



Digital Literacy and Using Technology in Education

Presented by: Catherine Newington

A large, vibrant Aboriginal dot painting is the central focus of the slide. It features intricate patterns of colorful dots in shades of blue, green, yellow, and purple, arranged in wavy, concentric lines. The painting is framed by a thick, curved border composed of alternating red and dark blue segments. The background of the slide is white.

Acknowledgement of Country

The ACS would like to acknowledge the traditional custodians of all the lands from which we join. We pay our respects to the Elders past, present and emerging and extend that respect to other Indigenous Australians present.

01

Unpack the Primary School Digital Literacy Capability

- Look at the changes between the previous curriculum to version 9
- Sharing some documents
- Incorporating the Digital Literacy Capability into your teaching and planning documents

02

Using technology as a learning tool

- What we need to consider when using technology in the classroom
- How do we choose the 'right' technology
- Examples of how my teaching changed

03

Questions

- Sharing ideas
- Asking questions
- Brainstorm other webinar topics

Meet Catherine



I was a Primary School teacher for 12 years and a Technology and Learning Lead role for 5 years

I studied at Monash University to get my postgraduate degree specialising in Education Technologies.

I lead the ACS ICT Educators national program to support the implementation of the Digital Technologies Curriculum across Australia.

I am the co vice president of DLTV – the digital technologies subject association for Victoria.



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Using technology as a learning tool

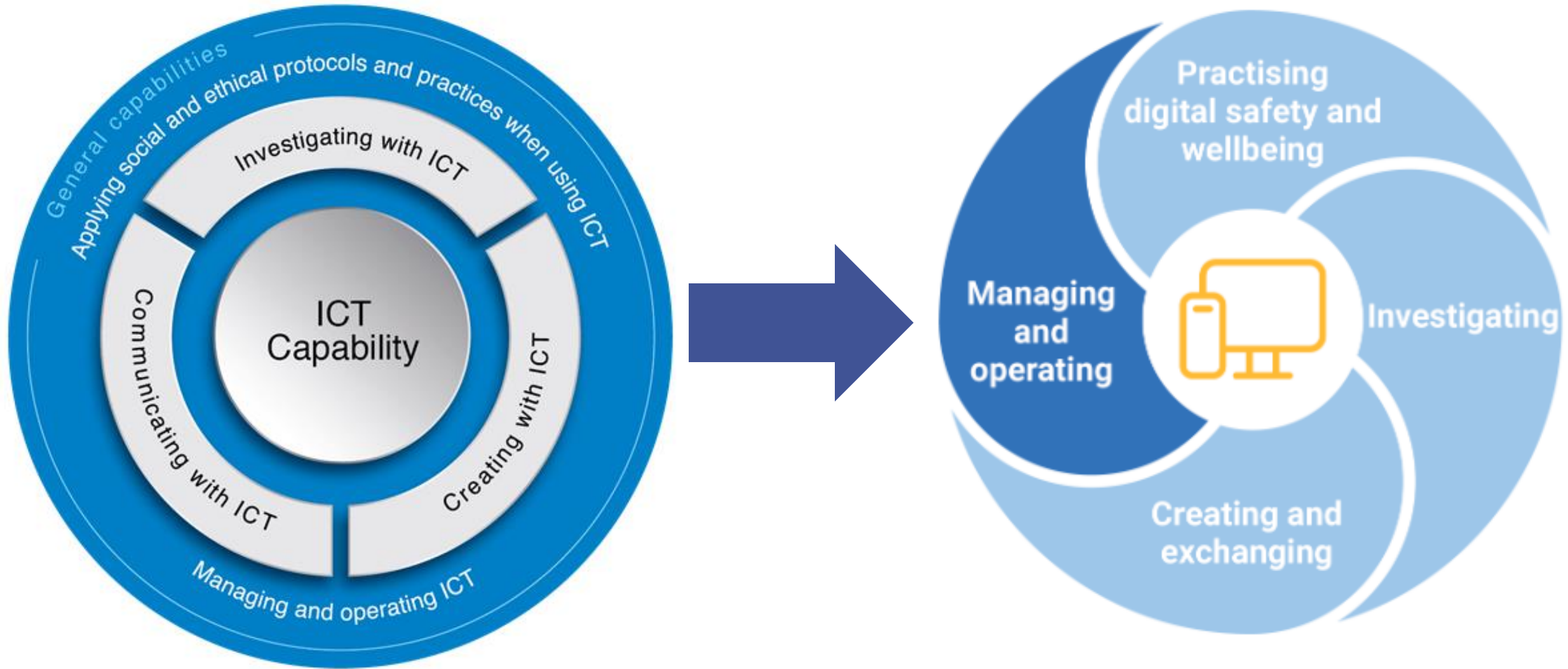
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Changes



Level 1 (Foundation)

Version 8.4

Version 9

recognise ownership over their own digital work	use online tools that are safe or only under direct supervision, seeking help from trusted adults when feeling unsafe
follow class rules about using digital information	recognise their personal data and that data (including text, images, and video) can be seen by others when shared online
follow class rules when sharing personal information with known audiences and demonstrate an awareness of applying social protocols when using ICT to communicate	follow adult directions for the use of digital tools at school and home
identify how they use ICT in multiple ways on multiple devices	
use ICT to identify where information is located	use simple digital tools to explore sorting data and information provided as part of learning experiences
use icons to locate or generate required information	use simple digital tools to create content
explain how located data or information was used	Identify who owns class data
use ICT to follow or contribute to a simple plan for a solution	
use ICT as a creative tool to generate simple solutions, modifications or data representations for personal or school purposes	
use purposefully selected ICT tools safely to view information shared by trusted adults	
understand that messages are recorded, viewed or sent in computer mediated communications for others to receive	
identify and safely operate ICT systems to complete relevant simple specified tasks and seek help when encountering a problem	save and retrieve content in an app
identify common consumer ICT systems with input and output functions	use simple digital tools to explore tasks and consolidate learning
save and retrieve digital data with support	seek help when encountering a problem

Level 2 (Year 1 and 2)

