

School Improvement STEM- St Pius X Heidelberg West

St Pius X School is aspiring to achieve the overarching goals of STEM Education:

-Ensuring all students finish school with strong foundational knowledge in STEM and related skills

STEM Education:

STEM education is a cross-disciplinary approach to teaching that increases student interest in STEM related fields and improves students' problem solving and critical analysis skills. STEM sits within the broader foundational knowledge base and the teaching of STEM is a part, albeit important of a balanced program of learning (National STEM School Education Strategy, 2016-2026)

STEM Skills:

In addition to essential deep discipline knowledge, STEM education is an effective vehicle for developing skills in problem solving, critical analysis, creative thinking, evidence informed decision making, exploring multiple perspectives and communication. It can enhance dispositions towards curiosity, strategic questioning and collaborative risk taking. Within the Catholic context, capabilities of ethical thinking and acting for justice and the common good can be incorporated.

St Pius X is striving to be a **successful STEM school by providing:**

- A strong vision for STEM education underpinned by deep knowledge, understanding of research and system directions and an recognition of our own context, and*
- Support for teachers to be designers of learning, promoting collaboration and problem solving as essential learning capabilities for themselves and their students, to ensure **equitable access and opportunity for all***

Our Rationale: is to embed STEM education as an effective vehicle for developing skills in problem solving, critical analysis, creative thinking, evidence informed decision making, exploring multiple perspectives and communication.

This will be achieved through

- Deep learning engaging animated learners in authentic and purposeful experiences*
- Strong knowledge of curriculum and effective pedagogies*
- Powerful teaching, building a culture of learning together, to achieve the highest standards possible*
- Authentic feedback and ongoing assessment processes to empower students in their own learning*

In 2017 St Pius X will therefore be strategically working towards offering opportunities for teachers and students to engage in authentic and purposeful STEM education experiencing **Deep Learning and Powerful Teaching** by:

-Developing the understanding of STEM education as a pedagogy through designing the learning, promoting collaboration, and problem solving as essential learning capabilities for themselves and their students and ensuring equitable access and opportunity for all.

Our specific focus is to:

- 1. Increase student STEM ability, engagement, participation and aspiration**
- 2. Increase teacher capacity and STEM teaching quality, and**
- 3. Build a strong evidence base**

Resourcing STEM in schools

A successful STEM school offers:

- *Opportunities to engage in **authentic and purposeful STEM education experiences** (STEM learning exists in a variety of tools and environments within schools and surrounding communities).*
- *Authentic and reciprocal relationships between schools and community members/businesses/organisations engage and empower students in **authentic and purposeful learning**.*

Deep Learning and Powerful Teaching in STEM

A successful STEM school offers:

- *Deep learning engages animated learners in authentic and purposeful experiences that are life changing and **truth seeking**.*
- *Underpinned by a strong knowledge of curriculum and effective pedagogies, powerful teaching **builds a culture of learning together to achieve the highest standards possible**.*
- *Authentic feedback and ongoing assessment processes empower students in their own learning and **honours the sacred dignity of each person***
- Flourish - The Animated Learner”, S.Lindsay, 2016, CEM

Designing Learning for STEM education

A successful STEM school offers:

- *A strong vision for STEM education is underpinned by deep knowledge, understanding of research and system directions and an recognition of our own context.*
- *Teachers as designers of learning promote collaboration and problem solving as essential learning capabilities for themselves and their students and ensure **equitable access and opportunity for all**.*

Our 2017 Strategic Intent is to embed a variety of digital technologies and “1 to 1” strategies to assist in the implementation of a Digital Technologies supported Curriculum.

Our Aim is to:

- support the E-Learning Team-planning by preparing, implementing and evaluating the use of contemporary technologies at the school and further developing the 1 to 1 program E Learning Team Support
- provide staff support through Professional Learning Teams using a planning structure for Project based learning and individualised programs
- provide coaching/modelling to support teachers/students in the classroom setting

Our Goals:

To create measurable Workflows-processes to embed the delivery of technology into the Inquiry process

To develop of student managed EPortfolios

To develop learner management systems for Teacher-student communication

To consolidate the staff communication portal

To develop/extend strategies to integrate and embed Digital Technologies Education

(See comprehensive outline of PLT support before/after class time slots)

How do we plan to achieve our goals :

