

# Scaffolding for success: Support students' amazing journey with Guided Inquiry



Students in 4/6A at CCPS peer reviewing their *Amazing animals* iBooks



Jenny Scheffers (L), teacher librarian, and Glenda Alekna (R), support teacher, at Caddies Creek Public School (CCPS), share how a Guided Inquiry approach is opening the door to exciting new learning experiences for students with autism spectrum disorder (ASD), and providing evidence of explicit learning outcomes.

## Background to Guided Inquiry at CCPS

Caddies Creek Public School, located in north-western Sydney, has a student enrolment of approximately 970 pupils; comprising 37 mainstream classes and three support classes. Since 2007, [Guided Inquiry](#) (GI) has been extensively trialled, developed and formally adopted as the framework for all students' research in the library. The approach to learning in the library is largely based on Cooperative Planning and Teaching (CPT), a flexible timetable and resource based learning. An article in [Scan 32.1](#) documents how iPads were successfully incorporated into Guided Inquiry research programs at CCPS in 2012. Now, they are extensively integrated in many learning programs across the school.

Class 4/6A is the senior Support Class Autism, catering for seven students with autism spectrum disorder (ASD). The class is supported by a teacher and a special learning support officer (SLSO). All students in the class are boys, with cognitive functioning ranging from below to above average. Emotional and social adaptive functioning is observably lower. Six out of the seven students have both [receptive and expressive language disorder](#).

In past years, the teacher of this class

and teacher librarian has worked collaboratively on several *lower order* CPT library research units outlined below. Using prepared research booklets, nonfiction books and prescribed websites, students recorded relevant keyword information about their chosen subtopics and then collated this information into a brief information report. These final texts were then used to create Microsoft PowerPoint presentations or Microsoft Publisher brochures.

### Planning a CPT unit for a support class

During Term 2 2014, the bar for teaching and learning for these older students with ASD, their class teacher and teacher librarian, was lifted, when the class participated in a more advanced CPT GI research unit titled [Amazing wild animals](#).

Using iPad technology, nonfiction texts and selected websites, students jointly formulated and researched focus, and contributing questions, related to why their chosen wild animal was so amazing. A [programming proforma](#), recently developed by Professor Ross Todd and Lyn Hay, was used to plan the unit.

At the initial planning stage, the class teacher and teacher librarian didn't foresee just how dynamic and in-depth

this teaching and learning unit would become. Several exciting, unplanned enrichment activities and heart-warming moments emerged along the way.

### Planning for high quality teaching and learning

A CPT planning meeting was held at the start of Term 2. The structure of the program was discussed, as well as the roles and responsibilities of both staff members. Print, online and ICT resources were identified and collected. The unit was conducted in both the classroom and library sessions. The support class was unable to access the library's CPT timetable before Week 3 as it was fully booked. The first three steps of the GI [Information search process](#) were conducted during class lessons.

A brief overview of the [programmed teaching and learning activities](#) is shown below. Todd and Hay's stage of process descriptions are shown in brackets.

#### Initiation [Open]

Students:

- explain and discuss the concept of *amazing* and how this could apply to animals
- brainstorm some favourite amazing animals.

#### Selection [Immerse]

Students:

- build their background knowledge of a range of animals by viewing video clips and browsing books and websites
- participate in an excursion to Taronga Zoo.

#### Exploration [Explore]

Students choose a favourite amazing animal and undertake deeper research about it.

#### Formulation [Identify]

Students:

- formulate focus question relating to why this animal is amazing
- formulate five related contributing questions.

#### Collection [Gather]

Students:

- research contributing questions during library lessons and in class time
- use their class notebooks for notetaking and then transfer keyword findings onto library iPads in library sessions
- individually complete surveys on *Survey monkey*.

#### Presentation [Create]

Students:

- model and draft responses to focus question

- analyse and sort through keyword findings for reasons why their particular animal is so amazing or special, not just regurgitating keywords, but providing valid justification about its special features, abilities or behaviours
- type their focus question response as a brief paragraph on a new page in iBook.

### Presentation [Share]

Students share iBook presentations by peer reviewing, using a [written review proforma](#).



Kye using the peer reviewing proforma

### Assessment [Evaluate]

Students individually complete survey on *Survey monkey*.

