

How Do I Grow?

A Health and wellbeing program for children in early childhood care.

Dr Karen Munday

Background

- Program was initiated by staff at a decile 2 Kindergarten in Palmerston North in response to the needs of the children attending the kindergarten, and their families.

- Staff were concerned with the quality of food which children were bringing in their lunchboxes.
 - Heavily processed snacks made up a large percentage of foods included in the children's lunches.
 - Parents given lunchbox guidelines, and staff worked closely with various families to improve the quality of food being provided, but this advice was rarely followed for long.
 - There were times when children would arrive with no lunch at all.
 - Often, if there was no food in the house to give the children for lunch parents would simply keep them home for the day. It was this practice which particularly concerned kindergarten staff.

- The aim of the staff at the Kindergarten was to:
 - Ensure the children were well-fed and could enjoy all that the kindergarten environment had to offer.
 - Increase the quality and variety of food the children had access to (vegetables and fruit, dairy).
 - Increase attendance at the kindergarten.
 - Assess success of programme to improve it and to secure future funding.

Initiatives

- Overseas interventions have found the following initiatives to be successful:
 - Education of the children about why it's important to eat fruit and vegetables.
 - Having school gardens that the children are actively involved in.
 - Increasing variety (and thus quantity) of fruits and vegetables consumed by introducing new foods regularly.
 - Parental education via courses or classes, and homework involvement.
 - Reward systems for trying new fruits and vegetables.
 - Peer buddy systems - having peers act as positive role models.

Study design

- 10 week intervention
 - Provision of lunches
 - Bi-weekly education sessions
 - ‘Healthy eating’ displays around the kindy
 - Bi-weekly tasting sessions with sticker rewards
 - Children involved with vegetable plot and process cooking
 - Three whanau cooking classes
- Data collection
 - 24-hour recalls (3 baseline, 3 end-intervention)
 - FFQ (baseline, 6 months post-intervention)
 - Monitoring of tasting sessions
 - Attendance term 2 and term 3

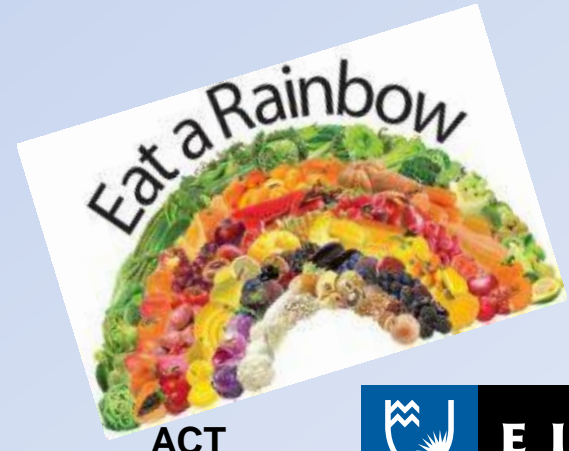
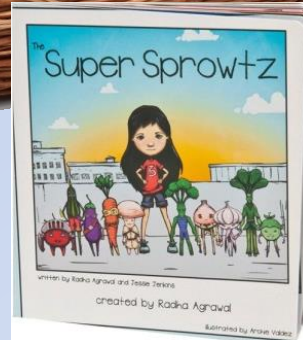
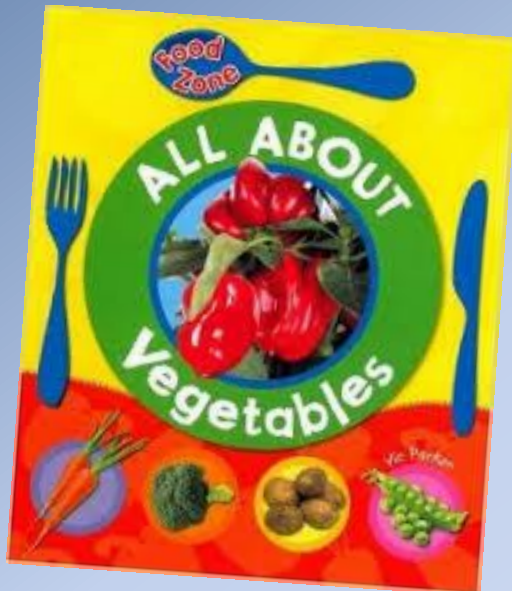
Education sessions



