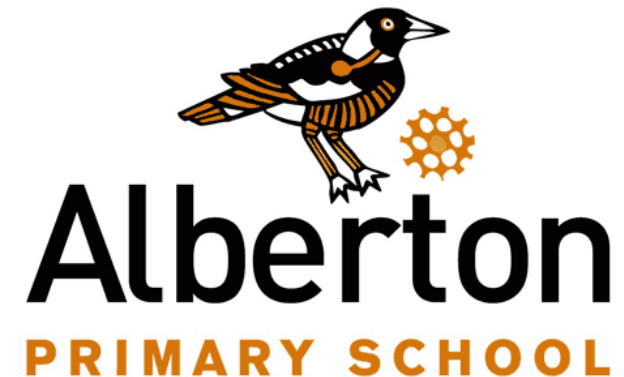


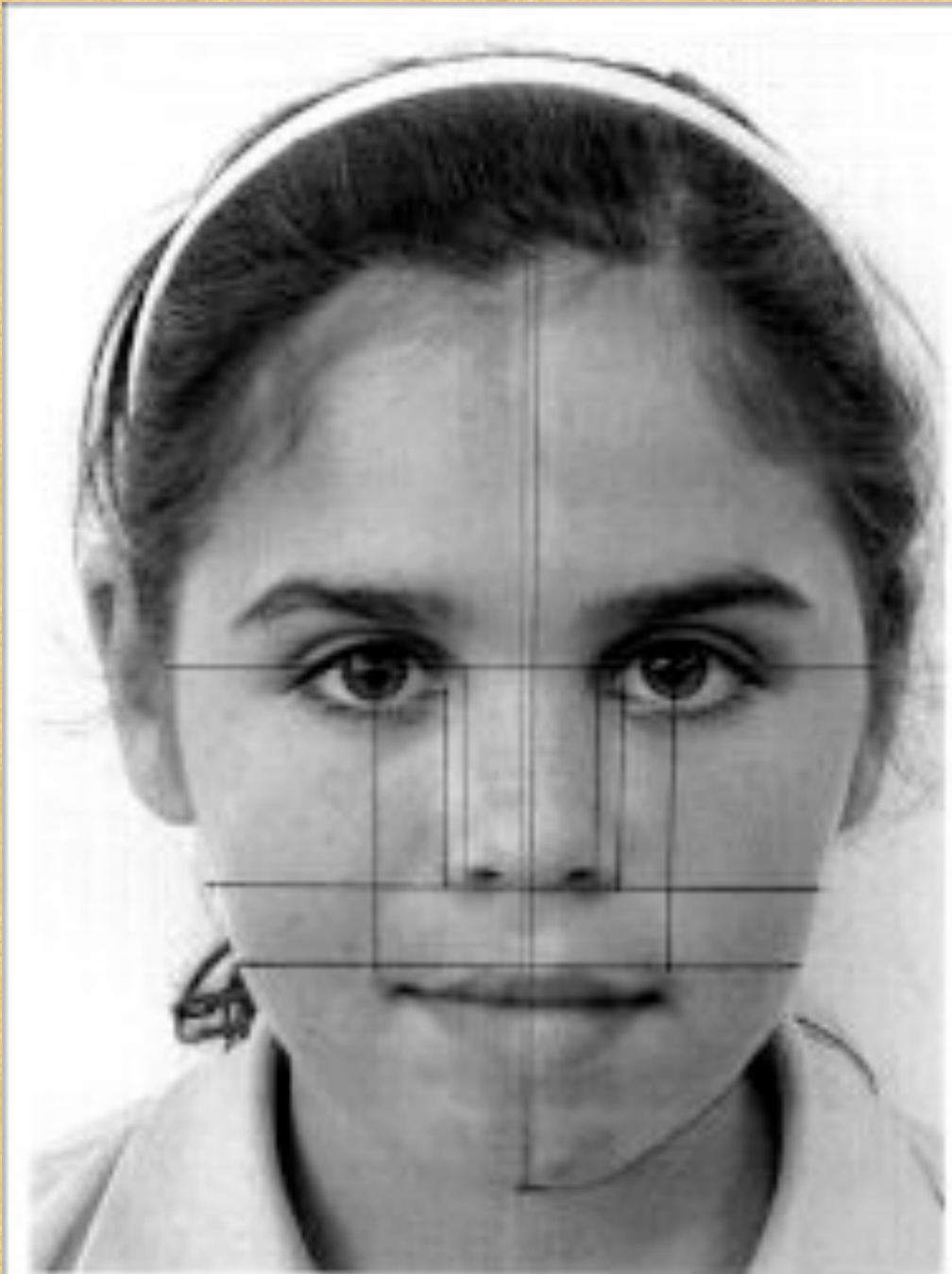
Alberton Primary

Alberton Cluster South Australia



Ocean View College
B - 12 College | Taperoo, South Australia





Much of the present teaching of mathematics, particularly in the primary years, has Aboriginal students doing mathematics that is not related to their world and their everyday experiences. As a result, by the time many Aboriginal students have reached the latter years of primary school they have been alienated from mathematics.

Matthews, Howard & Perry, 2003



Make it Count Aims

Document and share effective models of teacher professional development, whole school change and community engagement in relation to mathematics and numeracy.

Develop whole school approaches to mathematics and numeracy that result in markedly improved achievement by Indigenous students.

Build and participate in networks and professional learning communities and act as catalyst and support for action by others.

Make It Count Clusters across Australia

- **Eight diverse Clusters of schools in urban and regional areas of five states, with a Key School in each Cluster**
- **An average of 100 Indigenous students in each Cluster**
- **Each Cluster has a different focus for Make it Count and is working with a critical friend to link research and practice.**
- **Steve Thornton from Charles Darwin University is the Alberton Clusters critical friend**

Make it Count Clusters

- 1. Culunga, WA
- 2. Alberton, SA
- 3. Noarlunga, SA
- 4. Healesville, Vic.
- 5. Orange, NSW
- 6. Dharug, NSW
- 7. Nerang, Qld
- 8. Gladstone, Qld





The Alberton cluster question

What is the role of
mathematisation and
contextualisation in
developing
mathematical
resilience and
promoting transfer of
learning among
Indigenous students?

The Alberton model