### Implementing the Guided Inquiry unit

In anticipation of the *Amazing wild animals* unit, Class 4/6A joined the Year 5 excursion to Taronga Park Zoo, in the final week of Term 1. Work in Weeks 1 and 2 of the following Term was classroom based and focused on the selection of an *amazing animal* by each student: building and sharing background knowledge through class discussions and joint viewing of YouTube clips. There was a wide range of animals chosen including the tapir, mountain goat, zebra and king cobra.

Focus and contributing questions about the animal of choice were decided on, through modelling, brainstorming and class discussion. Possible research questions were recorded on the interactive whiteboard (IWB) and then each question was discussed as a *good or not so good* option, before final questions were decided upon. This process of question development has since provided a valuable and practical learning scaffold and is now also used in social skills development, with respect to making personal decisions.

### Preparing the students

Students were prepared for work in

upcoming CPT sessions in the library by designing hard copies of their research question mind maps, which were to provide an overview of their GI research. Additionally, researched keyword answers to contributing questions were recorded in class note books, ready to be transferred and added to the library iPads during CPT sessions.

From Week 3 to Week 9, the class participated in several forty-five minute CPT sessions. Each student was allocated a certain library iPad. Using the [Book creator](#) app, the teacher librarian demonstrated how to set up individual research iBooks, which included a book cover, contents page, research question mind map (designed using the [Popplet](#) app), the notetaking pages and focus question response.

### Scaffolding with technology

The teacher librarian modelled notetaking skills (bullet points, keywords and referencing) and these were then consolidated in related class activities. A bulk loan of relevant nonfiction books was made available for use in the classroom. Using the class's small bank of computers, students also accessed relevant prescribed websites. Students recorded their keyword findings for each contributing question in their class workbooks and then transferred this work to the library iPads

during the library CPT sessions. *Survey monkey* was used at the *Collection* and *Assessment* stages to track students' progress during their Guided Inquiry journeys.

Each student was supported to create their own iBook. One student became the *go-to* man when others needed help to insert pictures and there was not enough skilled adult help available. The use of iPads and the iBook format were extremely motivating for these students who are such strong visual learners. The iPads are a relatively recent addition to classroom technology and until this unit, had mainly been used to practice academic skills through games or in down-time at the end of the day.

### Supporting learning

Story writing sessions in class were given over to research, using internet access and relevant photocopied sections of nonfiction texts. Students were supported individually as needed, to identify keywords by highlighting or underlining, then recording them in class notebooks. Videos were viewed and paused strategically; questions were asked and students were required to write down keywords and information again, from what they remembered. Initially, teacher modelling of these processes occurred on the IWB. This support was gradually withdrawn as

the unit progressed and the boys' understanding of the research process and independence developed.

During weekly time in the computer lab, students transferred their keyword information from their iBooks to PowerPoint presentations, which required them to organise the main ideas into full-sentenced, coherent paragraphs, answering each research question on a new screen with relevant illustrations inserted.

## Amazing Animals



Student work sample: Kye's iBook

### Extension of unit

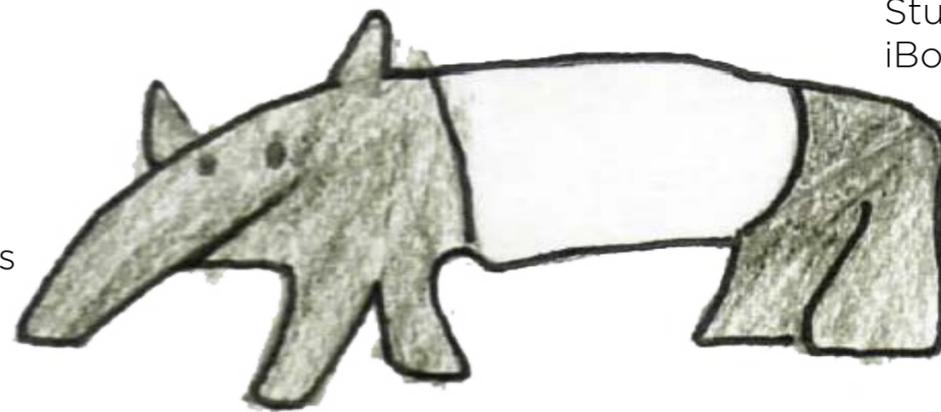
This unit of work took on a life of its own as spontaneous opportunities arose to extend students' experiences into previously unplanned creative endeavours, namely:

### Individual student audio interviews

These [impromptu interviews](#) with the teacher librarian were included as audio clips within the students' research iBooks (using the *Book creator* app) and were accompanied by a photo of the student. Questions included the students' reasons for choosing their particular animal, what they knew and understood about its appearance, diet, habitat etc. Students were so delighted and amazed to hear their own voices and were keen to replay and share their audio clips. These audio interviews also provided valuable, authentic evidence based data of the great depth of students' learning and understanding about their chosen animal.

