

Digital tools for the classroom

Rachel Crellin

Learning and Teaching Branch

Department of Education and
Training

crellin.rachel.a@edumail.vic.gov.au

Access this presentation at:

<http://fuse.education.vic.gov.au/?4DBNFX>

SAMR

The SAMR model, developed by Dr Ruben Puentedura, describes technology integration through four levels.

- **Substitution** – technology is used as a direct substitute for what you might do already, with no functional change.
- **Augmentation** – technology is a direct substitute, but there is functional improvement over what you did without the technology.
- **Modification** – technology allows you to significantly redesign the task.
- **Redefinition** – technology allows you to do what was previously not possible.

SAMR Model

Substitution



Students use a word processor for their writing. Students can now easily edit and format their writing.

Published work is now printed rather than handwritten. Students can save various drafts of their work.

Students search the internet for information to support their persuasive topic.

Augmentation



Students improve their writing through the tools within the word processing program e.g. spelling, grammar check, thesaurus, word count.

Images and graphics are easily embedded within the document.

Students can email external sources for further information.

Modification



Teacher shifts the focus of some of the writing task to be collaborative.

Students use an online collaborative space (e.g. wiki) to write in small groups, conduct peer editing and feedback, and to comment on final products.

Work can be done in classtime, as well as out of class.

Redefinition



Teacher chooses to collaborate with other classes locally or globally on a common issue, using video-conferencing.

Students research and share their findings within a virtual classroom, in order to find a common solution. The project uses the strengths of students from different classes.

Students use a range of multimedia to collect, communicate and distribute their findings and conclusions

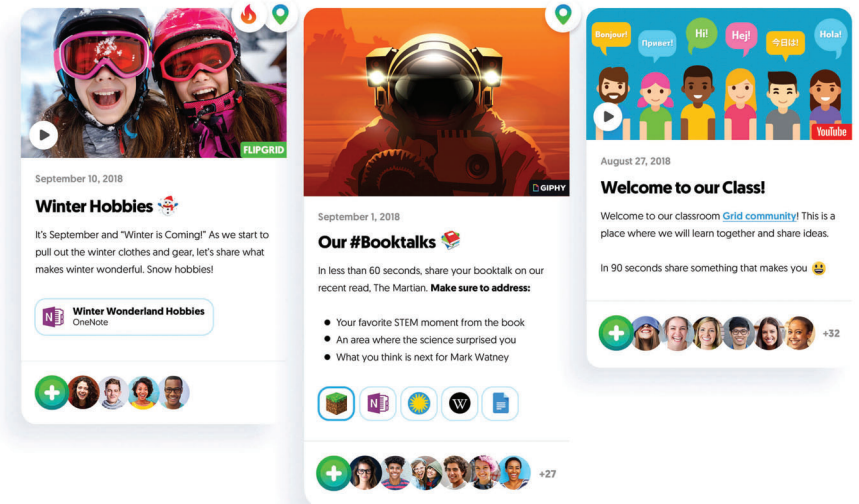
Some Digital Tools



Image: Google Keep note art by [@sage_solar](https://flic.kr/p/rYERZe) <https://flic.kr/p/rYERZe>

Videos

- Showcase key messages
- Interviews
- Processes, meal preparation
- Add audio, text overlay, still images, music
- Embed videos in websites, blogs, images etc
- Consider time lapse, stop motion or iMovie trailers
- Software - MovieMaker, iMovie, Adobe Premiere