- The integrated, cross-age literacy and numeracy model, middle primary and upper primary groupings (3-7)
- Student choice and voice
- Collaborative planning amongst the team
- Looking for a way of understanding and talking about what we are doing
- Links with critical friend Steve Thornton
- Development of Mathematical Resilience

Most Significant Changes

teaching and learning
through passions and
expertise

Student choice and voice

Linking research and
practice

Risk taking

Positive attitudes

Shared practice

Increased engagement

Development of
mathematical resilience

2009-2011

teaching and planning in
isolation

Scripted teaching

Teacher directed

Little progress

No connections

Little to no planning

Fear and avoidance

'Maths Sucks'

Pre 2009



Bridge Design



Right angles

Measurement

Vertical

Symmetry

Angles

Lines

Maths in
Bridge Design

Shapes

Horizontal

Diagonal

Perpendicular

Parallel Lines



Enterprise Mother's Day Stall



Profit and loss

Reading a receipt

Graphing

Calculating
change

Advertising

Enterprise
Mother's Day Stall

Surveying

Adding
money

Counting
money

Measuring

Calendar/timelines

Rosters

Moving from 'I can't to I can' before Make it Count


Looked like:	Sounded like:	Felt like:
<p>Head on the desk, book on the floor</p> <p>Tears</p> <p>Sometimes removing self from group</p> <p>Refusal to participate in certain tasks</p> <p>Face in hands</p> <p>Crawling into a corner</p> <p>Only chose to learn with the teacher</p>	<p>" I need help" before beginning or even sitting down</p> <p>"I need to go to the toilet"</p> <p>"I can't do this"</p> <p>"I don't know what to do"</p> <p>*crying</p>	<p>No risk taking</p> <p>Safe zone</p> <p>Confused</p> <p>Low resilience</p> <p>Fear of making a mistake</p> <p>Giving up before beginning</p> <p>Avoidance</p> <p>Did not enjoy learning</p>





