Technology   Unit Plan: Term 3 2010

Context for Learning: Reducing Rubbish at School	**Class:** year 2/3
Curriculum Area: Technology	**Duration:** 5-6 weeks

Achievement Objectives:

Students will:

Planning for practice
- Outline a general plan to support the development of an outcome, identifying appropriate steps and resources.

Brief development
- Describe the outcome they are developing and identify the attributes it should have, taking account of the need or opportunity and the resources available.

Outcome development and evaluation
- Investigate a context to communicate potential outcomes. Evaluate these against attributes; select and develop an outcome in keeping with the identified attributes.

Students will:

Technological modelling
- Understand that functional models are used to represent reality and test design concepts and that prototypes are used to test technological outcomes.

Characteristics of technological outcomes
- Understand that technological outcomes are products or systems developed by people and have a physical nature and a functional nature.

Global Learning Intentions:
WALT plan, design and make a lunchbox.

Diagnostic assessment (to find out what students know):
Go for a walk around the school and listen to children's discussion to find out what they understand about the effects of rubbish.

Key Competencies:	**Assessment tasks**
thinking using language, symbols, and texts managing self relating to others participating and contributing	**Level one –** produce an outcome in keeping with identified attributes **TP (The final design)** **Level two -** produce and outcome in keeping with identified attributes evaluated by a peer **TP (The final design)**

Provision for diversity: **Children with special needs** Names:	**Children with Special abilities** Names:	**ESOL** Names:

Cross curricula integration
<u>Technology</u>   Social sciences   <u>**Science**</u>   Mathematics and statistics   Learning languages   <u>**Health**</u> and physical education   The arts   <u>**English**</u>

Maori - Te reo –

Area	Learning Intention *I am learning …*	Success Criteria *I have achieved when I am able to…*	Teaching and Learning Experiences	Exemplars to be used
Oral language - output	To talk about and record what rubbish I see in the playground	• Discuss what kind of rubbish I see around the school • Draw or write down the types of rubbish I see	Go for a walk around the school - what kind of rubbish do you see? Back in the classroom brainstorm	**Use technology design booklet to help guide the process** Photos taken of the rubbish around the school *Brief Problem Poster in teacher pack*
Statistics – graphing	To categorize rubbish we found in the playground into recyclable parts.	• All the rubbish is in the correct category	What is recyclable? Mimio – have virtual rubbish bins set up with photos of the rubbish we found. Alternatively have it printed out for each table to glue around each recycling bin. (oral language game)	Recycling category labels - http://www.sparklebox2.co.uk/121-125/s2b123.html Recycling Category oral language game – http://www.sparklebox.co.uk/1296-1300/sb1297.html Mission impossible Recycling – promote discussion on why they went into the different bins http://www.youtube.com/watch?v=bnUuUYziNmM&feature=related
Characteristics of Technology **NoT** Science – Material World	What is eco friendly and what is bad for the environment?	• Place rubbish on a good to bad scale • Write or tell a buddy why it is placed there	Have children save rubbish from their lunch and in groups bury their packaging and peg it so you know where it is buried. Make predictions* about what will happen. Predictions can be made on a large line scale on the classroom floor and copied into brief.	pepper pig – recycling story http://www.youtube.com/watch?v=ll1RX6_h9Xc&feature=related *teaching point – scientists make predictions and ask questions about things in their world
Characteristics of technology outcomes **NoT**	To write about what packaging we have in our lunch box and why	• Use cause and effect words • Use adjectives to describe the material.	Get the children to open up their lunch box and using the sentence starters in their brief write about what they have and why it is used. Note: encourage them to use the words *because* or *so* in order to justify why that packing is used. Model this using mimio document found in transfers or alternatively on a large piece on paper	Read Connected 3, 2001 "The Perfect Packagaing" Example or sentence starter for teachers I have plastic in my lunchbox. It is used *to wrap my sandwiches*. It is **stretchy and clear *so* it can keep the sandwiches tight.**
Characteristics of technology **NoT** Social Sciences	Critically think about and discuss the type of packaging we have in our lunch boxes	• I can talk about how packaging has changed how people do things • Identify why I placed things here	Start Session with discussion about how lunch packaging has changed over time. Use the Venn diagram outline in the brief to categorize discussion into old, new and same	* Bring in paper bag, recycled shopping bag and plastic supermarket bag. *Photos in teacher pack*

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Characteristics of technology **NoT** Health	Critically think about and discuss the type of packaging we have in our lunch boxes	• Evaluate which foods are more eco friendly to bring to school in relation to the packaging.	Looking at the sentences from brief explanation. Analyse which types of food come pre packaged from the supermarket and which need wrapping from home. Leading into healthier food needs less packaging.	
Technological products **TK**	Indentify what we can use instead of gladwrap and tinfoil	• Identify materials that technological products are made of	View different lunch boxes and ways of packaging, why have they made a lunchbox with compartments? What about the size of the compartments. What is reusable that we have at home? Introduce the 3R's Reduce reuse and recycle	Interactive website on the properties of different materials http://www.bbc.co.uk/schools/ks2bitesize/science/materials/characteristic_materials/play.shtml
Technological products **TK** and Literacy- labelling	Label the different parts of a lunchbox that make it do the job (*fit for purpose*)	• Identify the parts of a lunchbox that make it do the job	Brainstorm the parts of a lunchbox on mimio with picture provided and/or use chart on the floor for an instant wall display. Scaffolding children's understandings about the different parts. Transfer this knowledge into the brief.	Rubbish Free Lunchboxes – to view after labelling activity http://www.nudefoodmovers.com.au/catalogue.asp *WALT and Lunch box image in Teacher Pack. A3* **Contact New Zealand food health and safety for posters in English and Maori cardboard lunchboxes and detective crime scene germ poster http://www.nzfsa.govt.nz/**
Brief Development **TP**	Understands what a good lunch box needs to have	• Knows what a good lunchbox is	Model a bad lunchbox and get the kids to talk about what is wrong with this lunchbox, co-construct the success criteria (attributes) as the children tell you what the lunchbox needs.	
Outcome development (conceptual design) and evaluation **TP** and explanation writing	Design a lunch box that can fit all our lunch in	• 3 compartments • Tight fit • Clips • Reuseable material	Get the children to design their lunchbox and peers assess it against the success criteria. Use the brief to record the peer assessment	
Outcome development and evaluation **TP** Oral language – presenting	Talk to a buddy from another class about what the problem was and how we thought we could help.	• Talk to a buddy about what they learnt • Listen to their buddies questions • Respond to questions	Buddy up with year six classes and show them the outline and what they found out	

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Alternative Outcomes

Health	Making healthy lunch to go in our designed lunchbox	• Bread first • Spread • 3 fillings • bread	Talk about what needs to go on first, potential order of sandwich and the amount of each component to put on.	
Outcome development **TP**	Make recycled paper	• Rip up paper • Blend it • Separate it • Dry it	Follow the youtube instructions on how to make paper. These can be shown on a projector, told or written down as instructions for children to follow.	How to make recycled paper http://www.youtube.com/watch?v=4QRESFaJAmc
Outcome development **TP**	Make your lunchbox using reusable items e.g. yoghurt containers, Chinese containers inside a cardboard container	• Look like your brief Refer to success criteria of brief	Make this lunchbox using item you have collected over time. Get children to choose their items according to their plan and place them out as a mockup before gluing. Get the children to peer assess against the success criteria. When ticked off by a peer then children can go ahead and make it.	

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