### Animated audio recordings using Morfo

With the assistance of Mrs Sophie Nammour, the iPad coordinator, students used the [Morfo](#) app to present their research from the animal's own



perspective, without the use of written notes. This teaching and learning activity clearly demonstrated students' new understandings and knowledge about their chosen animal, as well as their engagement, ownership and pride in their research achievements.

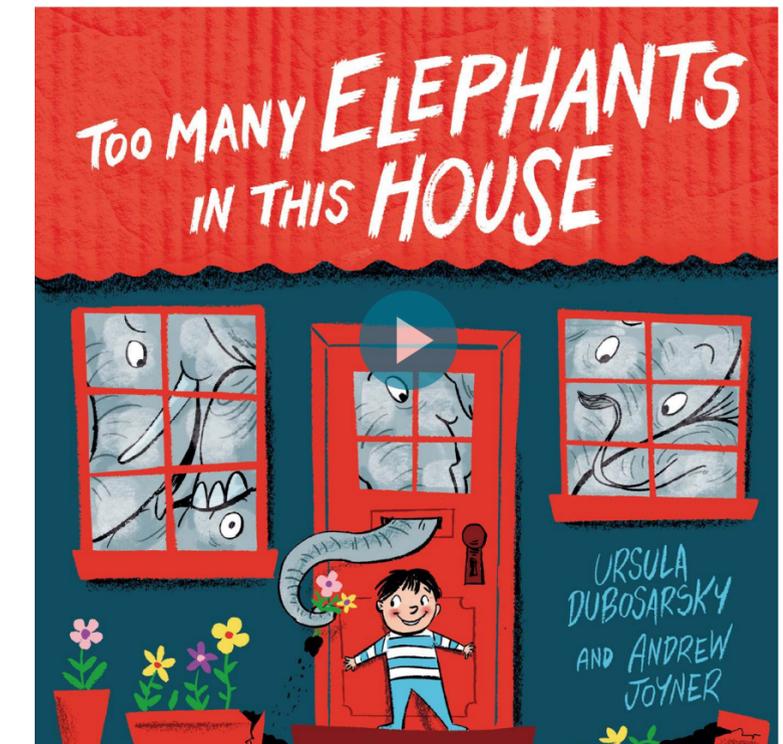


Kye's Morfo

### Oral presentations

Students projected their completed iBook onto the Library's IWB and displayed and read their final research findings to an appreciative audience comprising a senior mainstream class, parents and school principal.

### Creation of picture book texts



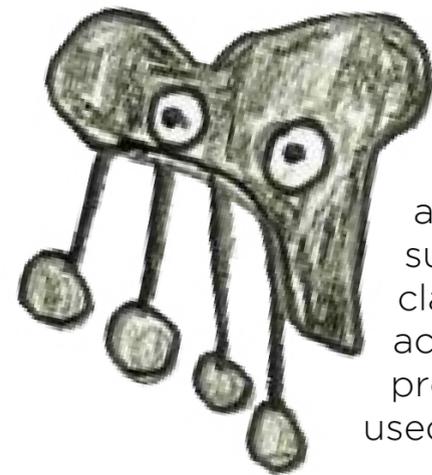
Ursula Dubosarsky reads her vibrant picture book

