Welcome

And

Introduction
small beginnings

A conversation around sustainability

with someone who had

An appreciation of the New Zealand curriculum

lead to

A CSR initiative by Sinclair Knight Merz (SKM)

centered around

A determination to produce a high quality teaching and learning resource
Task One

What is your current understanding of sustainability?

Independently, write your personal definition or understanding of the term *Sustainability and give an example of this* using the “define map” provided.

When complete, compile in the centre of your table for collection and sorting.
The concept of **sustainability**

The New Zealand Curriculum is designed to ensure that all young New Zealanders are equipped with the knowledge, competencies, and values they will need to be successful citizens in the 21st century.

Their learning is intended to contribute to the realisation of a vision of young people who will be **confident**, **connected**, **actively involved**, **lifelong learners**.

A key element is a future-focus on sustainability. In the words of Helen Clark:

“An understanding of the practices of sustainability is necessary for students if they are to become globally responsible citizens”. 
Sustainability quotes

New Zealand’s future is dependent on long-term sustainable strategies for our economy, society, environment, culture and way of life. Education is critically important here. It can give the leaders of tomorrow the knowledge they need to operate in a world rapidly running out of resources and facing the challenges of climate change. Through teaching and learning, research, knowledge-transfer and innovation, it can add value to primary production, help manage pressure on natural resources, and help manage and restore our indigenous ecosystems and biodiversity. It can help support all students to develop the skills and knowledge needed to balance the pressures that economic and social progress place on our environment and natural resources.

A collaboration

1. International consultants SKM
2. HOT (Hooked on Thinking)
3. ENPS
So what is sustainability?
The Brundtland Commission (1983) defined Sustainable Development as *meeting our current needs without compromising the needs of future generations.*

A moderate and more broadly held view would be that *we are seeking to sustain human existence (and improve human quality of life), without compromising acceptable standards of living for all the world’s inhabitants, which depends on the products and services of healthy ecosystems and a vibrant economy.*
What is Economic Sustainability?

- We should recognise that most of our choices are confined within economic constraints.
- Some say it is *economic growth that simultaneously improves our quality of life and the environment*.
- Corporate Social Responsibility.

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**Chocolate maker commits to Fairtrade standards**

Cadbury New Zealand is aiming to have its Dairy Milk chocolate brand sold under the Fairtrade logo by next Easter, the confectionery company said yesterday.

Cadbury has made an international commitment to Fairtrade, which secures fair minimum prices for farmers of products such as coffee and chocolate in the developing world.

Certification and labelling allow buyers to recognise and choose products that meet international Fairtrade standards.

In March, Cadbury in Britain announced plans for all Dairy Milk in Britain and Ireland to be sold under the Fairtrade logo by the end of 2000 summer.

Fairtrade executive director Steve Knapp said Cadbury’s commitment would open up new opportunities for cocoa farmers in our corner of the world.

Cadbury New Zealand’s managing director, Matthew Oldham, said the change would come with no extra cost to buyers and no change to the chocolate.

Early this month, the New Zealand company bowed to public pressure to get rid of palm oil from its chocolate. — NZPA
What is Economic Sustainability cont’d?

- Triple Bottom Line (measuring the success of your business by considering its economic, environmental/ecological and social impacts)
What is Economic Sustainability cont’d?

- Reducing use of natural resources
- Recycling & re-use: “Cradle-to-cradle” design
What is Environmental Sustainability?

- The ability to maintain the qualities that are valued in the physical environment
What is Environmental Sustainability cont’d?

- Most people want to sustain (maintain):
  - the capability of the natural environment to maintain the living conditions for people and other species
  - the aspects of the environment that produce renewable resources such as water, timber, fish, solar energy
  - the livability and beauty of the environment
What is Social Sustainability?

- Meets basic needs for food, shelter, education, work, income and safe living and working conditions
- Is equitable, ensuring that the benefits of development are distributed fairly across society
- Maintains or enhances the physical, mental, and social wellbeing of the population
- Promotes education, creativity and the development of human potential for the whole population
What is Social Sustainability?

- Preserves our cultural and biological heritage, thus strengthening our sense of connectedness to our history and environment
- Promotes conviviality, with people living together harmoniously and in mutual support of each other
- Is democratic, promoting citizen participation and involvement
Dots on Venn Diagram (Task Two)

Re-examine your own definition.

