

<b>DIGITAL TECHNOLOGIES IN FOCUS PROJECT PROPOSAL</b>		
<b>School name</b>	St. James Catholic College (SJCC)	
<b>School contact details</b>	25 Mary St, Cygnet, Tasmania (03) 6295 1541	
<b>School team members</b>	<b>Team member</b>	<b>Role</b>
	1. Stephanie Alexander Kitchen Garden, Garden Specialist 2. Year 6 teacher 3. ICT/DT teacher 4. Stephanie Alexander Kitchen Garden, Kitchen Specialist	
<b>School profile</b>	Number of students	256
	Location	Cygnet, Tasmania
	Sector	Catholic
	School type	Combined school
	Year range	K–10
	Proportion of students who are Indigenous	38%
	Proportion of students with disability	approx. 16%
	Proportion of students who are EAL/D	0%
<b>Year level(s) involved in project and reason for choice</b>	Years 3, 4, 5 and 6 <ul style="list-style-type: none"> <li>• These students have kitchen and garden classes on a Friday.</li> <li>• The Year 3 teachers have identified the need for additional support with ICT and DT implementation.</li> <li>• Year 4 teacher is in her first year of teaching after graduating from university last year. She is eager and motivated and we would like to support her with this new curriculum area.</li> <li>• Year 5 and 6 teachers have a small amount of experience and some confidence with ICT/DT. The students are engaged with hands-on tasks and can potentially mentor the Year 3 students.</li> <li>• We required further integration of the curriculum into kitchen/garden.</li> <li>• To develop leadership opportunities for the Year 5 and 6 students</li> </ul>	
<b>Number of students involved</b>	Year 3 = 13, Year 4 = 24, Year 5 = 16, Year 6 = 19 Total = 72	
<b>Number of teachers involved</b>	Year 3 = 2 (Andrea Brain & Kim Helm) Year 4 = 1 (Amy Westwood) Year 5 = 2 (Esther Sulzberger & Stacey Cooper) Year 6 = 1 (Brianna Lory) Total = 6	

## INVESTIGATING AND DEFINING

### Proposal details

**What is your research question?** (Identify the challenge generally; refine the statement; get specific and express as a question.)

How can we make our SAKG more efficient and manageable using digital technologies, especially during school holidays?

### What are your project aims?

- To make the maintenance of the garden manageable and requiring minimal human interaction during the school holidays
  - i.e. watering
- To make the maintenance of the chickens manageable and requiring minimal human interaction during the school holidays
  - i.e. feeding/watering the chickens
- Collaborate with other schools and community groups to share data, experiences and knowledge. Data examples:
  - rainfall
  - sunshine
  - growing season

**How will your school investigate the research question? (Consider literature review, connecting with other schools, working with members of your school's professional learning ecosystem.)**

Contacting and collaborating with the following:

Huonville – Nel Smit, Environmental Educator

Clarendon Vale – Trudy Ward, Year 3/4 teacher – have a garden and men's shed

Our Lady of Mercy Deloraine - Mary Wall, Principal – received the Digital Literacy Grant. Garden project.

Peter Lelong, ACARA

Joseph Pearson, Education Officer, TCEO

Utilising our school's professional learning ecosystem as necessary

**Please briefly describe your project. Include an explanation of how your project links to the Australian Curriculum: Digital Technologies and how it helps you achieve existing goals for your school. Include references to your school plan.**

We will be utilising digital technology to make the Stephanie Alexander Kitchen Garden more manageable, particularly in the school holidays. This will be completed through a series of simple projects completed by Years 3, 4, 5 and 6 and will be based on the skills, knowledge and understandings required in the DT curriculum. Years 5 and 6 will work to support Years 3 and 4 and teachers will encourage the older students to take on leadership positions with the younger students.

The projects will include:

- modifying the chicken coop to allow for less frequent checks during the school holidays and to prevent the need for a volunteer to take the chickens home
- improving the current watering system as necessary
- other small projects to prevent pests from eating produce (TBA)

- monitoring and modifying drainage in the kitchen garden
- collecting data based on monitors and observations before and after systems are put in place, including over time.

As an ongoing aim of the smaller projects, we will also continue to collaborate as a primary team within SJCC and also with other schools completing similar projects to share ideas and support.