### Inspiration and engagement

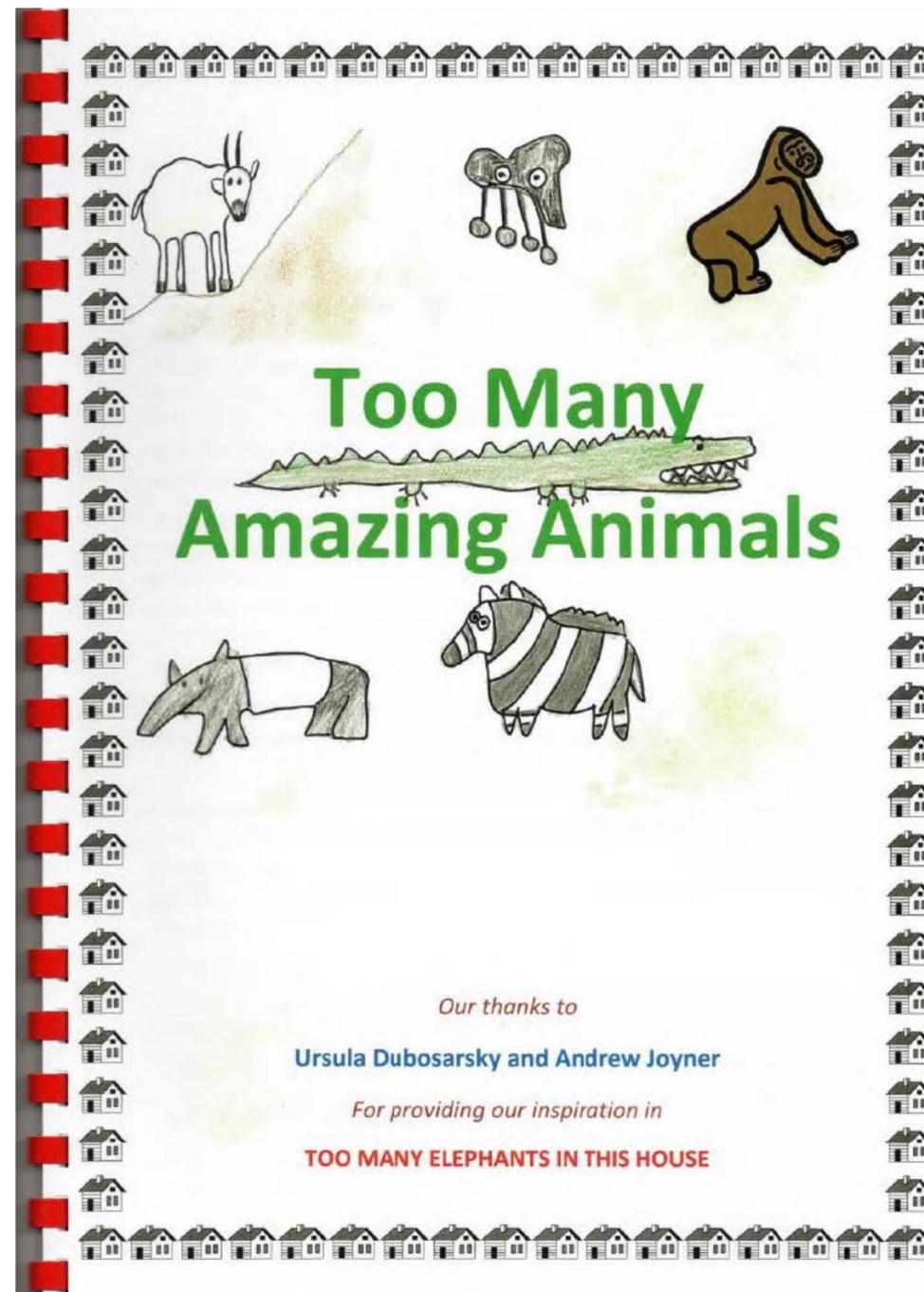
Ursula Dubosarsky's visit to the school during Book Week provided a valuable impetus for studying her picture book, *Too many elephants in this house*. This picture book became the model for each student to write a narrative about his amazing animal and the scenarios of having too many of them. Thinking creatively is extremely challenging for individuals with ASD. The boys readily adapted the story line by using their chosen amazing animal, their

own families and homes. They were enthusiastically involved in both the writing and illustration processes; receiving support only when needed. The boys' individual language styles and humorous experiences at home could be heard as their stories came together. Students clearly demonstrated their in-depth and expert knowledge of their animal's behaviour and appearance, in their text and their detailed hand drawn illustrations. Understanding of aspects of visual literacy were also demonstrated as students used vectors, facial and body expressions and animal body features, such as a crocodile's white underbelly, to add interest and meaning to their work. The results were truly inspirational. Students took great pride in reading their work to each other. The stories were compiled into a class book which was then colour photocopied and spiral bound. Copies were proudly gifted to each child's family. At the conclusion of Ursula's school visit, two students presented her with her own copy as a thank you gift. Ursula was also given a copy to pass onto illustrator Andrew Joyner.