Recent observations

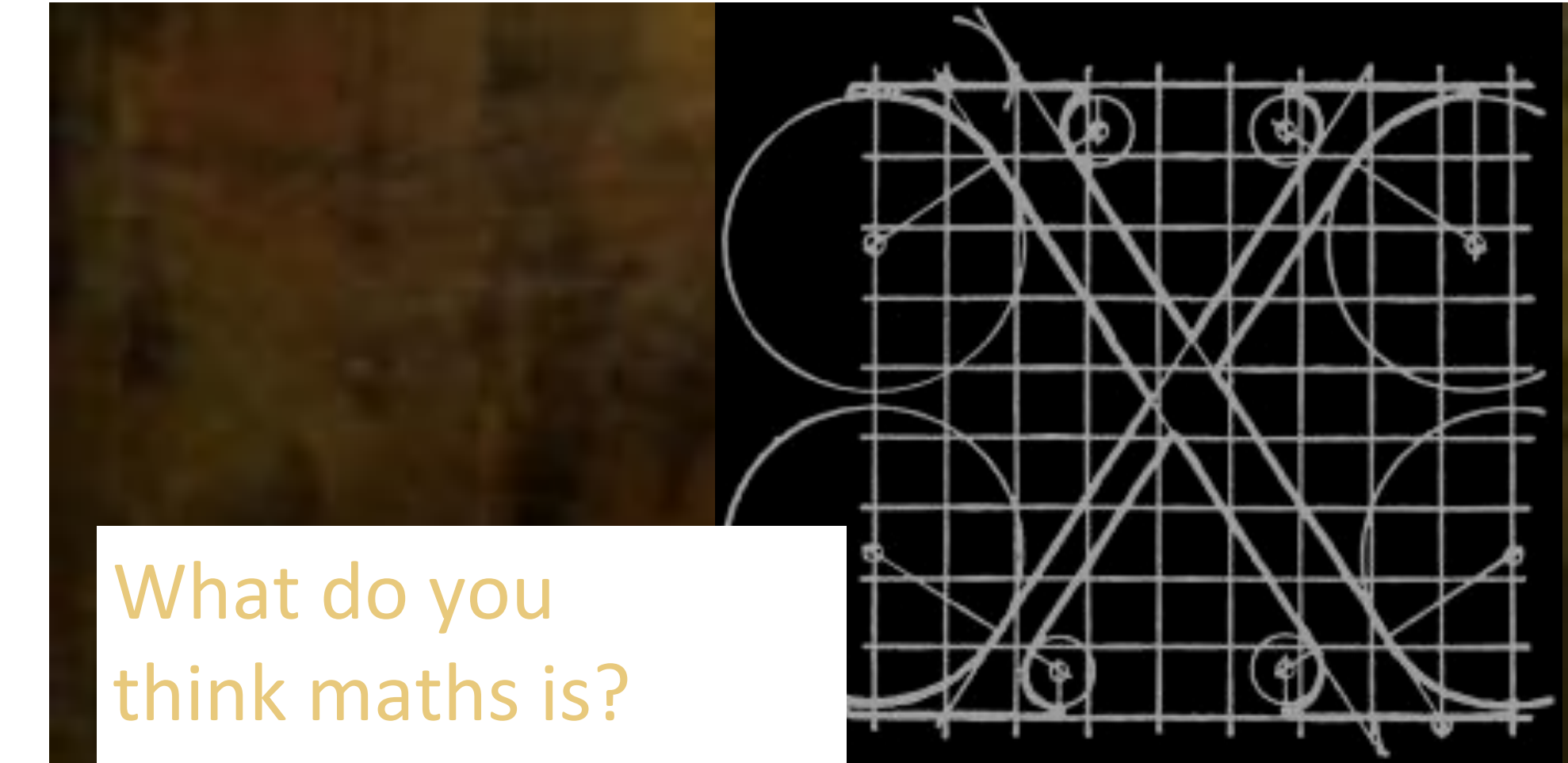


Looks like:	Sounds like:	Feels like:
<ul style="list-style-type: none"> • Sitting up • Focused on learning • Smiling, happy • Excited • Participating • Learning in a variety of ways: independently, collaboratively (group or partner), with the teacher • Laughing 	<ul style="list-style-type: none"> • “ Don’t help me yet, I want to try by myself” • “Hey Laura, I didn’t go to the toilet at all today. I’m getting good at that aren’t I!” • “What are we learning about today” before Numeracy time begins • “Come and look what I did” • “Can I share this with Mr. Plastow or Vicki” • Talking about her learning with the teacher and other students 	<ul style="list-style-type: none"> • Risk taking • Having a go • Proud • Excited • Eager to learn • Enjoys learning 

