<th>To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum as top down product</td>
<td>Curriculum as an experience / situated learning</td>
</tr>
<tr>
<td>Fixed knowledge</td>
<td>Provisional knowledge</td>
</tr>
<tr>
<td>Abstract knowledge</td>
<td>Real world knowledge</td>
</tr>
<tr>
<td>Teaching / instruction</td>
<td>Participative learning</td>
</tr>
<tr>
<td>Few learning styles</td>
<td>Multiple learning styles</td>
</tr>
<tr>
<td>Passive learning learning</td>
<td>Reflective / active</td>
</tr>
</tbody>
</table>
Questions

• In what ways do you currently create digitally rich resources for your classroom?
• What more could you / would you like to do?
• What opportunities and barriers are there currently?
• What kinds of support might you need to take this further?