The school therefore plans to employ Anthony Holohan (**AHH The Computer Tutor**) an **ICT consultant, who will provide a training/coaching program to support teachers and student learning** by:

- continuing to develop/extend strategies to integrate and embed Digital Technologies Education, Google Apps for Education based technologies and STEM into and across the curriculum
- building teachers skills to embed these tools and processes into the planning and delivery of Units in particular Inquiry, Numeracy and Literacy using workflows and Digital Technology planning document.
- providing opportunity for students to be able to take part in anywhere anytime access to collaborative learning and reflection.
- modelling and coaching staff/students in developing rich scaffolded curriculum to support the SAMR model by supporting the development of WORKFLOWS that move lesson content to the transformational levels and increase student engagement and enrich curriculum delivery.
- embedding the use of Ipad and tablet technologies and their “apps” as well as any robotics and STEM tools purchased by the school eg. (Beebots, Makey Makey, Sphero, Arduino, Ozobots, Lego Kits) into classroom structures and curriculum fitting into class rotation structures.
- introducing staff and students to the new Technology Curriculum specifically the Digital Technologies area with reference to the Design Technology processes.
- developing a Prep to 6 approach and further develop resources for “Coding” and “how we can embed this into our units using website resources/lessons/devices and Ipad Apps to support this strategy.

Implementation Process:

- 1.Learner Management System
- 2.Planning and Collaboration as develop use of Workflow to conduct Inquiry Investigations
3. Student Managed EPortfolios with Google Sites

Embedding Technologies / Planner

Term 1

	Ausvels Focus	Whole Class Discussion	Rotating Group Learning Experience and Teaching Points	Resources	Assessment Evidence Descriptor
Week 1	Inquiry Science - Change		<p>Activity 1: Teacher Group (IWB) Key reminder: Delivery of content through Wiki and independent Navigation by students opens doorways.</p> <p>Activity 2: Introduce PowerPoint Change Activity Students to open and save into folder and complete some initial exercises around Powerpoint or one modified by the teachers.</p> <p>Activity 3: Ipad Pic Collage and then Popplet Students learn the tools of th</p> <p>Activity 4: Ipad Pic Collage and then Popplet Students learn the tools of th</p>		<p><u>ICT Capability</u> Applying</p> <p><u>Digital Technologies Descriptor</u> Applying</p>
Week 2	Focus:				

As part of an ICT support/coaching strategy would also go support the Literacy Rotations:

1.2 or 3.4 whereby there are 4 activities 2 on computer/tablets and 2 off- utilizing the spaces in minilabs, IPADs and IWB boards - 1 side an activity and the other, another activity that use ICT whilst the spaces outside the classrooms and spaces in the vicinity can be 2 teacher generated activities that are on paper/inbooks etc.

- Students view a video on the IWB then work on a related activity sheet.

EXAMPLE

- A Cybersafety Report – view video then set up Word Document
- B PowerPoint - related to Unit eg. Olympics with athlete's sport profiles, websites and painting.
- C In book literacy activity
- D Perhaps IWB use Wiki or Blog page where video or Interactive is viewed then activity sheet completed
- Once these structures are in place it enables the teacher to facilitate and assess more freely and assist individuals more readily.

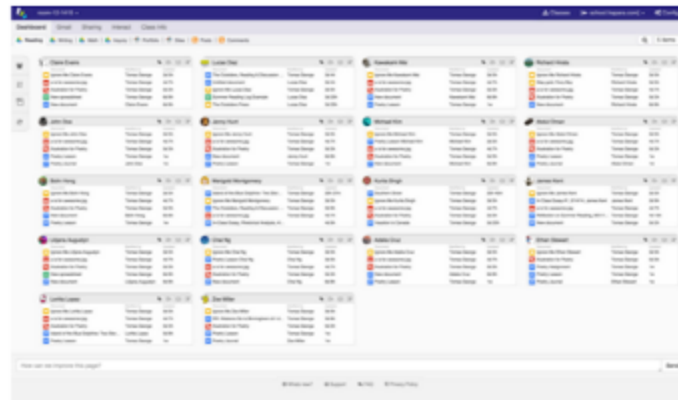
AIMS

Coaching and development role supporting teachers in the classroom setting and the implementation of the following:

IMPLEMENTATION AREAS for 2017

1. Learner Management System – Teacher Student Communications

- Folder and organizational structures in Google – setting up use of Drive Apps and connection with teachers through Google Classroom or Hapara
- Student Portal developed for communication and delivery of regularly used resources and curriculum sites links
- Developing Google Classroom Learning Space designed for communication and delivery of learning content to the class - showcase how to set up and to deliver curriculum documents and activities to students
- Maximize use of Learner Management Systems Google Classroom or Hapara, Google Drive and Google APPS for education:
- Collaborative planning
- Collaborative delivery of documents
- Presentation methods
- Assessment tools



2. **Planning and Collaboration as develop use of WORKFLOWS to conduct Inquiry investigations**

- Use SAMR model and workflow sequences of activities that utilize both Google and Ipad apps to enrich the delivery and access to curriculum content


We aim to embed the use of learning spaces in Google Drive, Sites and Blogs to enrich the Inquiry unit and the Inquiry Process as well as a means of transforming activity development higher in the SAMR model through creating measurable “WORKFLOWS”

THE INQUIRY CONTEXT - Sequence of Learning Example 1

WorkFlow Designed with Sue TerKuile

Heroes Sequence of Learning 5.6 Work Flow

Activity	Program	Focus
<p>Open Showbe Heroes Assignment Popplet</p>	<p>Brainstorm – What makes a Hero? 1. Use Popplet to create a list of all the attributes that come to mind when you think about a hero. What is a hero? How is a hero created? How can we learn from a hero? Use the one colour only for your pre ideas.</p>	<p>Substitution And Augmentation Popplet</p>
<p>Popplet Stage 2</p>	<p>Heroes 2. Watch the Framework of a hero's development https://youtu.be/Hhk4N9A0oCA 3. Watch https://youtu.be/Fn60Tgfucho and think about what a hero is.</p>	<p>Substitution Article</p>

	<p>4. Open the following Heroes Article Document and read the article</p> <p>5. Re-open your Heroes Popplet and add any new understanding/ideas you learnt about heroes. Use a different colour for these additional ideas.</p> <p>6. SUBMIT YOUR POPPLET THROUGH SHOWBIE – add a comment with your upload</p>	<p>Augmentation Youtube Popplet</p> <p>Substitution Website And Showbie</p>
<p>Explore Research</p>	<p>Researching a world hero http://historysheroes.e2bn.org/heroes/suggested</p> <p>7. Go to the following website type in a hero -for example</p>  <p>8. Click on the WHO button to read a brief description/outline of the hero – repeat this for a number of choices and decide on 1 you would like to make your focus for your investigation.</p> <p>9. Go to SHOWBIE and post a comment on who you have chosen and why.</p> <p>Research Plan</p> <p>10. Using a range of books and websites gather notes based on the following headings in a PAGES Document:</p> <ul style="list-style-type: none"> • Name of your hero • Complete a Profile • Complete 2 detailed paragraphs of how your hero meets your criteria for a hero outlined in your Popplet <p>11. Upload this document to Showbie as a PDF for teacher comment</p>	<p>Substitution Website Research And Showbie</p> <p>Augmentation Pages</p>
<p>Videos, Slideshows and interactives</p>	<p>Making a visual record</p> <p>12. Watch the Framework of a hero's development again with your hero in mind https://youtu.be/Hhk4N9A0oCA</p>	<p>Modification Youtube</p>



13. Go to this video and take note of how the profile video was created for this hero (Eddie Mabou) <https://youtu.be/TYfasEothTU>

- Intro with Presenter
- Images
- Video Interviews and photos of the hero
- Reflection

Design and Create

Making a Video News Profile

14. Use an APP of your choice eg. iMovie, Explain Everything, Book Creator to construct a news profile based on your inquiry including:

- Intro with Presenter
- Images
- Video Interviews and photos of the hero
- Your heroes journey
- Reflection

15. Upload this video to Showbie for teacher comment from the APP used

Redefinition

**iMovie
Explain Everything**

Action

Presentation

16. Create a PIC COLLAGE with a PHOTO of you and details around it on how you can be a hero.

17. Upload this COLLAGE as an Image to Showbie for teacher comment

18. Dress up as your hero and present your findings and video to your group.

Redefinition

**iMovie
Explain Everything**

THE INQUIRY CONTEXT - Sequence of Learning Example 2

Workflow Designed by Anthony Holohan

Google Workflows to Guide Independent Learning

Connect, Learn Grow Unit

Name

Photo

My Strengths

Write your strength in the left panel.