Numeracy
through

Arts

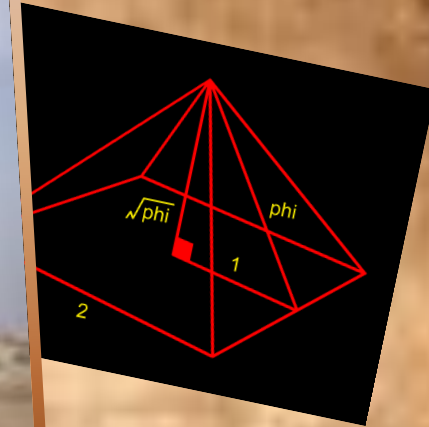




What do you
think maths is?

“Involving numbers”

Janaye

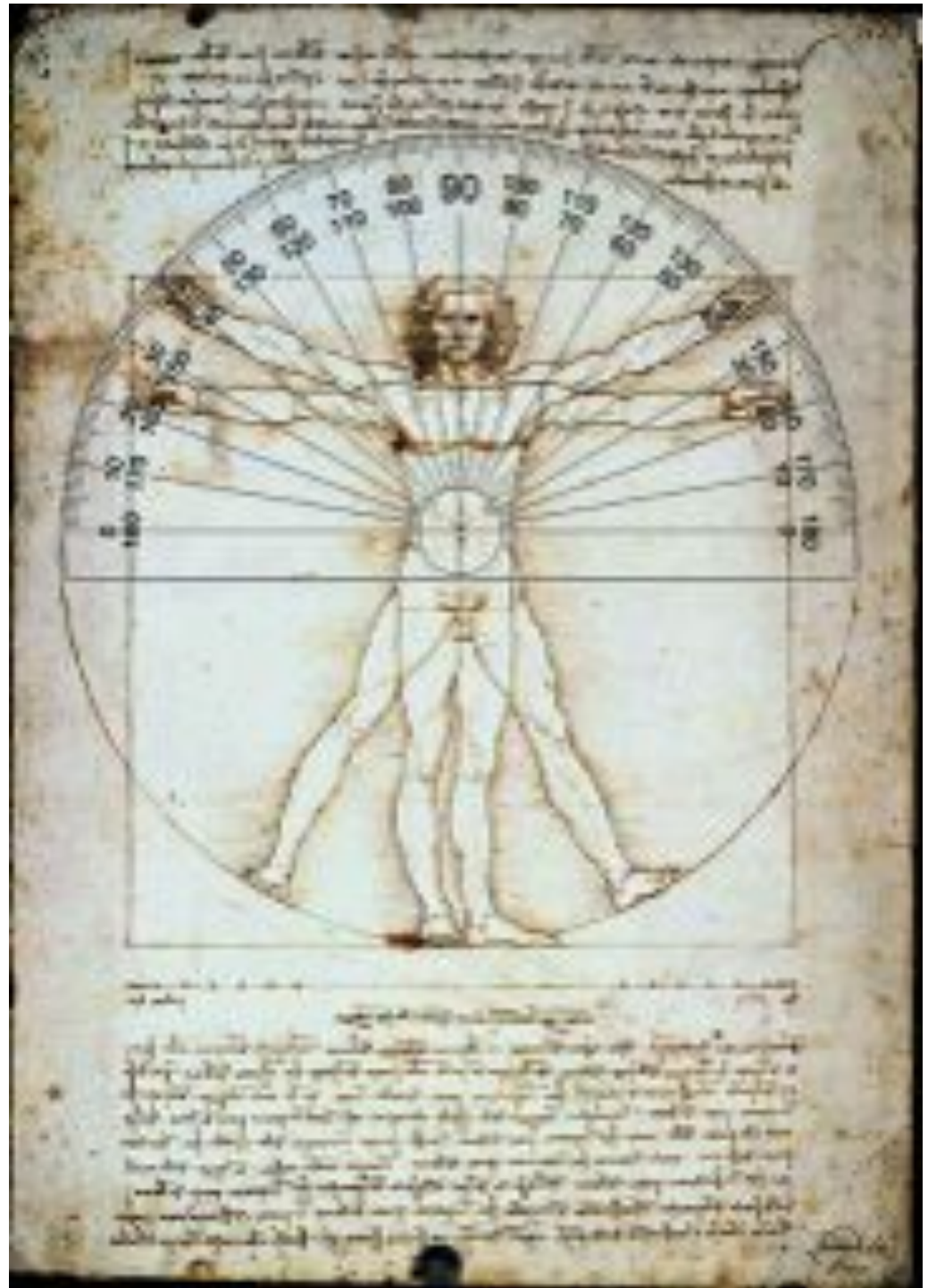


What do you think Numeracy is?
“Shapes, plus, take and times tables”

Janaye

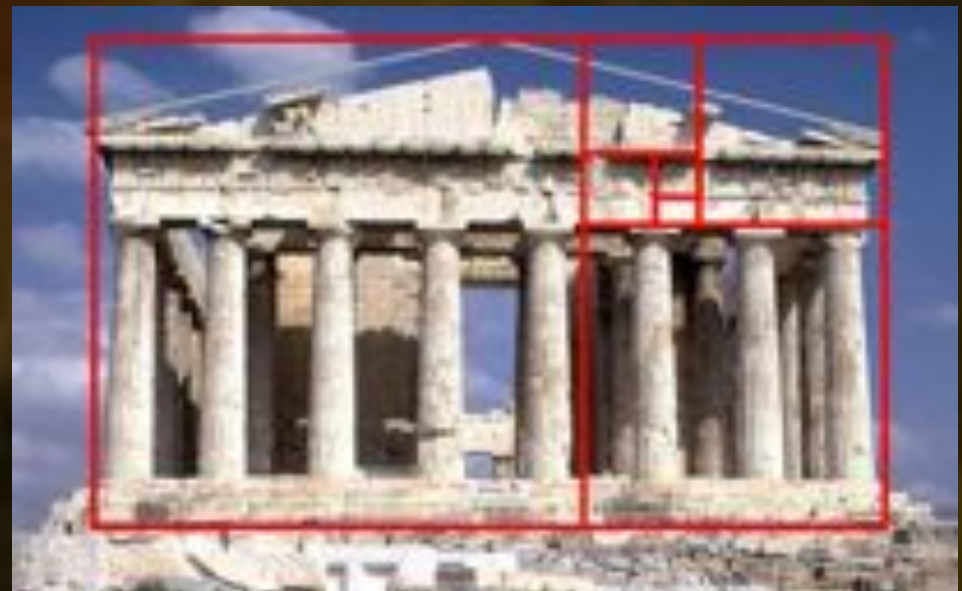
“Maths is things like measuring, adding, take away, times, shapes and other stuff. Learning how to do those things”