Also think about Video discussion platforms like Flipgrid

<https://flipgrid.com/>

Year 8 video https://www.youtube.com/watch?v=C-7eDQd9_KQ

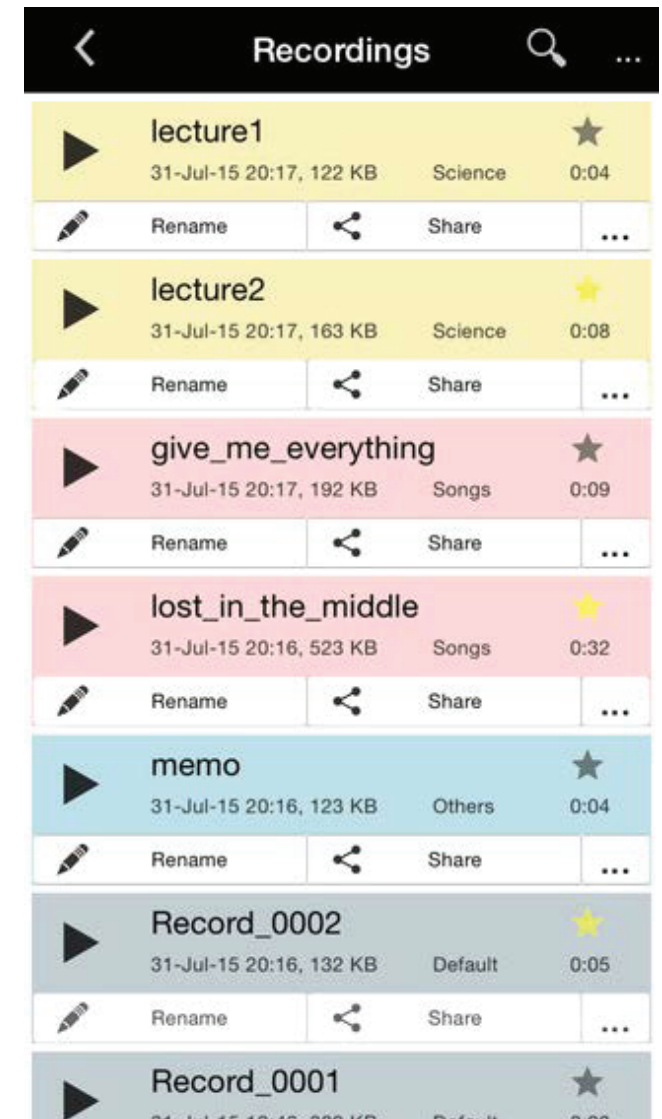
Podcasts



- Recordings can be made with your phone or microphones connected to your computer.
- Conduct interviews with people
- Record your reflections or ideas
- Use to add audio to videos
- Embed podcasts in websites, blogs, images etc

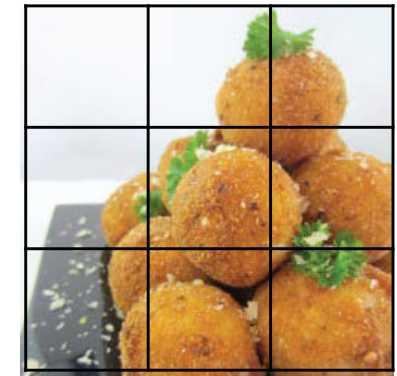
Audacity

- Free software to edit voice recordings and export as a MP3 file.
- [Audacity Tutorial - http://fuse.education.vic.gov.au/?9YH2P8](http://fuse.education.vic.gov.au/?9YH2P8)



Digital Photography

- Visual – ‘when you are reading from a textbook its hard to visualise it ... in a photo its just a simple snapshot of what you are trying to learn’ *Student using AutoCollage*
- Photograph concepts, experiments, processes and end products
- Use what ever you have at your disposal (iPad, smart phones, digital camera) think about lighting, props, rule of two thirds
- Display in a blog, word document or explore the functions under format picture in a PowerPoint presentation.
- Explore [AutoCollage](#) or Photo Story in eduSTAR



Digital Photography Tutorials <https://fuse.education.vic.gov.au/pages/View.aspx?pin=WQ2NLC>