Was it a mixture of all 3 or heavily weighted towards one or possibly two understandings
Backtracking to SOLO
(Structure of Observed and Learned Outcomes. Biggs & Collis 1982)

Task Two

- Assess your initial definition of *Sustainability* using SOLO taxonomy
- Pair up with a colleague/colleagues
- Rewrite a shared definition or understanding of the term - *Sustainability*
- Compare the new version with your initial versions
- Measure growth of personal learning outcomes against SOLO
WHAT? The initiative

✓ to collaboratively write
✓ multi-level
✓ cross-curricular
✓ integrated unit of work
✓ on the topic of ‘Sustainability’
✓ trial implementation
✓ revised based on feedback
✓ then made freely available to any school
✓ to support student learning.
This resource addresses the following:

- Every Learning Area
- Multi Level
- Values
- Achievement Objectives
- Learning Intentions
- Key Competencies
- Learning Experiences
This resource also includes the following:

- Integration Suggestions
- Subsidiary Questions
- What If Questions
- Driving Question
- Print Resources
- Thinking Strategies
- Assessment for Learning
This HOT Differentiated Curriculum model keeps in mind the need for:

- best practice – UBD informed
- differentiated learning outcomes coded to SOLO Taxonomy (more about this later)
- an inquiry approach
- enhancing and supporting students “learning to learn”, and
- key concept understanding.
Why use this resource? Because it:

- is consistent with all eight principles articulated in the Curriculum
- embraces cultural diversity
- offers a coherent learning experience across all learning areas
- is inclusive and future focussed, and
- exemplifies the intent in the NZ Curriculum for school based curricula.
How can it be used?

- Teachers can use this as a fully integrated unit. It can be copied and teachers can highlight the Achievement Objectives/Learning Intentions/Learning Experiences/Assessment that they are going to use with their students. This unit has been written to cover one term’s work but has the depth and breadth to sustain for a much longer period of time or

- Teachers may choose to investigate the concept of Sustainability through one curriculum learning area only.
So what’s happened student learning-wise?

- Learning in sustainability beyond the classroom – DOT days, waste audit, cultural festival
- Sustainability features in student behaviour changes
- Wide variety of learning experiences with a sustainability twist
- Common experiences across teams
So what’s happened student learning-wise?

1. Watch the video -
2. Work with a partner and discuss where these boys learning is in relation to SOLO – justify your thinking
3. Have they met the LI?

Link to Video
So what’s happened teacher learning-wise?

A word from Innes, Team Lead, Year 6
So what’s happened teacher learning-wise (a recap)?

- Improved quality of planning
- School-wide collaboration on a common topic
- Opportunities for leadership
- Big take-up of SOLO in multiple learning areas
- Changes in teacher behaviour
- Improved environment
So what’s happened – Year 6?

<table>
<thead>
<tr>
<th>Learning Area</th>
<th>Env</th>
<th>Soc/Cult</th>
<th>Eco</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science – protecting our marine environment</td>
<td>❖</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art - marine environment theme</td>
<td>❖</td>
<td>❖</td>
<td></td>
</tr>
<tr>
<td>English – persuasive writing (oral presentations &amp; creative publishing)</td>
<td>❖</td>
<td>❖</td>
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<tr>
<td>Social studies – puppets sustaining culture through lost art forms</td>
<td>❖</td>
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<td></td>
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<tr>
<td>Te Reo Maori – sustaining culture through language</td>
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<td>❖</td>
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</tr>
</tbody>
</table>
## So what’s happened – Year 4?

<table>
<thead>
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<th>Learning Area</th>
<th>Env</th>
<th>Soc/Cult</th>
<th>Eco</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science – Decomposition (compost/worm farming)</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Social Studies – Where does it come from? (home grown / imported / organic)</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>English – Persuasive writing (support for action projects, letters, advertising, oral presentations etc)</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Social studies – What is rubbish/recycling?</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Action Projects – Recycling cell phones, planting fruit trees, re-establishing hedgehog visitors</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Te Reo Maori – sustaining culture through language</td>
<td></td>
<td>✗</td>
<td></td>
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</tbody>
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So what’s happened – Year 2?

<table>
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<th>Learning Area</th>
<th>Env</th>
<th>Soc/Cult</th>
<th>Eco</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science/Social Studies – Reducing, reusing, recycling</td>
<td>✗</td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Science – Night, day, shadows (conservation of planet, needs of plants, growth &amp; nitrogen cycles, ozone layer)</td>
<td>✗</td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Art - Sustainability through Art</td>
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<td>✗</td>
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<tr>
<td>Performance Arts – Sustaining culture</td>
<td></td>
<td></td>
<td>✗</td>
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<tr>
<td>Social studies – Conserving our traditional tales and rhymes</td>
<td></td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Te Reo Maori – sustaining culture through language</td>
<td></td>
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<td>✗</td>
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</tbody>
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So what’s happened? - Spreading the news:

- Auckland Regional Transport Authority
- Tread Lightly Caravan
- AP/DP Principals Forum
- Friends of the Whau
- Principals Group - Rotorua
So what’s happened? Cont’d (using SmartBoards)

SmartBoards to introduce topic

Brainstorming

Live feed

Exemplars
Authentic collaboration offered:

- engagement of the wider community
- a professional development opportunity, and
- deep understanding of the NZ Curriculum.
Blank slide - if time permits

1. Form into groups of 3
2. Collaboratively select one learning area from the resource
3. Examine contexts for study, learning intentions, big ideas and driving questions
4. Develop a learning experience aligned with existing learning experiences in the resource e.g. Social Studies – *chaos at the gate: looking at car pooling*, the Arts – *designing musical instruments from recycled materials to play student-made composition*
5. Must be differentiated using SOLO
A Take-Away For You