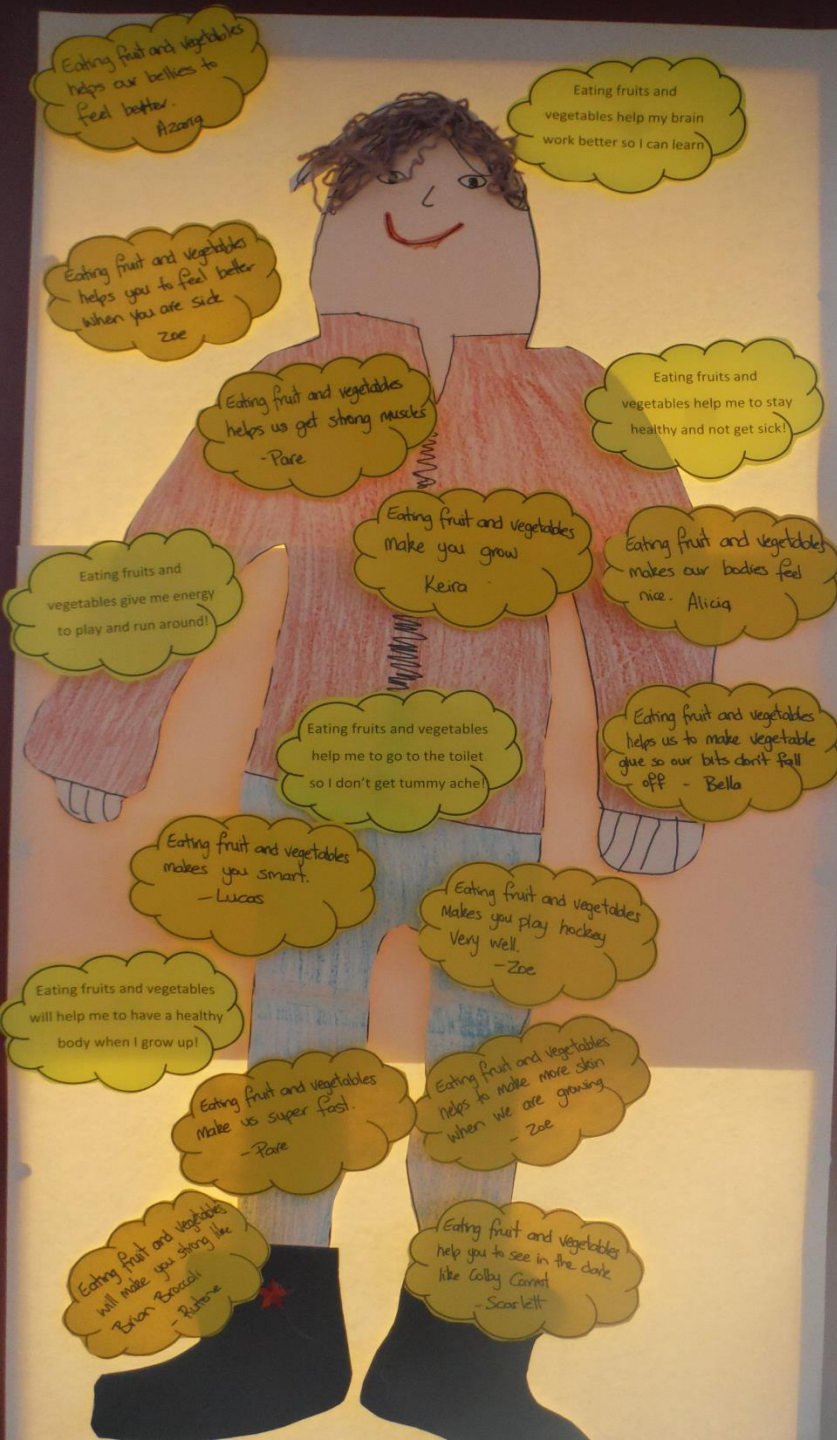
Munch & move songbook



“When my right arm fell off, I knew what to do. I stuck it back on, with vegetable glue.”



ACT
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Emily

Eating fruit and vegetables...

... makes you feel better when you are sick.

... makes you smart.

... makes you super fast.