On the Multiple Intelligences Quiz below.

Customize content directly and create in the write page. Upload your results and give an example to support the results of the Quiz.

These are what I think my Strengths are:

These are the Strengths shown in the Quiz:

What are the qualities of a good citizen?

Complete [A good Citizen](#) & [A good Citizen](#)

Qualities of a good citizen	Description	Example

What kind of community/society would you like to live in?

Think Feel Say Do

SAY

THINK

DO

FEEL

21 Steps to 1-1 Success: Supporting 1-1 Implementation

Planning

Preparing

Implementing

Evaluating

Resources

Student Learning

Project Based Learning Individualised Programs

- Creating measurable “WORKFLOWS” (processes to embed the delivery of technology into the Inquiry process). We model the creation of a workflow of activities to deliver to the students through our online spaces using Google Slideshows, Hyperdocs or Sites
- Students work at their own pace though the tasks with teachers capable of collaboration and immediate feedback through comment features

- Delivery of students material/projects to individual and groups as organised through different Google Classrooms eg. Whole Class(1 classroom), Literacy Groups (4 classrooms)

3. Student Managed EPortfolios with Google Sites

- Juniors – See Saw
- Middle – Google Slides/Keynote
- Seniors – Sites
- Development of Student Digital Portfolios through Google Sites for students to manage their Goals, learning and achievements
- Shared with teacher for collaboration and comment
- Used to guide Student Led Interviews
- Develop skills in teachers and students in Google Sites for Delivery and investigating as a medium for Portfolios for students
- Develop skills in use of SEESAW if school chooses this as a junior portfolio option



Staff Portal	Student Portal	Student Site
<p>The screenshot shows the 'St. Andrew's Staff Page' with a search bar and navigation links.</p>	<p>The screenshot shows the 'St. Luke's Students page' with a banner that says 'Connecting - Collaborating - Caring - Communicating' and a Google search bar.</p>	<p>This screenshot is identical to the one shown above, displaying the 'BORROONDARA City of Harmony' history page.</p>
Completed	In progress	2017 NEW SITES

- 4. Digital Technologies/STEM - Develop skills to implement Digital Technologies subject through “Coding” teaching with both teachers and modelling in the classroom with students-

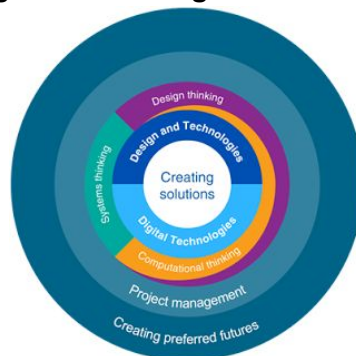
Foundation – Level 2	Levels 3 and 4	Levels 5 and 6	
Digital Systems			
Identify and explore digital systems (hardware and software components) for a purpose	Explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data	Examine the main components of common digital systems and how such digital systems may connect together to form networks to transmit data	Investigate how wireless and mobile systems connect together to form networks to transmit data
Data and Information			
Recognise and explore patterns in data and represent data as pictures, symbols and diagrams	Recognise different types of data and explore how the same data can be represented in different ways	Examine how whole numbers are used as the basis for representing all types of data in digital systems	Investigate how sound data is bit
Collect, explore and sort data, and use digital systems to present the data creatively	Collect, access and present different types of data using simple software to create information and solve problems	Acquire, store and validate different types of data and use a range of software to interpret and visualise data to create information	Acquire data from authentically, social
Independently and with others create and organise ideas and information using information systems, and share these with known people in safe online environments	Individually and with others, plan, create and communicate ideas and information safely, applying agreed ethical and social protocols	Plan, create and communicate ideas, information and online collaborative projects, applying agreed ethical, social and technical protocols	Analyse and use create informational objects or events Manage, create information and safety and social
Creating Digital Solutions			
Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems	Define simple problems, and describe and follow a sequence of steps and decisions involving branching and user input (algorithms) needed to solve them	Define problems in terms of data and functional requirements, drawing on previously solved problems to identify similarities	Define and describe account function (economic, environmental constraints)
		Design a user interface for a digital system, generating and considering alternative design ideas	Design the user interface, evaluating and refining
		Design, modify and follow simple algorithms represented diagrammatically and in English, involving sequences of steps, branching, and iteration	Design algorithm flowcharts, and flow input and to identify
	Develop simple solutions as visual programs	Develop digital solutions as simple visual programs	Develop and modify involving branching general purpose
Explore how people safely use common information systems to meet information, communication and recreation needs	Explain how student-developed solutions and existing information systems meet common personal, school or community needs	Explain how student-developed solutions and existing information systems meet current and future community and sustainability needs	Evaluate how we use existing information and take account
Achievement Standard			
By the end of Level 2, students identify how common digital systems are used to meet specific purposes. Students use digital systems to represent simple patterns in data in different ways and collect familiar data and display them to convey meaning. Students design solutions to simple problems using a sequence of steps and decisions. They create and organise ideas and information using information systems and share these in safe online environments.	By the end of Level 4, students describe how a range of digital systems and their peripheral devices can be used for different purposes. Students explain how the same datasets can be represented in different ways. They collect and manipulate different data when creating information and digital solutions. They plan and safely use information systems when creating and communicating ideas and information, applying agreed protocols. Students define simple problems, and design and develop digital solutions using algorithms that involve decision-making and user input. They explain how their developed solutions and existing information systems meet their purposes.	By the end of Level 6, students explain the functions of digital system components and how digital systems are connected to form networks that transmit data. Students explain how digital systems use whole numbers as a basis for representing a variety of data types. They manage the creation and communication of data, information and digital projects collaboratively using validated data and agreed protocols. Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. They incorporate decision-making, repetition and user interface design into their designs and develop their digital solutions, including a visual program. Students explain how information systems and their developed solutions meet current and future	By the end of Level 10, students explain the functions of digital system components and how digital systems are connected to form networks that transmit data. Students explain how digital systems use whole numbers as a basis for representing a variety of data types. They manage the creation and communication of data, information and digital projects collaboratively using validated data and agreed protocols. Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. They incorporate decision-making, repetition and user interface design into their designs and develop their digital solutions, including a visual program. Students explain how information systems and their developed solutions meet current and future