Version 8.4

Version 9

recognise ownership of digital products that others produce and that what they create or provide can be used or misused by others	use online tools that are age appropriate or only under supervision, seeking help from trusted adults when feeling unsafe
follow class rules about applying selected standard guidelines and techniques to secure digital information	recognise that online tools (website and apps) store their personal data, which may give an impression of them
follow class guidelines when sharing personal information and apply basic social protocols when using ICT to communicate with known audiences	follow agreed rules for the healthy use of digital tools and apply them at school and home
identify how ICT is used at home and at school	
use ICT to identify, record and classify textual and graphic information to show what is known and what needs to be investigated	locate information through search engines and in documents by applying search terms, and select relevant information
locate information from a given set of digital sources	collect data by counting, measuring and observing with familiar digital tools
explain the usefulness of located data or information	classify and group data using digital familiar tools to answer simple questions
use ICT to prepare simple plans to find solutions or answers to questions	use simple digital tools to contribute to a basic plan to complete a task
experiment with ICT as a creative tool to generate simple solutions, modifications or data representations for particular audiences or purposes	experiment with the features of familiar digital tools to create content
use purposefully selected ICT tools safely to share and exchange information with appropriate local audiences	recognise ownership of products that others produce or that are produced collaboratively
understand that computer mediated communications may be received later by the receiver	save and retrieve content with an agreed name
identify and safely operate a selected range of appropriate devices, software, functions and commands when operating an ICT system and attempt to solve a problem before seeking help	save and access content in their individual school account
identify the main components of common consumer ICT systems, their fundamental functions, and describe them using basic ICT terminology	use familiar digital tools to complete tasks and consolidate learning
manage and maintain digital data with guidance	attempt to solve a problem before seeking help

Level 3 (Year 3 and 4)

8.4

Version 9

acknowledge when they use digital products created by someone else, and start to indicate the source	report negative or harmful online behaviour by seeking help from trusted adults
independently apply standard guidelines and techniques for particular digital systems to secure digital information	identify their digital footprint (personal data stored by online tools)
apply standard guidelines and take action to avoid the common dangers to personal security when using ICT and apply appropriate basic social protocols when using ICT to communicate with unknown audiences	recognise their digital identity represents them online and can give a negative impression
identify the value and role of ICT use at home and school	give and seek consent before sharing online with peers and trusted adults
	follow an agreed code of conduct for the healthy use of digital tools
use ICT to plan an information search or generation of information, recognising some pattern within the information	locate information through search engines and in documents by applying specific search terms, and selecting and retrieving relevant information from multiple sources
locate, retrieve or generate information from a range of digital sources	collect and access data using a range of digital tools and methods in response to a defined question
explain why located data or information was selected	organise, summarise and visualise data using a range of digital tools to identify patterns and answer questions
use ICT to generate ideas and plan solutions	use familiar digital tools to develop and follow a basic plan to complete a task
create and modify simple digital solutions, creative outputs or data representation/transformation for particular purposes	use the core features of a range of digital tools to create content and communicate and collaborate with peers and trusted adults
	respect products created by someone else by acknowledging when they use them and use strategies such as indicating the source
use appropriate ICT tools safely to share and exchange information with appropriate known audiences	save and retrieve content in agreed locations with an appropriate name
understand that computer mediated communications are directed to an audience for a purpose	save and access content in shared folders using their individual school account
identify and independently operate a range of devices, software, functions and commands, taking into consideration ergonomics when operating appropriate ICT systems, and seek solutions when encountering a problem	select and use a range of digital tools to complete tasks
identify and compare the use of the main components of different ICT systems	attempt to solve a problem individually and with peers before seeking help
manage and maintain digital data using common methods	

Level 4 (Year 5 and 6)

Version 8.4

Version 9

identify the legal obligations regarding the ownership and use of digital products and apply some referencing conventions	report negative or harmful online behaviour to trusted adults and know how to report it in online tools
independently apply strategies for determining and protecting the security of digital information and assess the risks associated with online environments	recognise when to step away from negative online social interactions
identify the risks to identity, privacy and emotional safety for themselves when using ICT and apply generally accepted social protocols when sharing information in online environments, taking into account different social and cultural contexts	recognise the permanence of their digital footprint and digital identity, and the associated risks, including to their reputation
explain the main uses of ICT at school, home and in the local community, and recognise its potential positive and negative impacts on their lives	give and seek consent before sharing online in trusted groups
use a range of ICT to identify and represent patterns in sets of information and to pose questions to guide searching for, or generating, further information	follow an agreed code of conduct for the healthy and productive use of digital tools, considering the impact of tool use on wellbeing
locate, retrieve or generate information using search engines and simple search functions and classify information in meaningful ways	locate information through search engines and in documents by applying specific search terms based on set criteria, and select and retrieve relevant information from multiple sources
assess the suitability of data or information using a range of appropriate given criteria	collect and access data using a range of digital tools and methods in response to a defined question or problem
use ICT effectively to record ideas, represent thinking and plan solutions	analyse and visualise data using a range of digital tools to identify patterns and make predictions
independently or collaboratively create and modify digital solutions, creative outputs or data representation/ transformation for particular audiences and purposes	select and use digital tools to develop and follow a plan to complete individual tasks and group projects
select and use appropriate ICT tools safely to share and exchange information and to safely collaborate with others	select and control a variety of features in appropriate digital tools to create content and communicate and collaborate with trusted groups
understand that particular forms of computer mediated communications and tools are suited to synchronous or asynchronous and one-to-one or group communications	respect intellectual property by identifying the legal obligations regarding the ownership and appropriate use of products, exploring copyright protocols and applying some referencing conventions
select from, and safely operate, a range of devices to undertake specific tasks and use basic troubleshooting procedures to solve routine malfunctions	store content using appropriate names and folders for ease of retrieval
identify, compare and classify basic ICT system components	protect content when sharing with peers and trusted adults by setting appropriate access controls
manage and maintain data on different storage mediums – locally and on networks	select and use the core features of digital tools to efficiently complete tasks
	troubleshoot basic problems and identify repetitive tasks to automate