<http://digital-photography-school.com/rule-of-thirds>

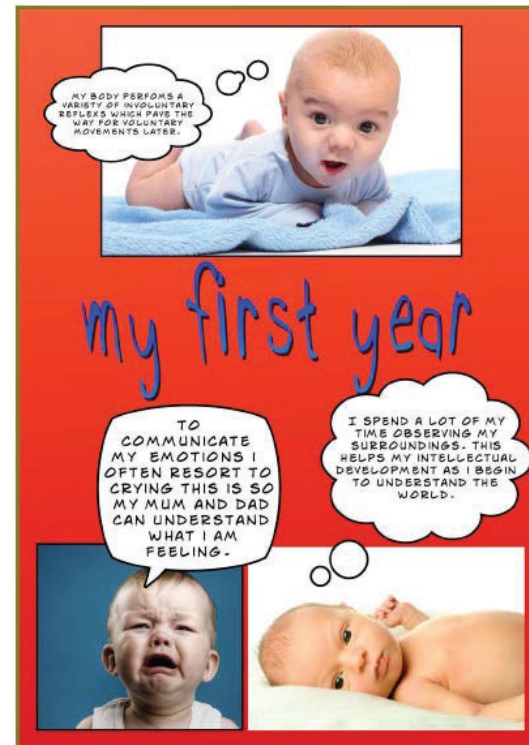
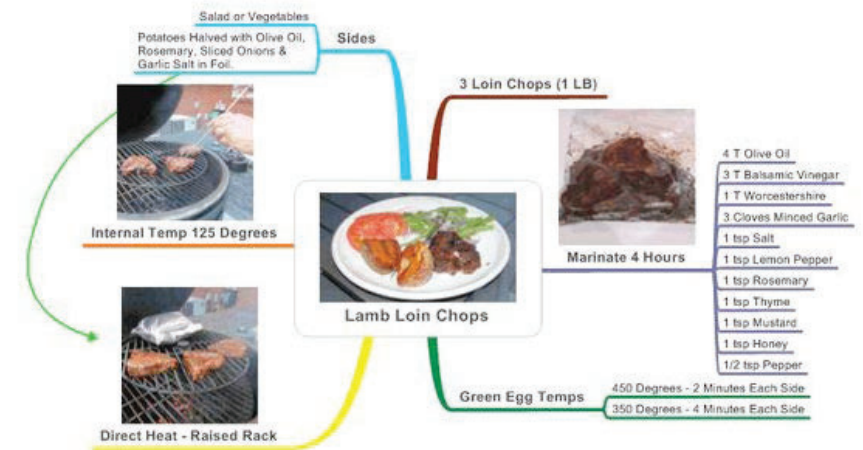
Images thanks to St Joseph's Food Technology <http://stjosephscollegefoodtechnology.tumblr.com/>

Annotated Visuals

- Good to explain, describe and summarise main points
- Document processes or relationships of a food industry
- Show cooking processes or recipe production
- Show relationships in an ethical issue
- Embed images, audio and videos to make an interactive mindmap
- Great for visual learners