- Introduce planning tools that embed the use of Digital Technology, build ICT capabilities and use of STEM
- Develop/extend strategies to integrate and embed Digital Technologies Education through understandings of the following:
- What is Computational Thinking? What is an algorithm and how can we teach them in the primary classroom with Visual Programming-CODING?
- An introduction to key programming concepts: Decisions and Iteration.
- What visual programming environments are available?
- Implementing algorithms in the classroom.
- Develop planning for use of activities that involves students:
- following, explaining or creating explicit instructions (an algorithm)
- developing skills in creating logical sequences
- incorporates the use of visual programming
- Develop Digital Technologies Scope and Sequence used across P-6 and support
- Staff to learn how to use these coding tools within their class structures and planning.
- Ideas for Design technology delivery and planning
- Develop skills in coding to support the implementation of the Digital Technologies curriculum – use of APPS and website content - Scratch visual programming, Coding and developmental course projects such as the Digital Learning Diary
- Build students skills in digital technologies using interactive applications and reflect on learning with screenshots and annotations in student journals

Resources

- Review software/Apps/tools used at each level
- iPad and tablet technologies and their “apps” as well as any robotics and STEM tools purchased by the school eg. (Beebots, Makey Makey, Sphero, Arduino, Ozobots, Lego Kits) into classroom structures and curriculum fitting into class rotation structures.

Digital Technologies Resources



The Digital Technologies learning area is distinct from the [ICT Capabilities](#) and the idea of 'using' technologies. Rather, this learning area prepares children to understand how their digital world works and to be creators of digital solutions.