TERM 1	TERM 2	TERM 3	TERM 4
<p>Summary Students will identify and describe how data transmission occurs when using digital applications. Students will recognise cybersecurity threats and discover ways in which they can protect from those risks. Students will construct a reference guide guiding others on how to implement cybersecurity measures.</p>	<p>Summary Students will recognise the broad range of cultures represented in school and the manifest cultural holidays and significant events which occur each year. Students will record and recall key cultural festivals for the multicultural student cohort including dates, traditions and food using applications such as Excel. They will investigate a short list of digital tools to evaluate their strengths and weaknesses in collating and presenting key cultural data. Then students will select the most suitable digital tool and apply its functionality when competing the cultural calendar project.</p>	<p>Summary Students will storyboard and then wireframe the user experience story/journey for their Cultural Calendar application. Students will incorporate Multi Factor Authentication (MFA) into the login/accessibility of their application, leveraging the learning from term one. Students will select one world cultural festival represented in their student cohort and apply user instructions to produce a prototype/minimum viable product (MVP) version of the Cultural Calendar in a prescribed software application.</p>	<p>Summary Students will identify a feature from their storyboard which is not implemented adequately in their software application build. Students will recall and practice the steps to refining their software application through using programming language. Students will use the acquired skills to upgrade the functionality of their application.</p>
<p>Key Concepts</p> <ul style="list-style-type: none"> • Digital systems – evaluating cybersecurity safety applications, i.e. when why and how to use. • Data and Information – applying process steps from user guides for cybersecurity applications. • Collaboration – group work in discovering, identifying, and applying the knowledge of the term. • Creating Digital Solutions – creating a user guide: i.e. forming a set of instructions to perform a task then following a set of instructions on how to create a teach-anybody guide. 	<p>Key Concepts</p> <ul style="list-style-type: none"> • Digital Systems – data collation tools (e.g. Excel), calendar applications (e.g. Google Calendar). • Data and Information – researching and collating relevant cultural information – images and expositions. • Online collaboration – evaluating data collations solutions and creating the <i>Cultural Calendar</i>. • Creating Digital Solutions – applying their research data to software to create their <i>Cultural Calendar</i>. 	<p>Key Concepts</p> <ul style="list-style-type: none"> • Digital Systems – recalling the steps to producing storyboards and wireframes. • Data and Information – applying selected data to the creation of storyboards and wireframes. • Online collaboration – producing a prototype of a working digital app. • Creating Digital Solutions – producing a prototype of a working digital app. 	<p>Key Concepts</p> <ul style="list-style-type: none"> • Digital Systems – implementing programming language to modify their software application prototype • Data and Information – applying programming language rules to solve a build requirement • Creating Digital Solutions – creating a new, improved feature in their application through the use of bespoke means (programming language).
<p>Content descriptions</p> <ul style="list-style-type: none"> • AC9TDI8K02 • AC9TDI8P13 • AC9TDI8P14 <p>Achievement standards Develop and modify creative digital solutions. Decompose real-world problems. Evaluate alternative solutions against user stories and design criteria. Explain how data is transmitted and secured in networks, identify cyber security threats. Students manage their digital footprint.</p> <p>Assessment pieces Creating a Teach You user guide. Students will organise a set of instructions into an ordinal reference guide. Creating a risks vs solutions matrix. Students will populate a proforma which captures the cybersecurity risks they have learned and matches them to identified solutions.</p>	<p>Content descriptions</p> <ul style="list-style-type: none"> • AC9TDI8P04 • AC9TDI8P01 • AC9TDI8P11 • AC9TDI8P12 <p>Achievement standards Decompose real-world problems. Evaluate alternative solutions against user stories and design criteria. Select appropriate hardware for particular tasks.</p> <p>Assessment pieces Students will collate the key information for cultural festivals represented by the diversity backgrounds of their school cohort. The Cultural Calendar will provide visual and expositional details of the festivals and synch with a calendar app to provide reminders of key dates. Students will evaluate and select digital tools to use in their project when collating cultural data. Students will evaluate and select digital tools to present their data.</p>	<p>Content descriptions</p> <ul style="list-style-type: none"> • AC9TDI8P07 • AC9TDI8P11 • AC9TDI8P12 <p>Achievement standards</p> <ul style="list-style-type: none"> • Develop and modify creative digital solutions. • Decompose real-world problems. • Evaluate alternative solutions against user stories and design criteria. • Acquire interpret and model data with spreadsheets and represent data with integers and binary. • Select and use a range of digital tools efficiently and responsibly to create, locate and share content. • Select and use a range of digital tools efficiently and responsibly to plan, collaborate on and manage projects. <p>Assessment pieces Producing a prototype/minimum viable product (MVP) version of the Cultural Calendar in a prescribed software application. Students will use the content they have researched, stored and refined to inform their storyboarding and wireframe. Students will use section of the storyboard and wireframe to create a prototype section of a software application using a prescribed software build tool.</p>	<p>Content descriptions</p> <ul style="list-style-type: none"> • AC9TDI8P09 <p>Achievement standards Design and trace algorithms and implement them in a general-purpose programming language.</p> <p>Assessment pieces Identifying a feature in their storyboard which requires bespoke coding (programming language) to implement in the prescribed software application. Modifying their prototype section of a software application to implement the feature using code (programming language).</p>
<p>Resources</p> <ul style="list-style-type: none"> • Process guide for modelling the Teach You asset. • Pro forma for students to complete the risks vs solutions matrix. • Case studies content for examples of cybercrime. • User guides for cybersecurity solutions – e.g., MFA. These are further referenced in the lesson plans. 	<p>Resources</p> <ul style="list-style-type: none"> • Selection criteria guides for selecting data solutions • Cultural insights guides explaining specified cultural festivals • Process guides for completing an Agile project of data collation and presentation 	<p>Resources</p> <ul style="list-style-type: none"> • User guides and templates for storyboarding • User guides and templates for wireframing • User guides for app production software 	<p>Resources</p> <ul style="list-style-type: none"> • Sandpit / practice environment for coding • Code cheat sheet • User guides for app production software, focused on bespoke code driven modifications

TERM 1



Summary

Students will identify and describe how data transmission occurs when using digital applications. Students will recognise cybersecurity threats and discover ways in which they can protect from those risks. Students will construct a reference guide guiding others on how to implement cybersecurity measures.

Key Concepts

- **Digital systems** – evaluating cybersecurity safety applications, i.e. when why and how to use.
- **Data and Information** – applying process steps from user guides for cybersecurity applications.
- **Collaboration** – group work in discovering, identifying, and applying the knowledge of the term.
- **Creating Digital Solutions** – creating a user guide: i.e. forming a set of instructions to perform a task then following a set of instructions on how to create a teach-anybody guide.

Content descriptions

- AC9TDI8K02
- AC9TDI8P13
- AC9TDI8P14

Achievement standards

Develop and modify creative digital solutions.

Decompose real-world problems.

Evaluate alternative solutions against user stories and design criteria.

Explain how data is transmitted and secured in networks, identify cyber security threats.

Students manage their digital footprint.

Assessment pieces

Creating a Teach You user guide. Students will organise a set of instructions into an ordinal reference guide.

Creating a risks vs solutions matrix. Students will populate a proforma which captures the cybersecurity risks they have learned and match them to identified solutions.

Digital Literacy

Resources – Digital Technologies

- Process guide for modelling the Teach You asset.
- Pro forma for students to complete the risks vs solutions matrix.
- Case studies content for examples of cybercrime.
- User guides for cybersecurity solutions – e.g., MFA. These are further referenced in the lesson plans.

Resources Digital Literacy

Content Descriptors

- AC9TDI8K02 – Investigate how data is transmitted and secured in wired and wireless networks including the internet.
- AC9TDI8P13 - Explain how multi factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats.
- AC9TDI8P14 - Investigate and manage the digital footprint existing systems and student solutions collect and assess if the data is essential to their purpose.
- AC9TDI8P04 - Define and decompose real world problems with design criteria and by creating user stories.
- AC9TDI8P10 - Evaluate existing and student solutions against the design criteria, user stories and possible future impact.

Assessment

Students design and create a user guide for applying multifactor authentication. The solution is based on evaluation of cybersecurity and data safety needs completed through the term. They use computational thinking to independently and collaboratively design and create effective user guides. The user guides offer a solution to the real-world problem of data privacy. They use a range of tools to make their user guides based on acquired, stored and validated data. Students apply criteria for success including sustainability and use these to judge the completed user guides.