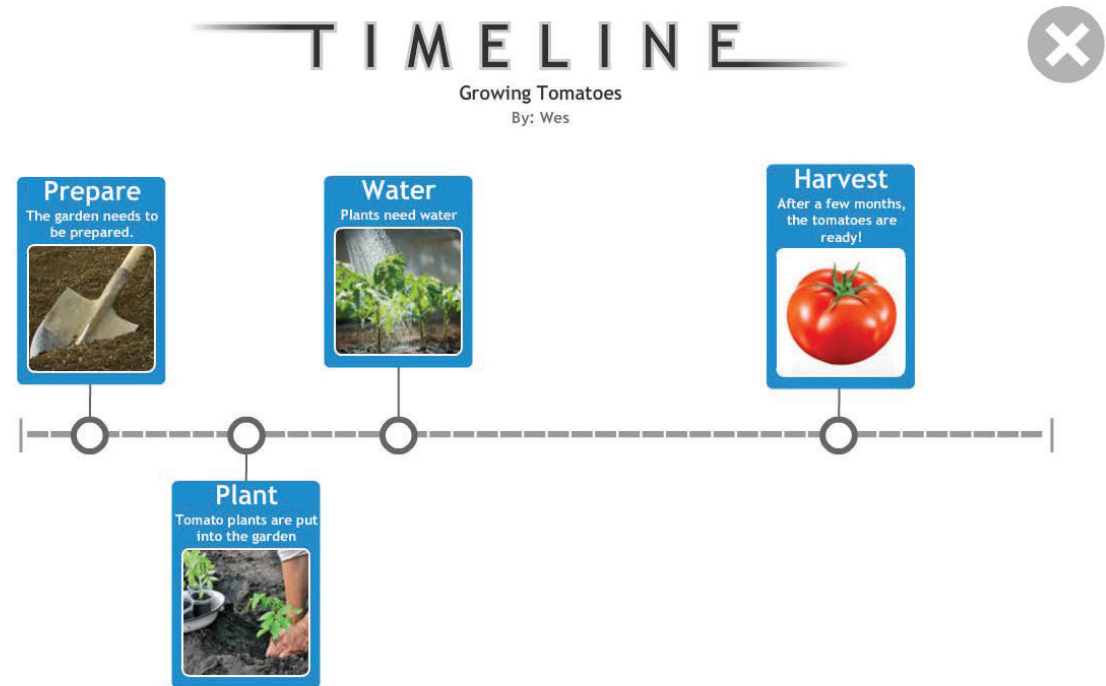
TRY

- MindMaps - Inspiration on [eduSTAR](https://www.eduSTAR.edu.au/)
- Comic Life – on [eduSTAR](https://www.eduSTAR.edu.au/)
- Infographics - Canva, piktochart



Timelines

- Make your own visual timelines
- Add images and basic text
- Organise by Date, Time or Event
- Show the history of a food
- Show the sequence of a cooking or sewing process
- Outline how a fibre or food is grown
- Make interactive by adding QR codes, hyperlinks or importing image into Thinglink



readwritethink

International
Reading Association

NCTE

Thinkfinity | verizon foundation

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TRY

- <http://www.readwritethink.org/classroom-resources/student-interactives/timeline-30007.html>
- Could also be done in a Word doc or PowerPoint

Publishing

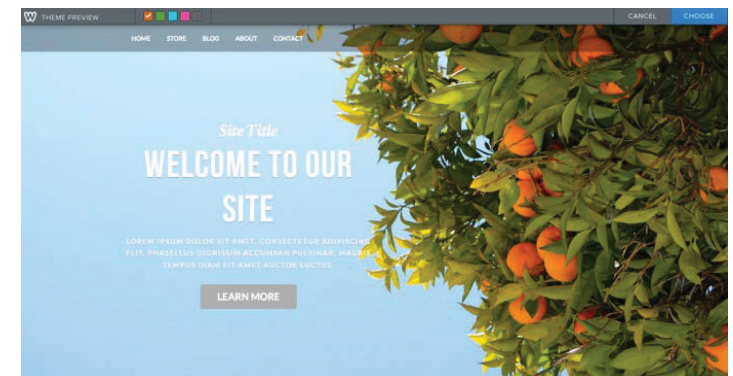
Websites, wikis and blogs allow an authentic online space for teachers and students to publish work

Blogs

- Set up class or individual blogs to share and collaborate
- Add wiki's, discussion forums and static pages
- Blogs can be open, shared or password protected
- Try Global2 – a free safe blogging environment for Victorian teachers and students <http://global2.vic.edu.au/> or Edublogs <https://edublogs.org/>

Websites

- Free, easy to develop platforms for public sharing
- Try www.weebly.com and <http://wix.com>
- Also - Goolge Sites, Microsoft Sway, Adobe Spark



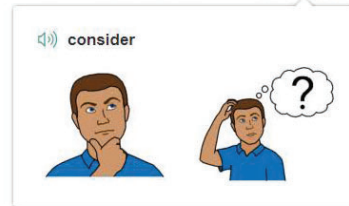
Accessibility Tools - Immersive Reader

Immersive Reader

Scenario 1: #hashtag

Create a social media campaign that educates people your age about healthy eating. Think about how major food companies use social media to advertise their products, for example: SMS competitions.

In your group brainstorm some activity ideas for your campaign and consider why it would appeal to young people.