**State your criteria for success.**

- We are aware of schools with similar aims and contact is made/maintained throughout the project.
- Data are shared between schools.
- Teachers engage with relevant professional learning and share their knowledge within the team.
- Students collect, analyse and interpret data throughout the process.
- Students identify problems, suggest solutions utilising digital technology and attempt the solutions.
- We order, become familiar with, and use Arduino and the related software.

- **Teachers are planning, implementing and assessing the Digital Technologies curriculum. Students have the opportunity to achieve the following achievement standards:**

YEARS 3/4 (<http://www.australiancurriculum.edu.au/technologies/digital-technologies/curriculum/f-10?y=3-4&y=5-6&s=DIKU&s=DIPPS&layout=2>)

- Year 4, students describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. They explain how the same data sets can be represented in different ways.
- Students define simple problems, design and implement digital solutions using algorithms that involve decision-making and user input. They explain how the solutions meet their purposes. They collect and manipulate different data when creating information and digital solutions. They safely use and manage information systems for identified needs using agreed protocols and describe how information systems are used.

YEARS 5/6 (<http://www.australiancurriculum.edu.au/technologies/digital-technologies/curriculum/f-10?y=3-4&y=5-6&s=DIKU&s=DIPPS&layout=2> )

- Students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. They explain how digital systems use whole numbers as a basis for representing a variety of data types.
- 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 implement their digital solutions, including a visual program. They explain how information systems and their solutions meet needs and consider sustainability. Students manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols.

**GENERATING AND DESIGNING**

**How will your project be delivered? What actions are planned?**

- Teacher professional learning opportunities
- Teacher planning sessions facilitated by Joe Pearson/Peter Lelong
- Garden teacher and class teachers will work with students to identify problems, generate solutions and collect data
- Yrs 5 & 6 will team with Yrs 3 & 4 working in small groups to use digital technology to solve problems

**Are you collecting data? How do you plan to do this?**

- We will be collecting:
  - soil water retention levels
  - temperature variations
  - hours of sunlight
  - egg output.
- We will be using technology as appropriate.

**COLLABORATING AND MANAGING**

**Identify the resources you will need for the implementation of the project.** (Include your key stakeholders, how ACARA can offer assistance, what will impact your capacity to deliver.)

- Joseph Pearson, EO TCEO
- Peter Lelong, ACARA
- Professional learning ecosystem
- Linking in with like schools undertaking similar projects
- Project needs to be budgeted for (i.e. Arduino kits etc.)

**Identify the potential risks your project may face.** (Include risks, such as lack of resources; lack of interest by teachers, students, community)

- lack of resources
- participation divide
- too few teachers with the skills/enthusiasm to implement
- too few hours available to interested teachers for planning/ordering materials/supporting other teachers
- low levels of parent/community engagement

**Consider the deliverables and timelines for this project (progress reports, webinars, podcasts, final report). What are the milestones for your school's project?**

*By the end of Term 3, 2017* – Meet with all teachers/staff involved with the project to begin creating links within the curriculum and recognising the learning and resourcing needs required before beginning.

*By the end of Term 4, 2017* – Place orders for resources based on agreed upon first projects.  
Provide PL to staff as required.

Term 1, 2018 – classes 3/4/5/6 begin working on the first unit/problem to solve.

Term 2, 2018 – Student work is reported on

Term 4, 2018 – Student work is reported on

**PRODUCING AND IMPLEMENTING**

**Describe how Digital Technologies will be implemented in your school.**

All teachers will be undertaking professional development in this area and will have support with planning initial units. Specific teachers are being targeted for this project to increase their confidence and capability. In primary, Digital Technologies will be planned, taught, assessed and reported on by the classroom teacher. This project has specific long- and short-term goals.

**EVALUATING**

**ACARA will be assessing students at the beginning and at the end of the project in terms of ICT literacy and computational thinking skills.**

**What additional evidence will you need to collect in relation to your school's specific action research question? You may like to consider:**

- collecting student work samples
- recording an illustration of practice.

**ACARA will be surveying teachers at the beginning and at the end of the project in terms of their ICT literacy and their confidence in teaching Digital Technologies knowledge, understanding and skills.**

**What additional evidence will you need to collect in relation to your school's specific action research question?**

- teacher unit plans and subject overviews
- teacher reflection and feedback on one or more of their DT lessons

**Please add any other comments about your project that you would like to make.**

**Thank you for your time and commitment to the Digital Technologies in focus project.**