Four assessment pieces will be completed by students to measure and demonstrate their learning in year eight, term one:

1. Student video presentation is completed in lesson 6, explaining:
 - How is data is transmitted and secured in networks?
 - What types of data we share (examples)?
 - How can we manage (limit) our exposure?
2. Students create a user guide for MFA instillation targeted to a prescribed audience (completed in lesson nine).
3. Students complete an assessment, evaluation and reflection matrix in lesson ten. The matrix offers criteria points to scaffold the assessment of their own and their classmates' user guides.
4. A mini presentation video of cyber security comprehension is completed in lesson two.

See *Assessment Components by Learning Descriptor* table below.

Session

'Session' has been used to define the order of tasks to complete the unit. It does not define a set time required to complete the task. Time allocated to complete a session is the teacher's discretion. This allows for flexibility for the teacher to drive the duration of the task and make modifications if necessary. Sessions can be merged into one set period, or one session may run over multiple periods.

Digital Technologies Curriculum

Content Descriptors

- AC9TDI8K02 – Investigate how data is transmitted and secured in wired and wireless networks including the internet.
- AC9TDI8P13 - Explain how multi factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats.
- AC9TDI8P14 - Investigate and manage the digital footprint existing systems and student solutions collect and assess if the data is essential to their purpose.
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 - How is data is transmitted and secured in networks?
 - What types of data we share (examples)?
 - How can we manage (limit) our exposure?
2. Students create a user guide for MFA instillation targeted to a prescribed audience (completed in lesson nine).

Digital Literacy

Assessment

Digital Technology	Year 8, Term 1	Lesson number: 1	Curriculum Description AC9TDI8P14
<p>Learning Intention: Students will investigate and evaluate the safety of software applications they use in their daily lives. They will establish what information is shared via their apps and hardware, how the information is protected and where information is stored.</p> <p>Success Criteria: I can explain how software applications access and store my personal information.</p>			
<p>Key Understandings:</p> <ul style="list-style-type: none"> Explain how software applications access and store their <u>information</u> Explain how data is transmitted through networks (hardware & software) 	<p>Key Questions:</p> <ol style="list-style-type: none"> What types of information do we store and share? How do we do this? 	<p>Answer Prompts:</p> <ol style="list-style-type: none"> IP Address / Hardware and Software information / Physical location / Personal details / bank card numbers / photographs. By providing personal information to applications <u>in order to</u> use their services. Allowing cookies on websites and browsers. Uploading images or text and including geotags. Allowing autofill on various apps. 	
Learning Experience (lesson stages)		Resources	Assessment
<ol style="list-style-type: none"> Elicit common applications used in students' daily lives with whole class feedback. Write p applications on white board as elicited. Arrange students into small groups and give traffic light handout. Direct students to group previously elicited applications into safe (green), neutral (amber), dangerous (red) based upon evaluation of the safety features (two step verification, passwords, photo verification etc). Followed by full class feedback <u>comparing and contrasting</u> between groups evaluations. Organise students in pairs. Direct to move through the gallery walk and discuss what information is shared during different contextual interactions (date of birth, location, sensitive financial details etc) and what safety features are provided, who can access the information (sender, recipient, public/private, third parties etc) and how it is stored. Students will award two stars to applications they have established are secure and a wish to an application that requires enhanced security and safety features. 		<p>Traffic light hand-outs in colour. Gallery <u>walk</u> images (common activities that require various information to be shared via apps) such as posting images on Instagram, booking tickets for a concert, location sharing via Snap Chat etc).</p>	N/a

Digital Technology	Year 8, Term 1	Lesson number: 1	Curriculum Description AC9TDI8P14 Digital Literacy	
<p>Learning Intention: Students will investigate and evaluate the safety of software applications they use in their daily lives. They will establish what information is shared via their apps and hardware, how the information is protected and where information is stored.</p> <p>Success Criteria: I can explain how software applications access and store my personal information.</p>				
<p>Key Understandings:</p> <ul style="list-style-type: none"> ▪ Explain how software applications access and store their <u>information</u> ▪ Explain how data is transmitted through networks (hardware & software) 	<p>Key Questions:</p> <ol style="list-style-type: none"> 1. What types of information do we store and share? 2. How do we do this? 	<p>Answer Prompts:</p> <ol style="list-style-type: none"> 1. IP Address / Hardware and Software information / Physical location / Personal details / bank card numbers / photographs. 2. By providing personal information to applications <u>in order to</u> use their services. Allowing cookies on websites and browsers. Uploading images or text and including geotags. Allowing autofill on various apps. 		
Learning Experience (lesson stages)			Resources	Assessment
<ol style="list-style-type: none"> 1. Elicit common applications used in students' daily lives with whole class feedback. Write p applications on white board as elicited. 2. Arrange students into small groups and give traffic light handout. Direct students to group previously elicited applications into safe (green), neutral (amber), dangerous (red) based upon evaluation of the safety features (two step verification, passwords, photo verification etc). Followed by full class feedback <u>comparing and contrasting</u> between groups evaluations. 3. Organise students in pairs. Direct to move through the gallery walk and discuss what information is shared during different contextual interactions (date of birth, location, sensitive financial details etc) and what safety features are provided, who can access the information (sender, recipient, public/private, third parties etc) and how it is stored. 4. Students will award two stars to applications they have established are secure and a wish to an application that requires enhanced security and safety features. 			<p>Traffic light hand-outs in colour. Gallery <u>walk</u> images (common activities that require various information to be shared via apps) such as posting images on Instagram, booking tickets for a concert, location sharing via Snap Chat etc).</p>	<p>N/a</p>

Lesson Ideas: Key Connections



Manage online safety

Manage digital privacy and identity

Manage digital wellbeing

This sub-element supports students to develop the appropriate technical, social, cognitive, communicative and decision-making skills to address online risks. They recognise the **content** risks that they face online, such as hurtful user-generated **content**, and the strategies involved in dealing with them.

Level 1 (Foundation)

- use **online tools** that are safe or only under direct supervision, seeking help from **trusted adults** when feeling unsafe



Level 2 (Years 1-2)

- use **online tools** that are age appropriate or only under supervision, seeking help from **trusted adults** when feeling unsafe



Level 3 (Years 3-4)

- report negative or harmful **online behaviour** by seeking help from **trusted adults**



Level 4 (Years 5-6)

- report negative or harmful **online behaviour** to **trusted adults** and know how to report it in **online tools**
- recognise when to step away from negative **online social interactions**



Key connections to other learning areas provided as examples.

Support you to implement the Digital Literacy General Capability across other learning areas.

