



SPEVI

South Pacific Educators
in Vision Impairment

Australia

SHINING THE LIGHT ON VISION EDUCATION

2017 CONFERENCE

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Seeing the World Through Their Eyes: Teaching Geography to Students who are Blind and Vision Impaired

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Rationale

- For a person who is blind or vision impaired the ability to gather information about the world around them and cognitively map out environments is an essential skill for effective and independent movement.
- Maps, models and tactile graphics can also provide blind and vision impaired people with knowledge and understanding about landforms, countries, and the world we live in.
- The new Australian Curriculum introduces the teaching and learning of Geography from the foundation year level.
- Children as young as five are expected to be able to recognise that places can be represented on maps and globes in pictorial forms.
- By year 3 students should be using maps to demonstrate an understanding of cartographic conventions such as scale, legend and north point.
- By year 6 students must be describing the absolute location of specific countries using latitude and longitude.



Key Things I Discovered...

- In order for a blind child to successfully access maps and other tactile graphics they need
- the ability to interpret spatial relations between objects, as well as the relationship between the child and surrounding objects
- and the ability to interpret the relationship between three-dimensional objects and their two-dimensional representations (Marek, 1997; Jaquiss, 2003).

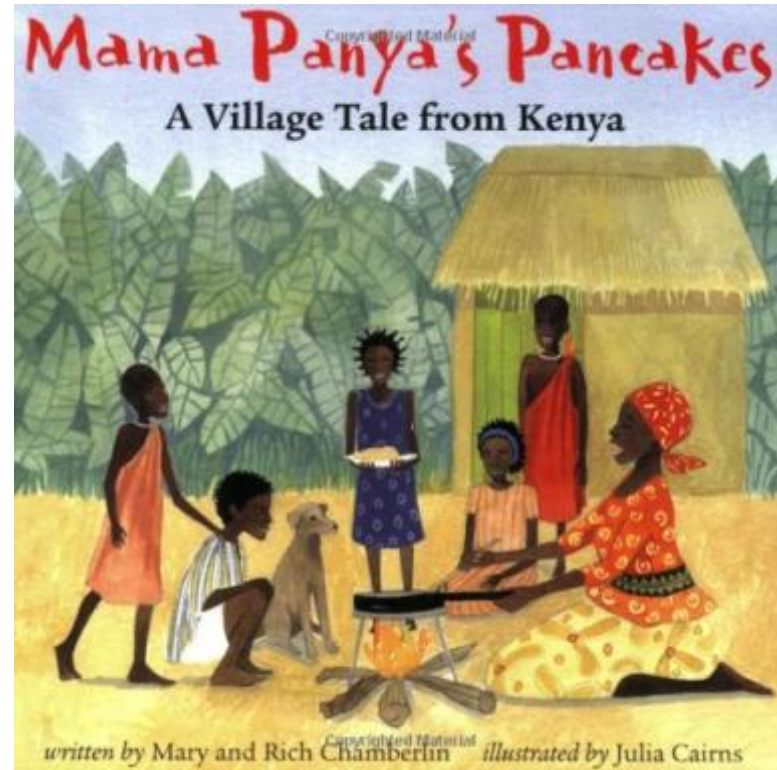


2014 Geography Program



2014 Terms 2 and 3

- Australian Curriculum
Geography - Africa and South America
- Essential skill building
- Integrated unit based upon a key text
- “Mama Panya’s Pancakes” by Mary and Rich Chamberlin





The 2D to 3D relationship

- Spent time exploring the relationship between 3D and 2D representations of the same object/thing
- One of the resources I used was the transofgraph which is one of the 'Hungry Fingers' resources created by Polish Professor Boguslaw Marek



First the students examined a real table.



I then asked them to draw the table using a raised line drawing kit. No suggestions or guidance was given. .



The students examined a model of a table.



And used the transfograph to feel a 2D relief of the model table.