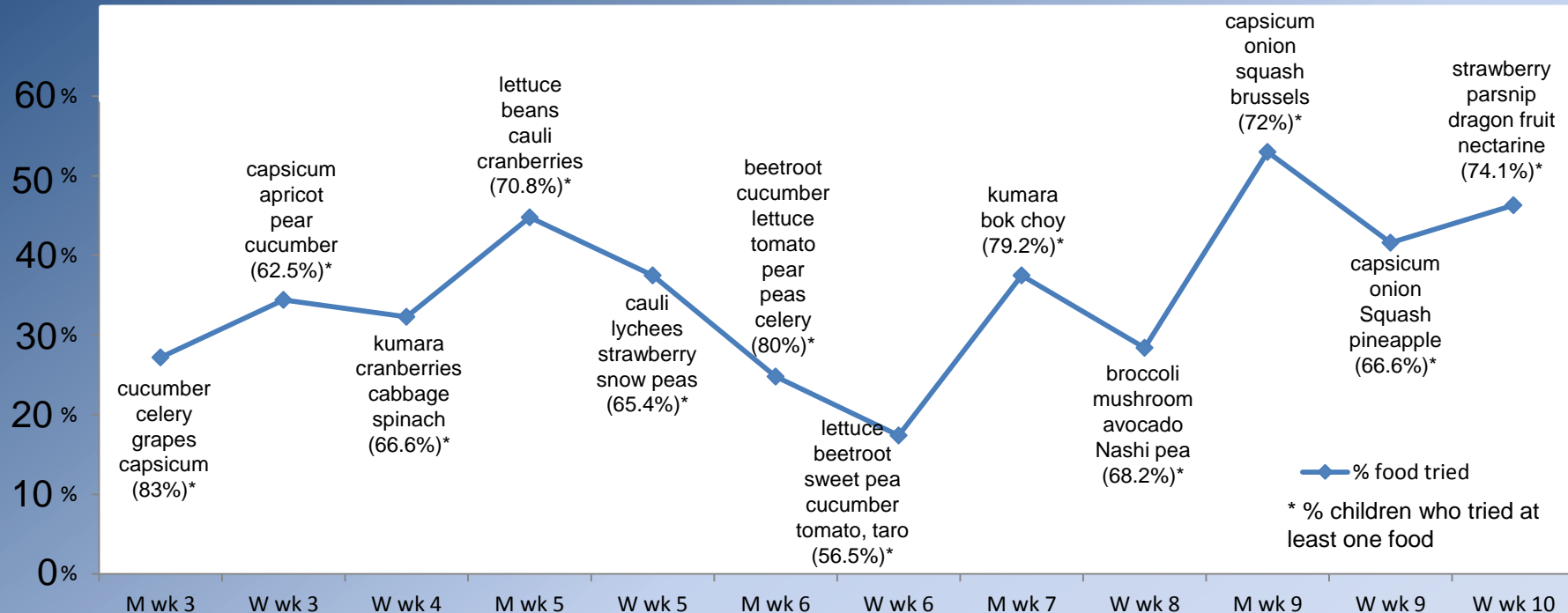
... helps us get strong muscles.

... help you to see in the dark like Colby Carrot.

... makes you grow.

... helps us to make vegetable glue so our bits don't fall off.

Tasting sessions



Whanau cooking classes

Designed to get parents / whanau more involved in 'healthy eating' culture.