Lesson Ideas: Key Connections



Level 2 (Years 1-2)

- use **online tools** that are age appropriate or only under supervision, seeking help from **trusted adults** when feeling unsafe



Health and Physical Education

Technologies

The Arts

Practising digital safety and wellbeing - Manage online safety

Level 2 (Years 1-2)

- use online tools that are age appropriate or only under supervision, seeking help from trusted adults when feeling unsafe

Years 1 and 2

Students have opportunities to develop the sub-element in the following content description and elaborations:

AC9HP2P05

identify and demonstrate protective behaviours and help-seeking strategies they can use to help them and others stay safe

Elaborations

- ✓ proposing strategies they can use at school and home that promote healthy use of digital tools

Lesson Ideas: Practising digital safety and wellbeing



Key Connections

- Health and Physical Education
- Digital Technologies
- The Arts

Other ideas and Suggestions

- Incorporate into the start of the school year expectations and include digital well being
- Incorporate into Cyber Safety Week
- Unit or theme on themselves and who they are – incorporate digital identify and digital footprint

Lesson Ideas: Investigating



Key Connections

- HASS
- Science
- Mathematics
- Technologies
- English
- Languages

Other ideas and Suggestions

- Look at how you use search engines to find and locate information. Compare the information and use the information to writing up nonfiction texts and explanations.
- Data collection Mathematics activity – name from unifix blocks. One block is equal to one letter. Create class graph and guess the name by the size.
- Collecting data in a Science lesson taking photographs over time or use technology to collect the data and spreadsheet to collate.

Lesson Ideas: Creating and exchanging



Key Connections

- English
- The Arts
- Mathematics
- Technologies
- English
- Languages

Other ideas and Suggestions

- Over time, expose students to a selection of digital tools to showcase learning. When students have mastered a small section provide the space for students to select the digital tool and explain why that particular tool was used.
- Create a pros and cons list of digital tools used in the classroom.
- Use classroom platforms (Seesaw, Google Classroom, Microsoft Teams) to share work
- When use the inter to find and locate text and images, understand where those text and images came from and who owns them.

Lesson Ideas: Managing and operating



Key Connections

- Technologies
- The Arts
- Mathematics
- HASS
- Science
- Language

Other ideas and Suggestions

- Saving and accessing files. Set up the classroom expectations with a focus on setting up and managing their files. From where a photo goes to creating folders.
- If students ever work collaboratively online, focus on how to manage sharing files.
- Create a class display of the digital tools they use and the basic functions. Use these displays as a stimulus.

01

Unpack the Primary School Digital Literacy Capability

- Look at the changes between the previous curriculum to version 9
- Sharing some documents
- Incorporating the Digital Literacy Capability into your teaching and planning documents

02

Using technology as a learning tool

- What we need to consider when using technology in the classroom
- How do we choose the 'right' technology
- Examples of how my teaching changed

03

Questions

- Sharing ideas
- Asking questions
- Brainstorm other webinar topics

Technology and Education



Educators

Knowing our students.
Knowing our pedagogy.



Curriculum

Honor the Curriculum.
Know what requirements
we need to fulfill.



Technology

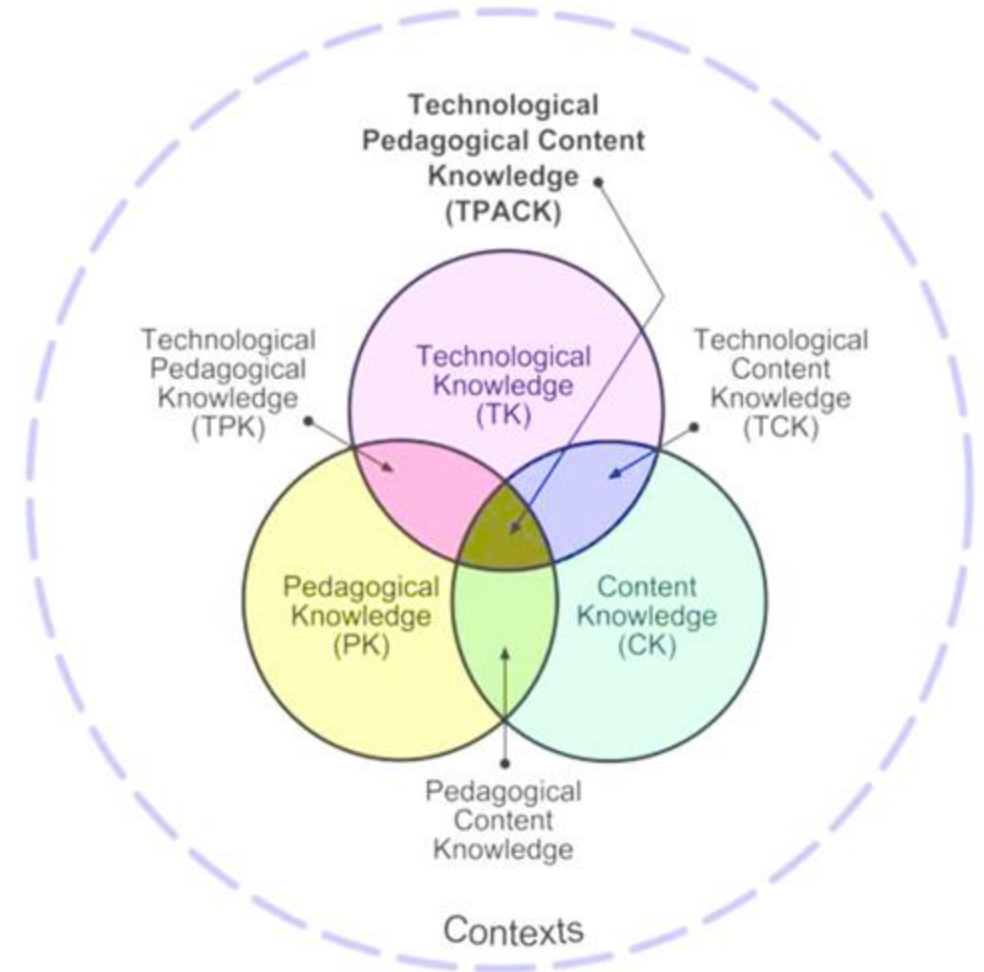
Allows you to evaluate the technology for your
purpose. Choose the right tool for the task.

TPACK



TPACK is a way of describing how technology pedagogy and content fit together to enable powerful learning.

The TPACK model highlights that an idea for using ICT in classrooms must have a sound curriculum and pedagogical fit.