This enabled students to feel with their fingers what one can see when one stands in front of a table.

The other two legs cannot be seen because they are exactly behind the front legs (Marek).



Students drew the table again.



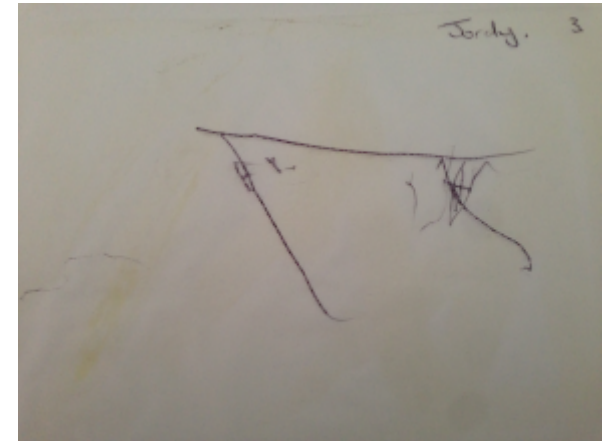
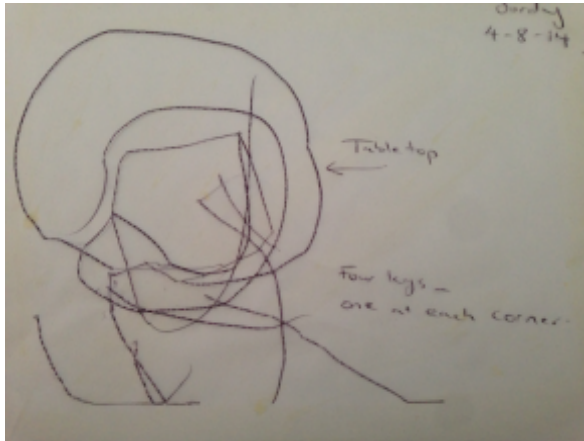
And then examined a 2D image of a table and made comparisons between the drawing and the relief in the transfograph.



Then drew the table one last time.



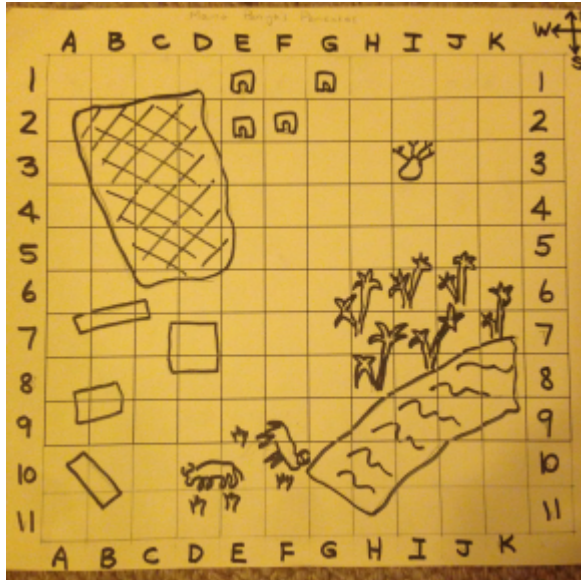
This shows the progress that one student made in just one session...