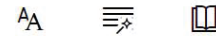


Immersive Reader

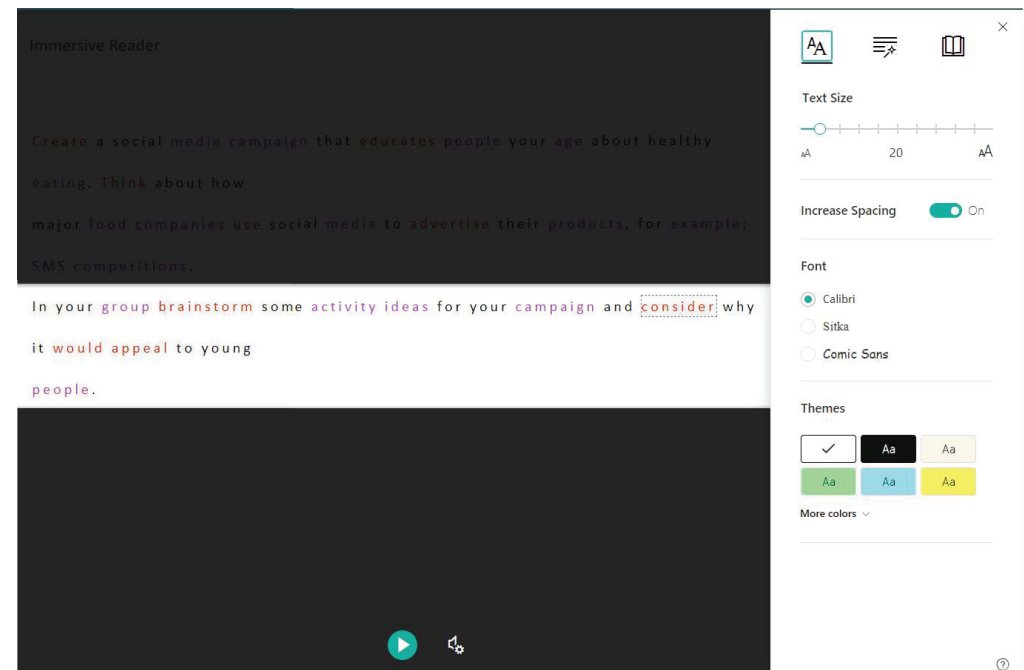
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- Tools available in Office 365 (OneNote), Google and Apple.
- Support students with learning and reading difficulties
- Promotes student agency

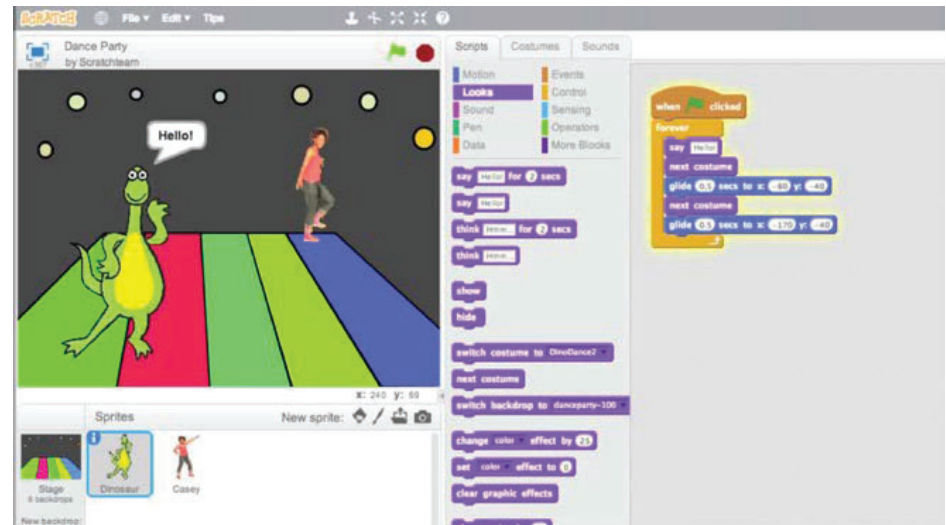


Games and Animations

- Test knowledge – need to answer a question before moving through game
- Show how food is digested through the body
- Explain sensory aspects of food
- Show how the process of a food product from farm to plate

TRY

- Scratch – basic block coding that allows you to build a game or animation <https://scratch.mit.edu/>
- Game Maker for more advanced games <http://www.yoyogames.com/gamemaker>
- Games and Apps Challenge student templates <http://gac.global2.vic.edu.au/create/>



Augmented Reality

- Process used the Choice CluckAR app - how free range are your eggs.
- As you scan an image with a phone or iPad a moving image, video etc appears
- Show different aspects of a food or fibre history on a map
- A bus stop activity where multiple images can be scanned to define and discuss food security.
- Scan a series of images to show food being digested or the absorption and utilisation of macronutrients.