TPACK

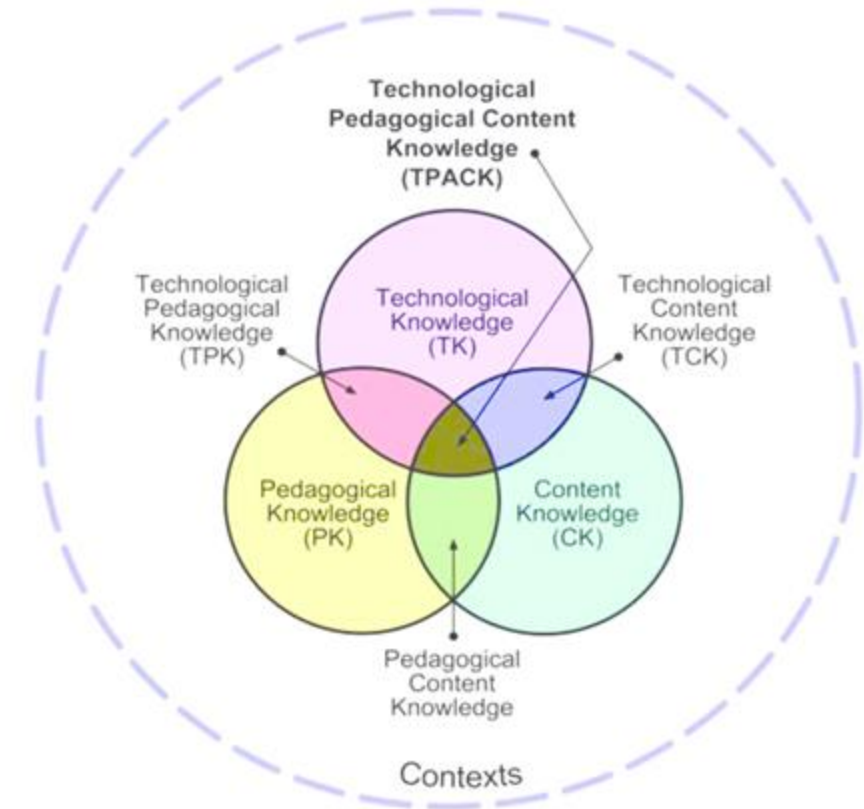


Technology – Evaluating the technology as a tool and making sure you are using the right tool to complete the job.

Focus on how the students will use the technology when they are engaging in their learning. They need to be doing more than just engaging with the technology.

Look at how the technology fits into the curriculum rather than trying to fit the technology into the curriculum.

Example: Drones and 3D Printers



TPACK

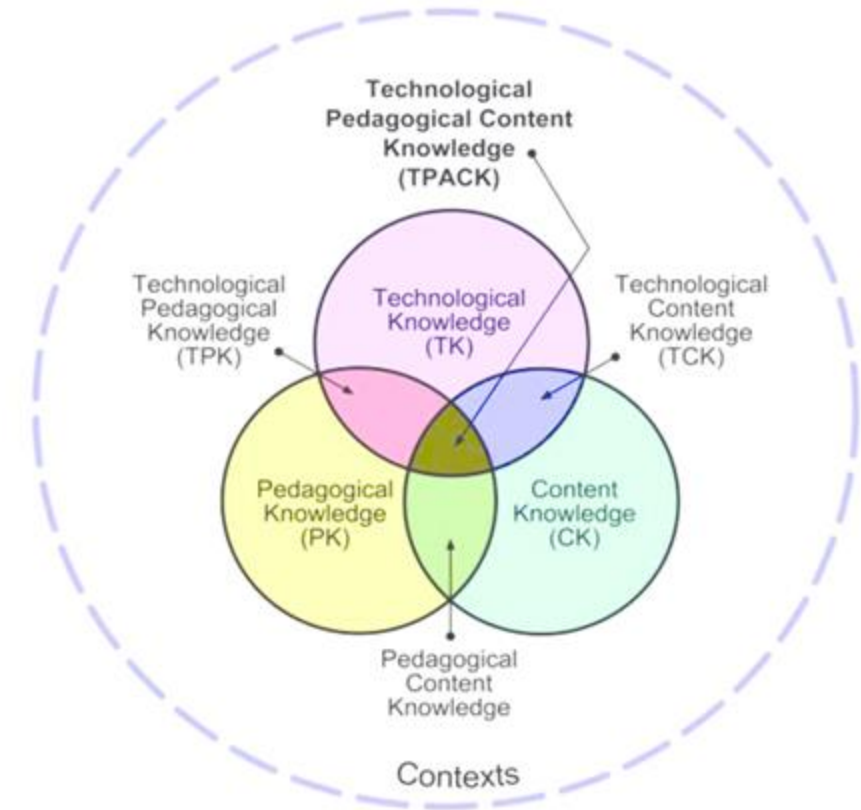


Pedagogy – Knowing who you are as a teacher and knowing what works in your classroom.

Finding and evaluating the technology that fits into your pedagogy.

If you choose technology that doesn't marry your pedagogy, it can hinder.

I love project based learning, inquiry based learning where students are exploring and constructing their own knowledge. Drill and skill based technology doesn't work for me.



TPACK

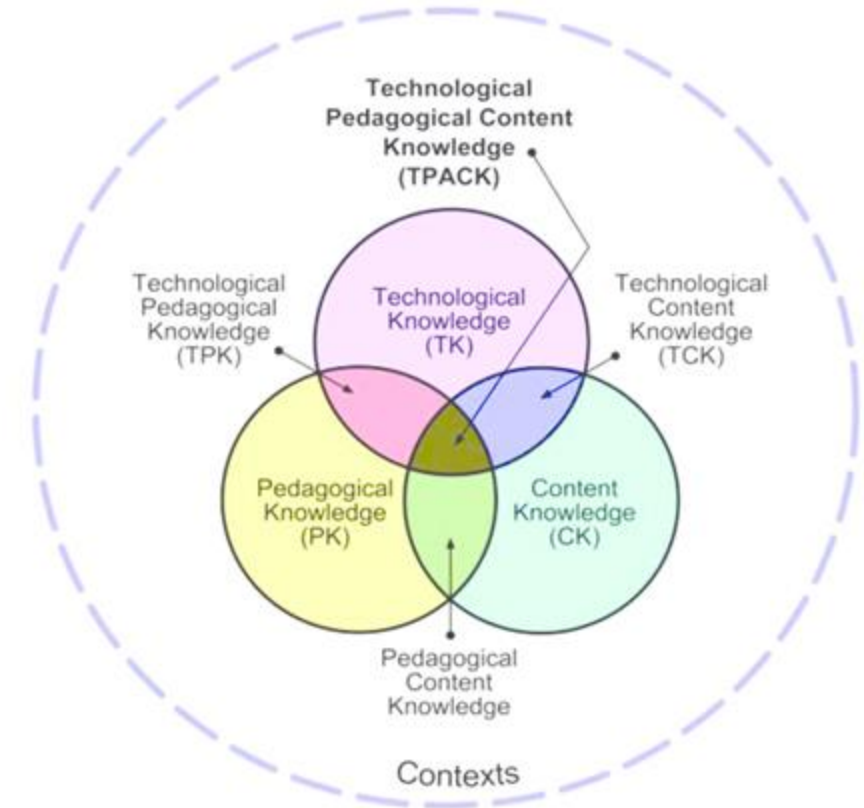


Content– Knowing what you need to teach the students. Knowing the curriculum standards and knowing how you will assess.