Digital Technologies Hub Site

<https://www.digitaltechnologieshub.edu.au/>

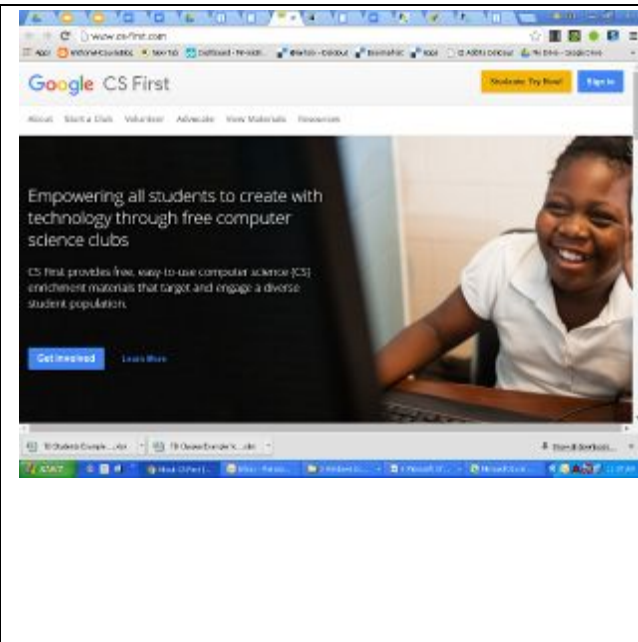
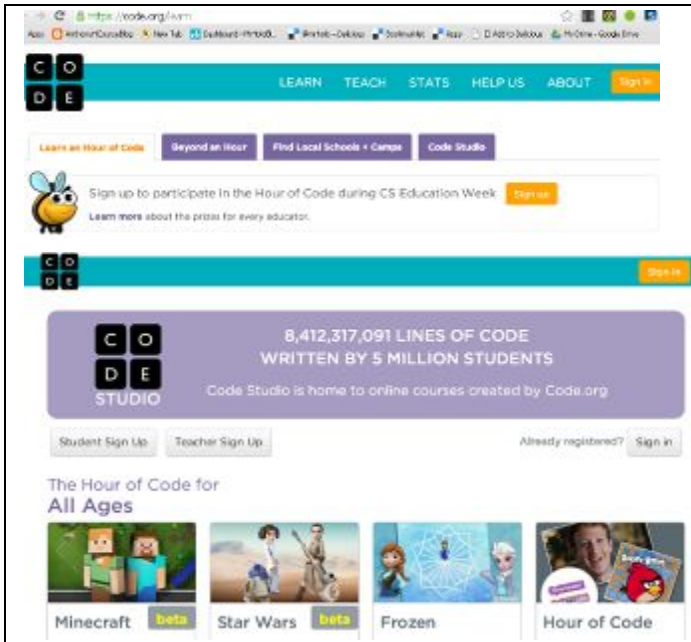
<http://www.australiancurriculum.edu.au/technologies/digital-technologies/curriculum/f-10?layout=1>

Digital Technologies Portfolio [Assessment Samples](#) from ACARA

Pedagogical practices - [Elemental Learning Design](#)

Victorian Digipubs [Site](#)

Hour of Code Code Learn https://code.org/learn https://studio.code.org/	Code Learn – Coding Club http://www.cs-first.com/
--	---

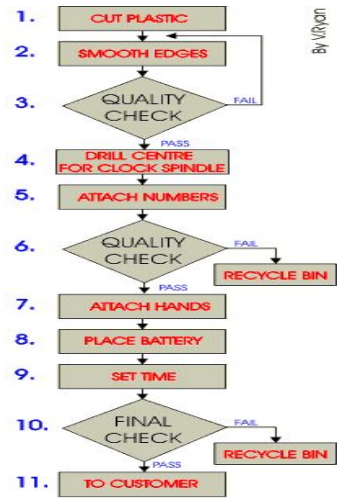


Scratch
<https://scratch.mit.edu/>

Hopscotch - Programming made easy! Make games, stories, animations and more!



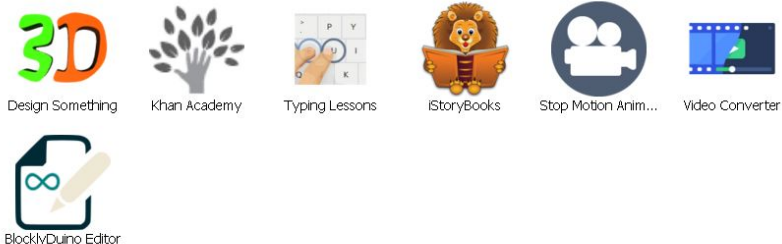
– Develop skills in Design Technology – Flow Charting and Design to graphically represent thinking and problem solving process



5. Chrome APPS – which to embed into curriculum and coach staff and student use.

Subject	Foundation	Junior School	Middle School	Senior School
IPAD APPS <i>Presentation</i>	Popplet	Pic Collage	Explain Everything	Explain Everything
	Drawing Box	Padlet	Caribous	Caribous
	Pic Collage	iMovie	iMovie	iMovie
	Drawing Pad?	Tagxedo	Pic Collage	Pic Collage
		Drawing Pad	Popplet lite	Think Link
		Drawing Box	Word Clouds	Prezi
		Tellagami	Book Creator	
			Drawing Pad	
CHROME APPS				
	Map	Seesaw	Collabry Flipbook	Lucid Press
	Read Write			Sketch up
	Seesaw			3D Design Something