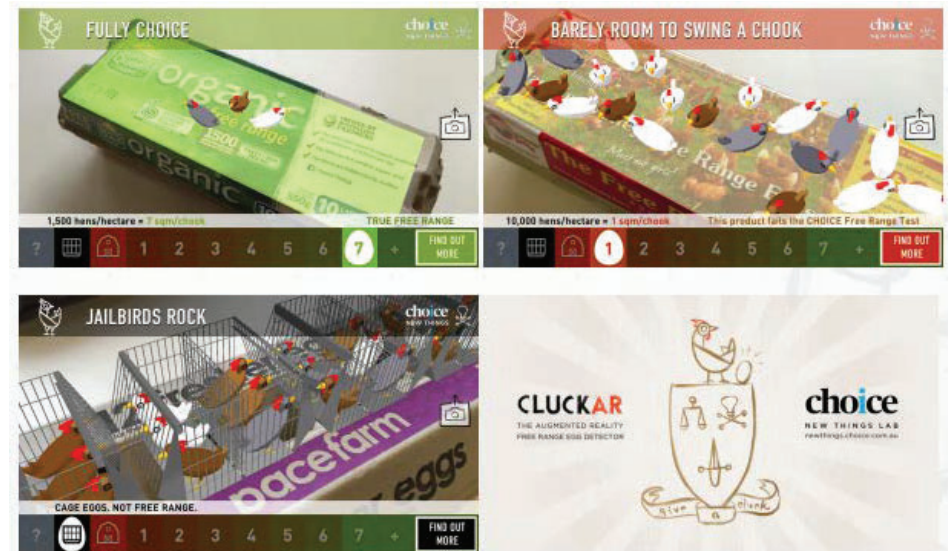
TRY

- CluckAR - <http://newthings.choice.com.au/cluckar/>
- Aurasma – easy to use to get basic auras <https://www.aurasma.com/>

Examples of classroom use:

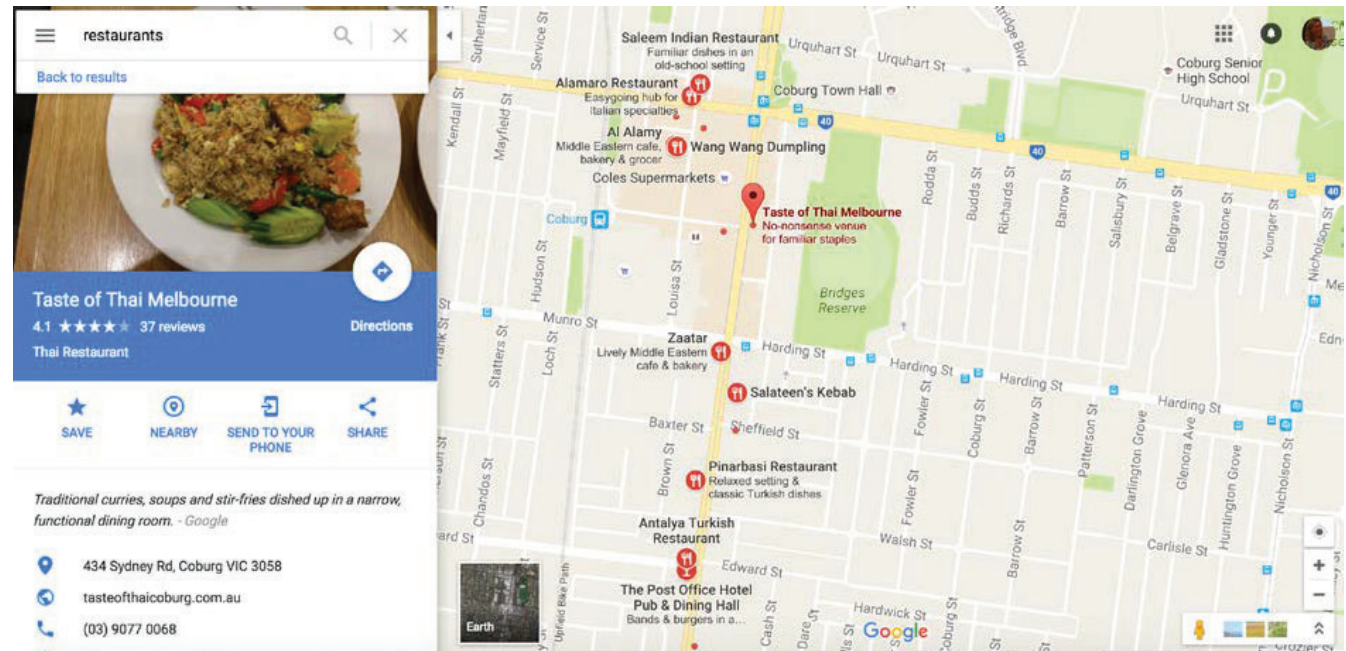
<https://youtu.be/zQsKwgclbQg>

<https://youtu.be/uHlxYpBW7sc>



Interactive Maps

- Put your own information and data onto a map from a spreadsheet
- Add links, videos, audio and images
- Show how a food is used in different parts of the world
- Map where fresh food can be purchased in a suburb
- Analyse the cultural influence of an area by mapping food outlets
- Identify the route that a pair of jeans has taken from cotton fibre to being bought.



TRY

- Google – My Maps
- <https://www.zeemaps.com/>

Online surveys, polls and quizzes

- Allows you to collect and display data instantly
- Run a test on facts about food items or fabrics
- Invite students to reflect on a question and answer with one word to form a word cloud
- Run an open poll asking what is a typical Australian dish or item of clothing
- Show images of food labels and ask which one is healthier
- Pre and post testing student knowledge

TRY

www.polleverywhere.com www.kahoot.it

Also - Microsoft Office Forms and Google Forms

Which one of these heroes has the best costume?



What superpower do you wish to have?



Who is your least favorite Super Villain?



Virtual Learning and collaboration

- Communicate virtually via Polycom, Adobe Connect, Microsoft Lync or Skype
- Invite an expert to present to the class and answer student questions
- Video the session to provide an ongoing resource on a topic
- Join with another school or class to collaborate on a topic for example: differences in their local environment or influences on food availability
- Also consider Blogging, Twitter, Facebook or Instagram to collaborate online
- Access virtual excursions, classroom events and professional learning sessions



<http://mlavirtualexcursions.com/>

Wolfram Alpha

- Analyse nutritional information for a single food or combination of foods
- Download your own nutrient panel
- Compare multiple foods
- View nutrition facts for single ingredients and recipes.
- Find information about food preparation
- Find dietary reference intakes
- Get data on agriculture and crop production

<https://www.wolframalpha.com/examples/FoodAndNutrition.html>

Access the Wolfram Alpha pro with a Wolfram ID

<http://www.education.vic.gov.au/about/programs/learningdev/vicstem/Pages/wolframsoftware.aspx>

serving sizes (total: 926 g)

chicken drumstick or thigh: 4 pieces (296 g)

onion: 1 onion (110 g)

carrot: 1 carrot (36 g)

celery: 1 stick (4 g)

chicken stock: 2 cups (480 g)

total calories 1092

% daily value*

total fat 59 g **91%**

saturated fat 16 g **80%**

trans fat 0 g

cholesterol 346 mg **115%**

sodium 3 g **113%**

total carbohydrates 61 g **20%**

dietary fiber 3 g **12%**

sugar 15 g

protein 73 g **147%**

vitamin A 118%

vitamin C 19%

calcium 12%

iron 25%

vitamin E 2%

thiamin 34%

riboflavin 77%

niacin 112%

vitamin B6 56%

vitamin B12 33%

folate 26%

phosphorus 65%

magnesium 27%

zinc 46%

*percent daily values are based on a 2000 calorie diet

Maker movement and wearable technologies

Textile materials that incorporate soft circuits, conductive fibres or digital elements into the design.

Conductive thread, fabric, tape and/or paint to connect computer components such as a micro-controller, LEDs, sensors and batteries.

The pieces are often wearable and interact with their environment.

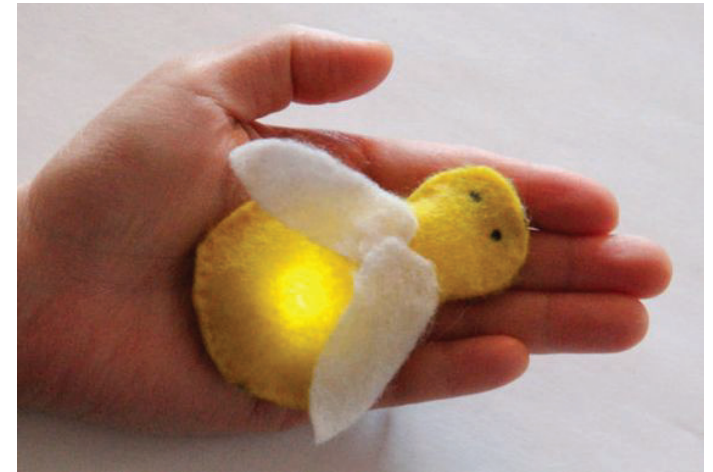
See:

eTextiles and Wearable Technologies

<http://fuse.education.vic.gov.au/?B2TQQX>

Making DigiPub

<http://www.digipubs.vic.edu.au/pubs/maker/home>



<https://au.pinterest.com/pin/189221621815945410/>



<http://fuse.education.vic.gov.au/?MBCBP9>

FUSE

- Departments digital repository for quality assured learning and teaching resources
- Find resources aligned to the Victorian Curriculum
- Upload resources and videos to share via a FUSE ID
- Publish your own or suggest resources to the team



Levels 7 and 8 Content Descriptions
Historical Concepts and Skills
Chronology
Sequence significant events in chronological order to analyse the causes and effects and identify continuities and changes (VCHHC097)

History / Levels 7 and 8 / Historical Concepts and Skills / Chronology	
Content description	Elaborations
Sequence significant events in chronological order to analyse the causes and effects and identify continuities and changes	<ul style="list-style-type: none"> analysing and evaluating the theory that people moved out of Africa around 60 000 BC and migrated to other parts of the world, including Australia plotting historical events in sequence in order to identify broader patterns of cause and effect and continuity and change, for example, the Polynesian expansion across the Pacific, the stability of the Angkor Wat Empire over many centuries defining and using terms such as BC, Before Christ, AD, After Christ, BCE, Before Common Era, and CE, Common Era, BP, Before Present, postscript, before the period of textual recordings and history (the period beginning with named individuals and textual recordings)
Code: VCHHC097	<p>Curriculum resources and support</p> <p>FUSE</p> <p>Find related curriculum resources on the FUSE website</p> <p>VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY</p> <p>Find related curriculum resources on the VCAA website</p> <p>Click on the above links to view these sites</p>



fuse.education.vic.gov.au

Healthy Eating and Food Literacy <http://fuse.education.vic.gov.au/?N2JKTF>

Using ICT for assessment in Food Studies and this presentation: <http://fuse.education.vic.gov.au/?4DBNFX>

Copyright, Images, Terms and Conditions

- Make sure students understand copyright
- Encourage students to use their own or creative common images
- Always attribute the image – at least the name of author and link to image
- When online, embed via their image link rather than download
- Check if online applications have an age limit – many require users to be over 13
- Check privacy – some tools publically display all users work, consider before including personal information.



Image: Cooking by stavos <https://flic.kr/p/mbKPhy>

Student Led Learning

- Learn from your students
- Student led tutorials for the class
- Students choose their own method of presentation for home work
- Ask students to research what is the best tool for a task



Edna Sackson @whatedsaid · Feb 12

Love this via [@Andrew_mcgovern](#)! Could be adapted for anything, not just tech. pic.twitter.com/J9rzBXMfjv



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Tips

- Focus on the learning purpose – not the technology
- Remember SAMR
- Talk to your tech or digital learning coordinator
- Start with one thing and do it well
- You don't have to know it all – it is OK to explore or let students lead the way as well
- Have fun learning new things!

WHAT DO YOU WANT KIDS TO DO WITH TECHNOLOGY?

WRONG ANSWERS

- MAKE PREZIS
- START BLOGS
- CREATE WORDLES
- PUBLISH ANIMOTOS
- DESIGN FLIPCHARTS
- PRODUCE VIDEOS
- POST TO EDMODO
- USE WHITEBOARD
- DEVELOP APPS

RIGHT ANSWERS

- RAISE AWARENESS
- START CONVERSATIONS
- FIND ANSWERS (TO THEIR QUESTIONS)
- JOIN PARTNERS
- CHANGE MINDS
- MAKE A DIFFERENCE
- TAKE ACTION
- DRIVE CHANGE

TECHNOLOGY IS A TOOL, NOT A LEARNING OUTCOME.