Honour the curriculum

Knowing the standards that your students need to meet too. This may be different for some.

Explore the curriculum.



TPACK in 2 minutes



TPACK Reflection Activity



Suggested activity to do with staff

Technology: What technologies have you seen used for learning purposes? What programs are you confident with?

Pedagogy: What are your pedagogical beliefs? How would you use teaching to support your students? What is one thing you would look for when choosing technology?

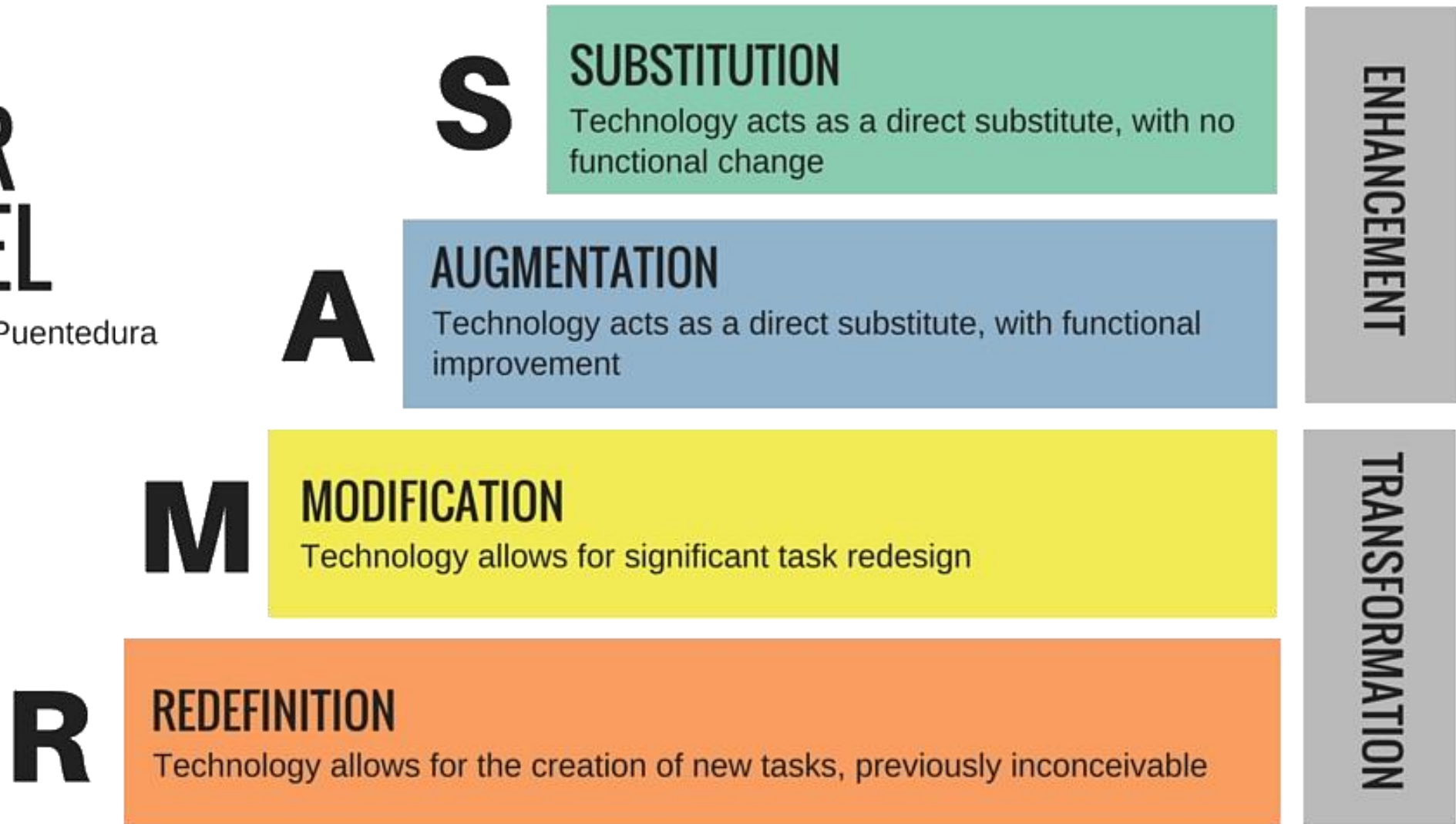
Content: How are technologies supporting curriculum learning? What content do you need to cover and what technologies can help you teach and assess?

SAMR Model



THE SAMR MODEL

Dr. Ruben R. Puentedura



SAMR Model



S

SUBSTITUTION

Technology acts as a direct substitute, with no functional change

Substitution - Technology acts as a direct tool substitute for traditional practices, with no functional change could be time saving and resource friendly

- Digital textbook - online quizzes - digital whiteboard - word/docs

SAMR Model



A

AUGMENTATION

Technology acts as a direct substitute, with functional improvement

Augmentation - Some functional improvement

- Multimedia elements images, videos layout skills in presentations, online instruction, online independent research

SAMR Model



Modification - Co-authorship and collaboration intended - less teacher direction

- Podcasts, blogs, website authorship ie google sites

M

MODIFICATION

Technology allows for significant task redesign

SAMR Model



Redefinition - student centered, self directed learning, real-world authentic problem solving. Students display high levels of technology skills

- Extensive multimodal elements in presentations
- Potential world wide audiences