### Transfer of skills into other aspects of classroom practice



Through collaboratively planning, implementing and evaluating this CPT unit, the support class teacher realised that GI terminology and notetaking strategies would successfully transfer to other classroom teaching and learning activities and that scaffolding provided in GI processes could be used to help students to:



4/6A class book of stories: *Too many amazing animals*

### Develop and increase understanding of texts when reading and viewing

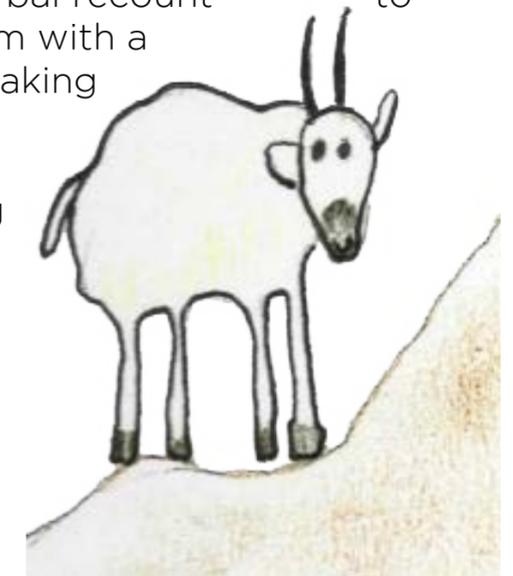
Identifying, marking and or writing keywords in texts, both read and viewed are now regular reading strategies within the classroom. Keywords give the students reference points for formulating answers to questions about the text, and provide the basic patterns of sentence structure to which they can add verbs, prepositions, articles and conjunctions.

### Develop and increase receptive language skills

During weekly news sessions, students record the keywords they hear as the other students speak. This supports remembering what has been said. Individuals with receptive language disabilities exhibit difficulty with organising and retaining what they hear due to processing delays. Writing keywords as they are heard provides the visual support needed to remember. Anxiety is consequently reduced.

### Develop and increase expressive language ability

Students now record keywords of their own main ideas before they give a verbal recount to the class. This provides them with a sequenced visual support, taking away the anxiety of having to remember the order of events while they are trying to organise sentences coherently in their heads as they speak.

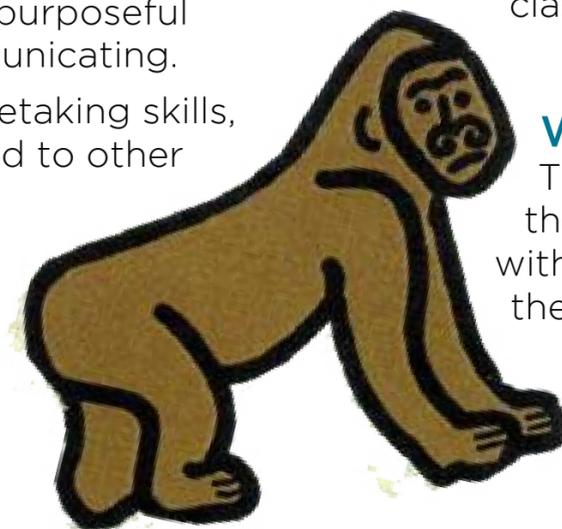


### Evidence of student outcomes

Throughout this exciting

GI Research unit, students' learning and self-esteem flourished in this well supported learning environment. Each student clearly demonstrated a wide range of learning outcomes including:

- Acquisition of a deep knowledge and understanding of their chosen animal. Students became experts about their animal. The evidence was clearly provided by students' non scripted audio interviews, *Morfo* recordings and [Survey monkey responses](#).
- Development of great pride in students' own work and that of their classmates. Students felt ownership of their work and were very supportive of each other and their achievements. There was a sense of communal learning and sharing amongst all of the students and teachers involved.
- Improved ability to work as a member of a team. The implementation of the unit fostered closer relationships between the teacher librarian, class teacher, ICT teacher and students. There was a most rewarding sense of pride and team effort.
- Improved speech development. This integrated class and library unit provided both a genuine motivation and relevant and purposeful avenue for talking and communicating.
- Development of valuable notetaking skills, which have since been applied to other class work.
- Development of iPad expertise including the layout and design of research iBooks, using *Book creator*, *Popplet* and *Morfo* apps.



**Kye working on peer reviewing exercise with the help of teacher librarian, Jenny Scheffers**

- Ability to integrate new knowledge and understanding of chosen animals into their own stories, based on Ursula Dubosarsky's text.
- Increased self confidence in presenting own work to classmates and an audience.

### Where to next?

The overwhelming success of this dynamic unit and the excitement of watching the students engage with learning certainly provide strong motivation for the teacher librarian and the support class teacher to plunge into future collaborative ventures. These will incorporate the further integration of iPads and additional apps. More exciting times and GI research journeys lay ahead.

### References and further reading

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