Janaye

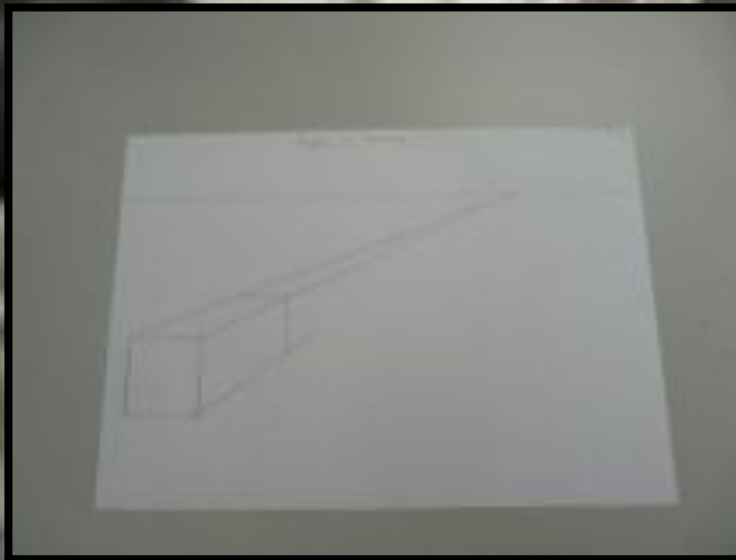


“Numeracy is using maths, so like using measuring when you do cooking and if you were building, you need to be able to add and measure and we have done lots of art where we have used maths like measuring, times tables, adding , odd and even numbers, patterns”.