R

REDEFINITION

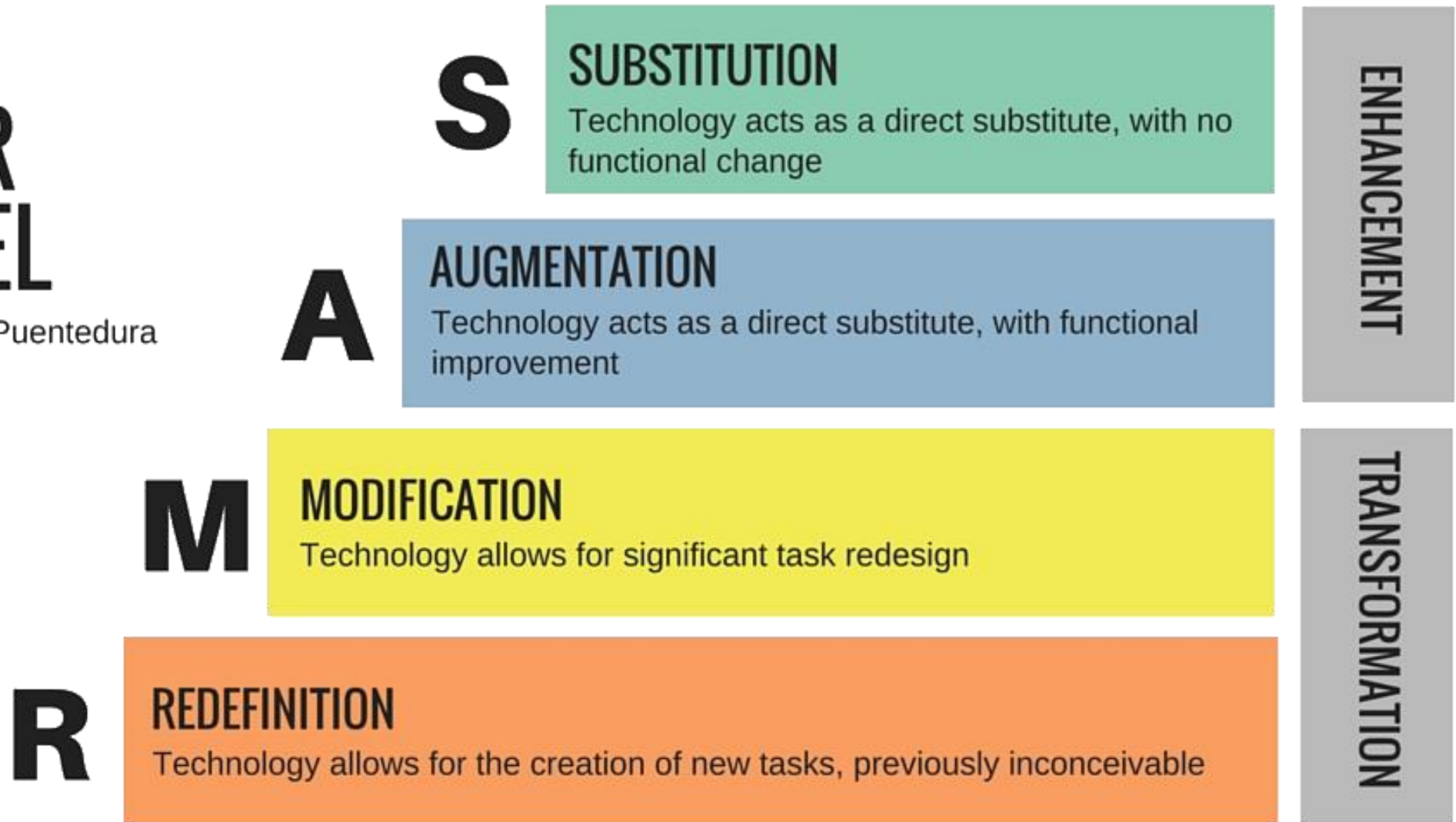
Technology allows for the creation of new tasks, previously inconceivable

SAMR Model



THE SAMR MODEL

Dr. Ruben R. Puentedura



SAMR Reflection



Suggested activity to do with staff

- What technologies are you using and how are you using them in your classes?
- Where are they in the regards to the positions within the SAMR model?
- What do you need to move onto the next level?

Evaluating Technology



PEDAGOGY



Does the content accommodate for individual differences?

Does the technology allow the needs of the learner to be flexible and supportive?

Does the content promote higher-order thinking?

When using the technology, what is the role of the teacher?

Evaluating Technology



CURRICULUM



Can the technology be used within another subject area of the curriculum?

Can the technology be used within another subject area?

Does it have the flexibility to be implemented into any subject area?

How do you assess student learning against curriculum?

Evaluating Technology



ASSESSMENT AND FEEDBACK



Does the program offer appropriate feedback?

When the learner is incorrect, does the technology give instant feedback?

Does the technology allow students to reflect on their learning?

Are activities integrated with assessment?

INTERFACE AND DESIGN



- Can content such as music and animations be controlled by the user (turned off and on)?
- Does the information appear in a natural and logical order?
- Is the font and style consistent?
- Are words and appropriate pictures are used rather than words alone?

Evaluating Technology



USABILITY



Can students use the program independently after the first use?

Does the opening screen give clear instructions?

Is it easy to navigate?

Can the technology be accessed through the school's Wi-Fi/security settings?

Technology Example

Topic: Show evidence of learning

Curriculum: Science and English

Students completed their own inquiry into sea animals. Epic! Was used to so students could choose to learn about an animal of their choice. Learning materials books and videos were available in a range of readings levels. We had focus questions(based on the curriculum) that they needed to answer.

Students used Book Creator to gather all their learning about their chosen animal. Instead of writing, students used the voice recording feature to capture their learning. The voice records and vocabulary they used surpassed their writing skills. We took writing abilities out of the equation and the result was Epic!



Technology

Book Creator



<https://bookcreator.com>

Epic!



<https://www.getepic.com/educators>

Technology Example

Topic: Showcase learning

Curriculum: Mathematics

I wanted students to articulate their learning of mathematical concepts. I wanted to gather evidence to use for report writing.

Students created short videos explaining the concepts. They presented them to the class. They were all used as a class library of videos.



Technology

Camera



iMovie



<https://apps.apple.com/us/app/imovie/id377298193>

Technology Example

Topic: Student driven learning

Curriculum: Mathematics

Students self corrected pretests. Used Excel to keep track of their learning. They evaluating their answers into a traffic light system:

Red = Incorrect response, needed help to understand the concept and question

Orange = got the answer correct but not to sure how they got it right or needed extra support consolidating learning

Green = correct and understand completely.

Students monitored their learning for the unit and were able to keep track of what they needed to learn.



Technology

Numbers



<https://apps.apple.com/au/app/numbers/id361304891>

Microsoft
Excel



Google
Sheets



Technology Example

Topic: Author Study

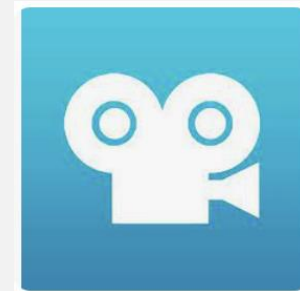
Curriculum: English, Science, Critical and Creative Thinking, Personal Capabilities

Implemented the concept of 'Author Study' into fortnightly literacy rotations. Our first author study was Pat Hutchins. First book we read was 'Titch'. This book was turned into a Claymation series. Students commenced exploring stop motion as a way to tell a story. Used 'Rosie's Walk' for big term project. The main focus was using the text to create a narrative. Made their text into a stop motion.



Technology

Stop motion



<https://www.cateater.com/>

iMovie



<https://apps.apple.com/us/app/imovie/id377298193>

Getting Started



Engage in the learning through technology

Students to articulate their learning and technology helps us do that.

Reflect on 'fun'.



Honour the Curriculum

Our priority is to teach and assess the curriculum. Find the tools to help you do that well.



Be Gentle on yourself

Take your time with what works for you. And focus on one thing at a time.



Keep it Simple

Don't feel as though you have to be innovative all the time. Or use different technology for the same result.



Questions?

Access the presentation here:



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