6. iPad APPS and embedding into curriculum content and IPAD AUDIT for Levels

- Juniors – into Literacy, Numeracy and Inquiry
- Middle and Seniors – all areas of the curriculum
- Work through Scope and Sequence of curriculum related APPS
- Collate APPS and where they fit into the SAMR Model
- Plan for use of APPS to enrich components of the curriculum and develop collaborative opportunities and engagement
- Learning new APPS that can be embedded into Literacy/Numeracy and Inquiry enriching the curriculum delivery and engagement
- Investigate and help teachers implement IPADS or TABLETS into rotational structures or 1 to 1 structures dependent on school rollouts of equipment – explore and skill up in use of the apps available on these tools.



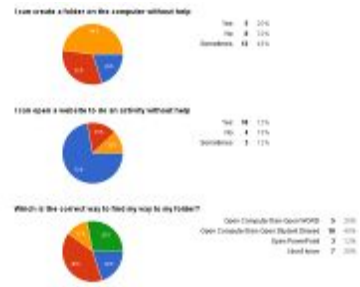
Subject	Foundation	Junior School	Middle School	Senior School
IPAD APPS <i>Presentation</i>	Popplet	Pic Collage	Explain Everything	Explain Everything
	Drawing Box	Padlet	Corkulous	Corkulous
	Pic Collage	iMovie	iMovie	iMovie
	Drawing Pad?	Tagxedo	Pic Collage	Pic Collage
		Drawing Pad	Popplet lite	Think Link
		Drawing Box	Word Clouds	Prezi
		Tellagami	Padlet	
			Book Creator	Drawing Pad
CHROME APPS	Foundation	Junior School	Middle School	Senior School
	Mind Map	Seesaw	Collabrify Flipbook	Lucid Press
	Read Write			Sketch up
	Seesaw			3D Design Something

7. Pre and Post Assessment

- Using and participating in use and analysis of Google Form data used with QR Codes on I pads
- Assessment and testing through Google Forms and use of QR Codes for delivery of content through I pads (Prep and Post testing – analysing data)



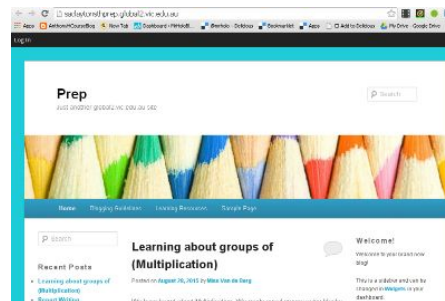
Name:	Grade:	2013	Evidence of Learning		
IPAD (Prep - 11)			😊	😐	😞
1. Use the Internet to research the IPAD. Evaluate the appropriateness and accuracy of the information.	1.1. Access and Evaluate	1.1.1. Compare the IPAD.			
		1.1.2. Identify the advantages and disadvantages.			
		1.1.3. Identify the disadvantages and risks of the IPAD.			
	1.2. Access and Evaluate	1.2.1. Compare the advantages and disadvantages.			
		1.2.2. Identify the advantages and disadvantages.			
		1.2.3. Identify the disadvantages and risks of the IPAD.			
	1.3. Access and Evaluate	1.3.1. Compare the advantages and disadvantages.			
		1.3.2. Identify the advantages and disadvantages.			
		1.3.3. Identify the disadvantages and risks of the IPAD.			
	1.4. Access and Evaluate	1.4.1. Compare the advantages and disadvantages.			
		1.4.2. Identify the advantages and disadvantages.			
		1.4.3. Identify the disadvantages and risks of the IPAD.			



8. Cyber safety and responsible use

- methods and tools we can use in the classroom
- Juniors – ACMA – Hectors World, Think etc.
- Middle - ACMA – Budde program
- Senior – ACMA – Digital Licence E Smart
- methods and tools we can use in the classroom
- Cyber smart focus with staff and students looking at safe/responsible use of online resources through Cyber Safety online projects and Journals revisited throughout the year.