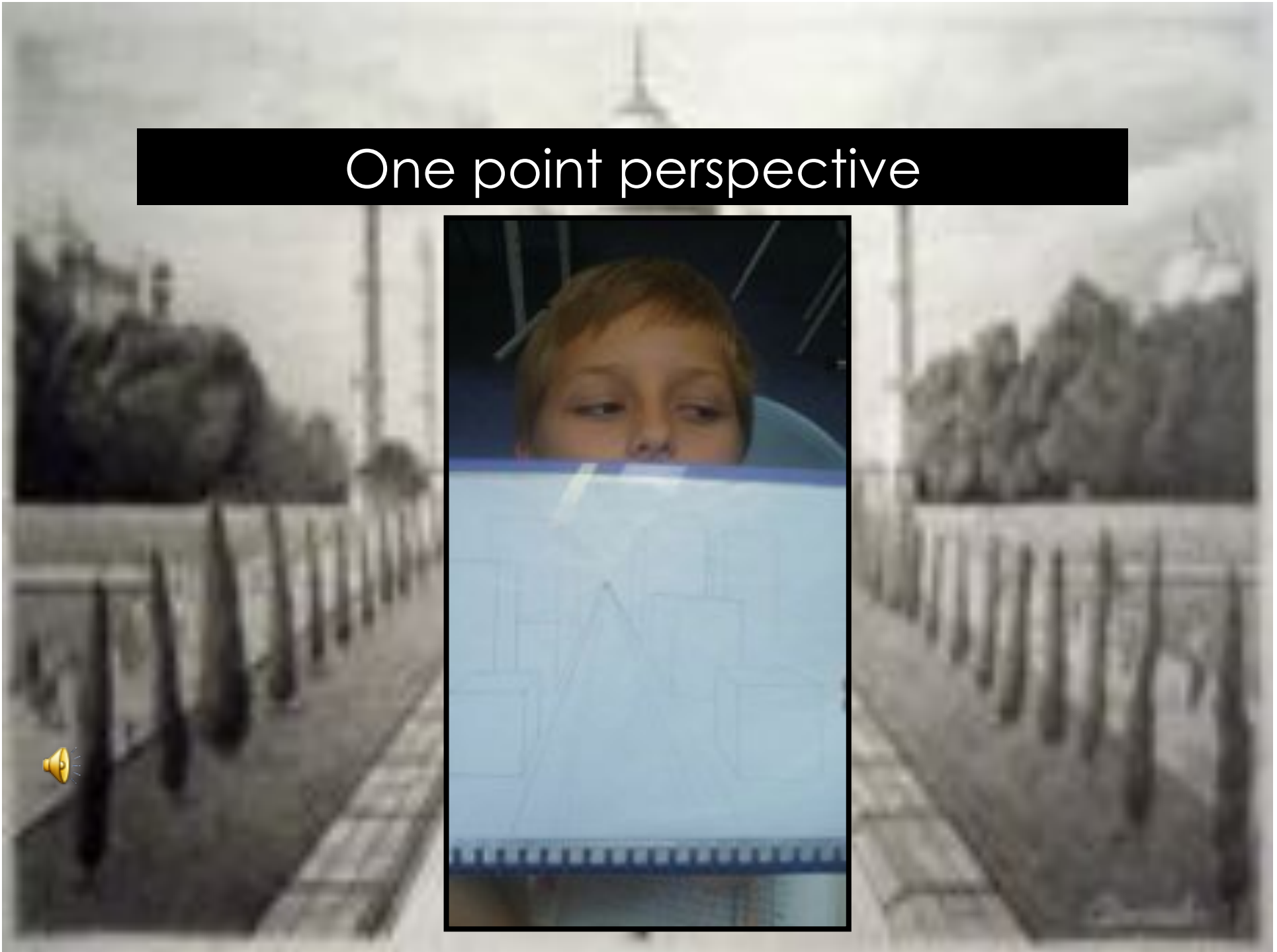
Janaye



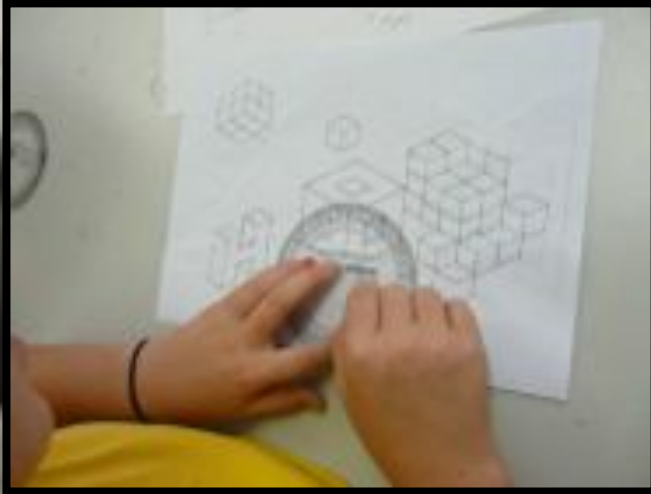
Perspective Drawing



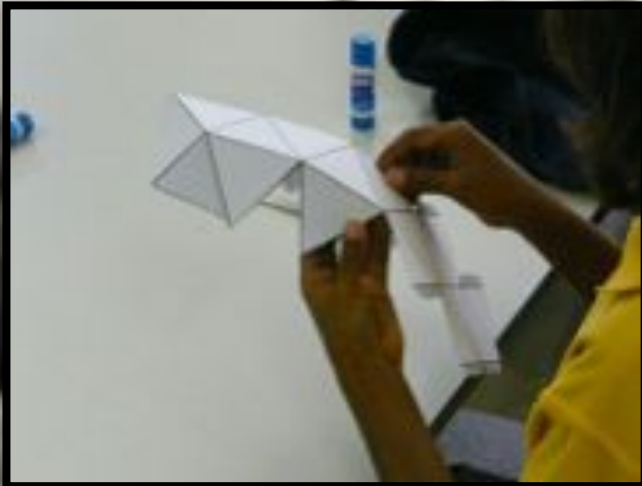
One point perspective



Isometric Drawing



3D Sculptures



Mathematics 1.1 Item (1-2-2011) Version 1
 Published 02/06/2011, Revised 07/2011

Assessment	Assessment
0	The student does not use the correct description for any of the descriptions listed. None correct. No drawing.
1-3	Correct not used. Faces, Edges, Vertices names not used. No face description. Some faces or some edges. Face name correct. Faces, Edges, Vertices names not used. No face description. Only 1 or 2 parameters.
4-7	Some faces correctly constructed. Some of faces, Edges, Vertices names not used. Face description includes 1/3 of the criteria. Edge/face/vertices names not included. Only 1, 2 or 3 parameters used. Correct used.
8-9	Most accurate construction. Most of the faces, Edges, Vertices names not used. Face description includes 2/3 of the criteria. An attempt to name angles for the sculpture is to name and describe.
10	Significant effort in attempts at a full construction with correct used. Accuracy constructed. All faces, Edges, Vertices constructed. Face description includes 3/4 of the criteria. Sculpture appears to be stable and reasonable when correctly used. Attempt to name angles used.
11	Most accurate construction which has been fully named. Some faces, Edges, Vertices used, general comment, face name and name of sculpture. Minimum of 30 faces, 70 edges and 100 vertices. All criteria are correctly constructed. Accuracy constructed. Use of colours. Sculpture is stable and reasonable. Face used. Face used. Face used. Attempt to name angles used.



Abstract Sculptures



Art exhibition



The Leroy Story



This is Leroy.



Leroy starts the lesson with the premise that everything will be OK. He is organised and he is ready to begin.



He knows where to find the information...



...however he has trouble accessing the information he needs.



At the beginning of the year, Leroy found it difficult to work independently.



When the teacher was helping other students, he found it hard to engage.



Leroy has discovered that he can use other people to gain information, through observation and deeper questioning.

Leroy is still learning, but he is 'doing' rather than just 'waiting'.





Make it Count has supported us in teaching and learning Maths with new eyes!