Mapping the Journey



Moving from 3-D to 2-D



Moving from 3-D to 2-D



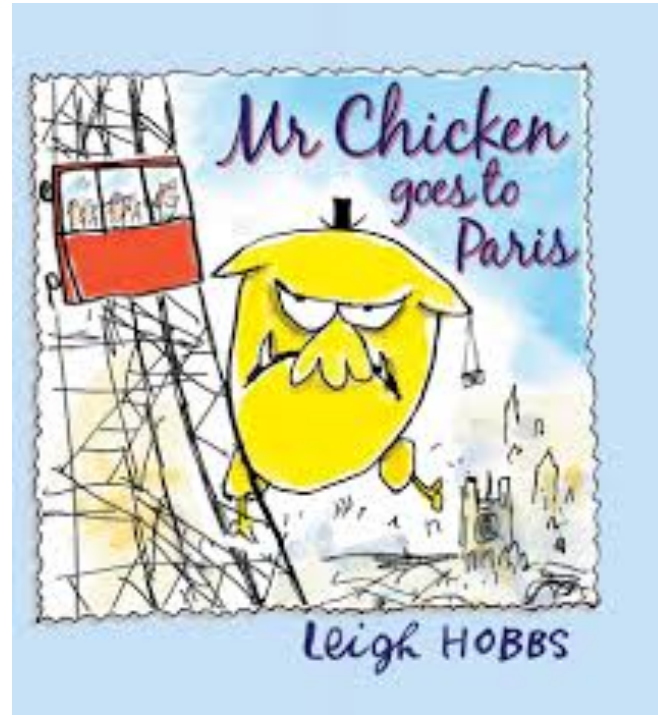
Extended map reading skills



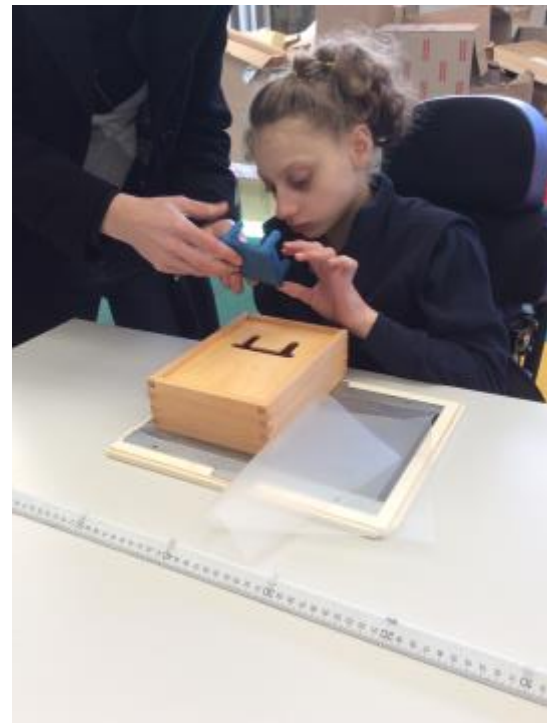
Extended map reading skills



Geography 2015 Program



Transfograph



Mapping the Journey



Extended mapping skills



So...what did I learn from this?

- It is vitally important for students to understand the relationship between 3-D, 2-D and 1-D
- Students need access to high quality tactile graphics in a range of mediums including collage, Thermoform, sterocopy or PIAF paper, tactile line drawings such as those created on the Tiger embosser
- Students need access to professionals (teachers, teacher aids and alternate print producers) who have an understanding of the importance of tactile graphics and how to best produce them
- Students benefit regular (daily) practice reading tactile graphics “if you don’t use it you lose it”
- It is important for students to create their own (meaningful) maps and tactile graphics beginning with familiar locations and moving towards the unfamiliar and abstract.
- Anecdotally it would appear as if this particular group of students are much more confident and willing to persevere with all types of tactile graphics as they have been exposed to key concepts and had the opportunity to explore and develop their own strategies for interpreting maps and tactile graphics



References

Chamberlin, M. & Chamberlin R. (2006). *Mama Panya's Pancakes*. Bath: Barefoot Books Ltd.

Hobbs, L. (2009). *Mr Chicken Goes to Paris*. Allen and Unwin.

Jaquiss, R. (2003). Books, Maps, and Other Touching Experiences. *The National Federation of the Blind Magazine for Parents and Teachers of Blind Children*. Vol. 22 (3).

Marek, B. (1997). *Before a blind child can read a map. First steps in tactile graphics*. ICEVI 10th World Conference, Sao Paulo, Brazil. August 3-8, 1997.