9. Blogging as a means of communication with community



10. Continuation With Your Google Spaces Tools – Setting up student drives and New Tools – Add Ons

- All PLT to support the implementation of Google Apps for education through online tools developed to support teachers and learners in an interactive collaborative way.
- Google Apps for Education - the tools and how to use them in schools
- Investigate Google APPS and ADD Ons
- Through rotational activities using both IWB and Laptop or Tablet devices embed ICT use in Literacy/Numeracy rotations or as part of Inquiry in the CLASSROOM ENVIRONMENT
- Investigate the potential use of student Google Drives as a paperless option for both teachers and students to profile their learning and development leading to 1 to 1 learning
- Google Sites

- Google Forms and Flubaroo
- Mind mapping APPS
- Collaboration Apps



Teacher Support PLT's

Plan structure and needs for teacher training/planning for before/after school time slot to support the following.

Project Based Learning

Individualised Programs

- **Creating measurable "WORKFLOWS"** (processes to embed the delivery of technology into the Inquiry process). Model the creation of a workflow of activities to deliver to the students through our online spaces using Google Slideshows, Hyperdocs or Sites
- **Students work at their own pace though the tasks with teachers capable of collaboration and immediate feedback through comment features**
- **Delivery of students material/projects to individual and groups as organised through different Google Classrooms eg. Whole Class(1 classroom), Literacy Groups (4 classrooms)**

Student/Collaboration

- **Participation in collaborative tasks and projects delivered to the students through the Google Classroom**

Student Managed EPortfolios

- **Development of Student Digital Portfolios through Google Sites for students to manage their Goals, learning and achievements**
- **Shared with teacher for collaboration and comment**
- **Used to guide Student Led Interviews**
- **Develop skills in teachers and students in Google Sites for Delivery and investigating as a medium for Portfolios for students**
- **Develop skills in use of SEESAW if school chooses this as a junior portfolio option**

Learner Management System – Teacher Student Communications

- **Student Portal developed for communication and delivery of regularly used resources and curriculum sites links**
- **Developing Google Classroom Learning Space designed for communication and delivery of learning content to the class - showcase how to set up and to deliver curriculum documents and activities to students**
- **Maximize use of Learner Management Systems Google Classroom or Hapara, Google Drive and Google APPS for education:**
 - **Collaborative planning**
 - **Collaborative delivery of documents**
 - **Presentation methods**
 - **Assessment tools**

Leadership/Staff

- **Consolidation of Staff Communication Portal with resources, calendars, announcements and links to our Google folder structures**

- **Build connections between staff and leadership through online links**
- **Develop learning communities**
- **Support teacher Curriculum Planning-Preparing-Implementing and Evaluating the use of Digital technologies at the school**
- **Assessment and testing through Google Forms and use of QR Codes for delivery of content through Ipad (Prep and Post testing - analysing data)**

Digital Technologies

- **Develop/extend strategies to integrate and embed Digital Technologies Education through understandings of the following:**
- **What is Computational Thinking? What is an algorithm and how can we teach them in the primary classroom with Visual Programming-CODING?**
- **An introduction to key programming concepts: Decisions and Iteration.**
- **What visual programming environments are available?**
- **Implementing algorithms in the classroom.**
- **Develop planning for use of activities that involves students:**
- **following, explaining or creating explicit instructions (an algorithm)**
- **developing skills in creating logical sequences**
- **incorporates the use of visual programming**
- **Develop Digital Technologies Scope and Sequence used across P-6 and support**
- **Staff to learn how to use these coding tools within their class structures and planning.**
- **Ideas for Design technology delivery and planning**
- **Develop skills in coding to support the implementation of the Digital Technologies curriculum - use of APPS and website content - Scratch visual programming, Coding and developmental course projects such as the Digital Learning Diary**
- **Build students skills in digital technologies using interactive applications and reflect on learning with screenshots and annotations in student journals**

Resources

- **Review software/Apps/tools used at each level**
- **IPad and tablet technologies and their "apps" as well as any robotics and STEM tools purchased by the school eg. (Beebots, Makey Makey, Sphero, Arduino, Ozobots, Lego Kits) into classroom structures and curriculum fitting into class rotation structures.**
- **Chrome APPS - which to embed into curriculum.**

Cyber safety and responsible use

- **methods and tools we can use in the classroom**
- **Cyber smart focus with staff and students looking at safe/responsible use of online resources through Cyber Safety online projects and Journals revisited throughout the year.**