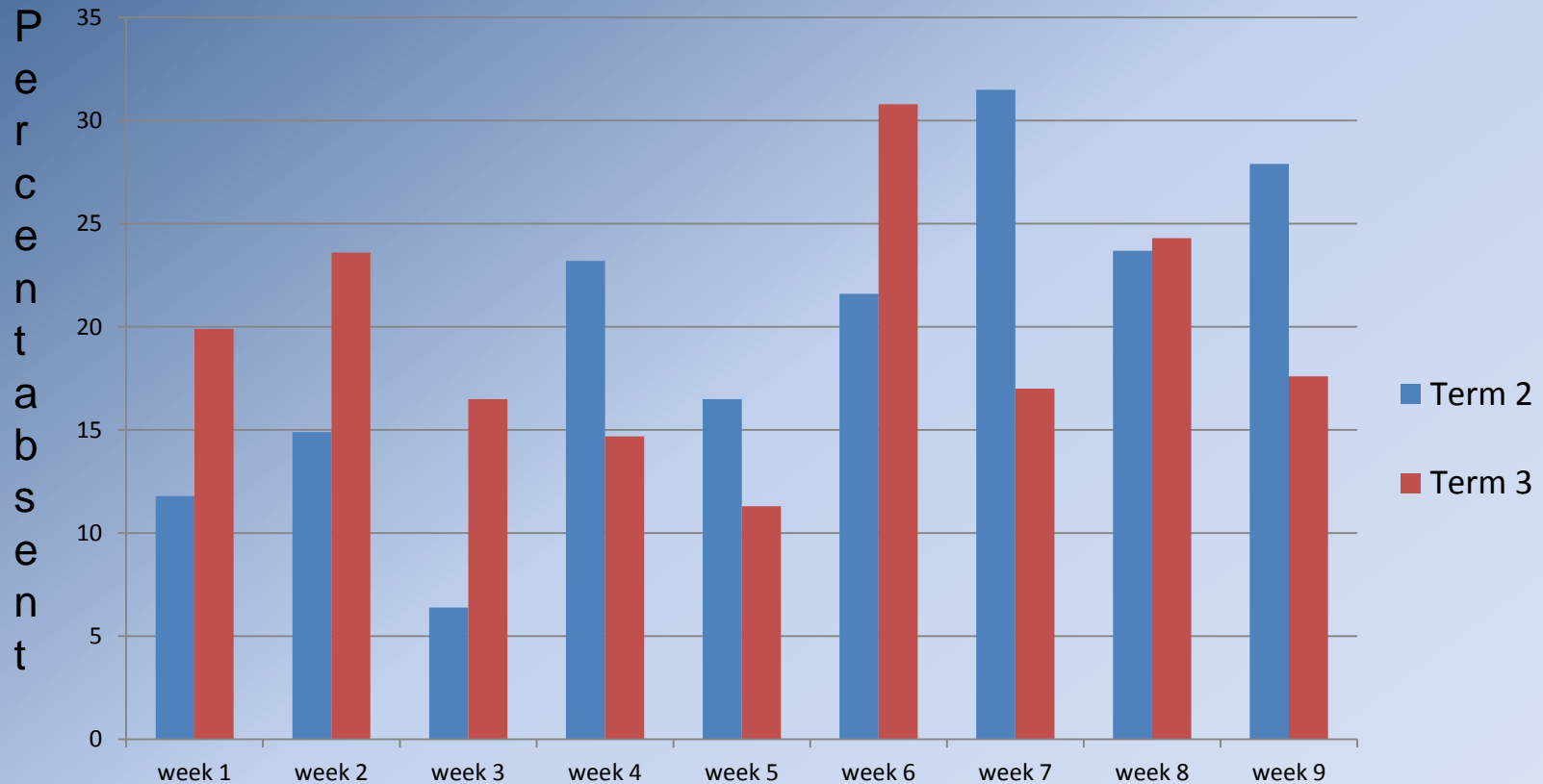
Focussed on child-friendly, nutritious budget meals.

Three classes held after kindy had finished, child-care provided.

Very low up-take from parents / whanau.



Absences



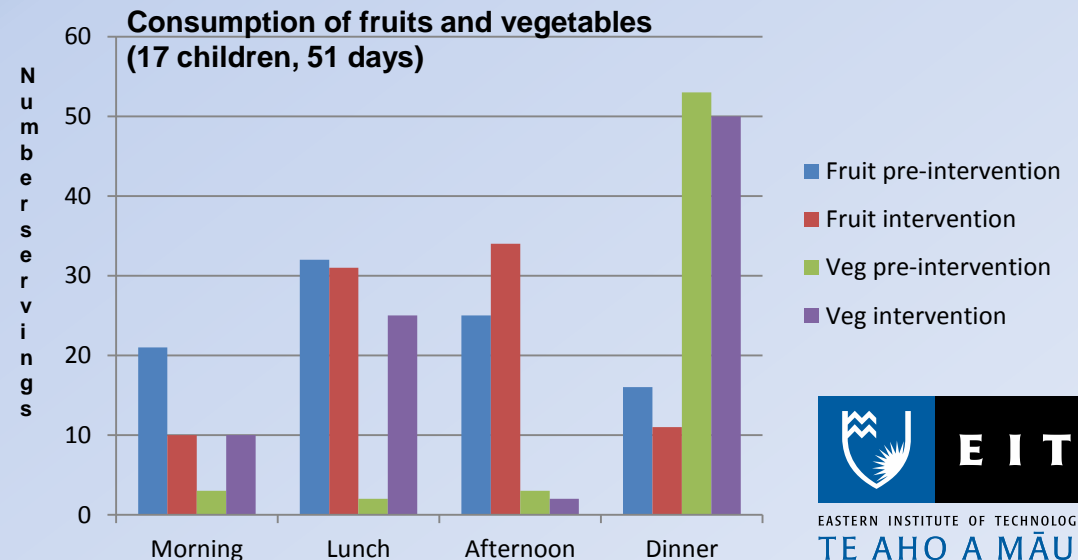
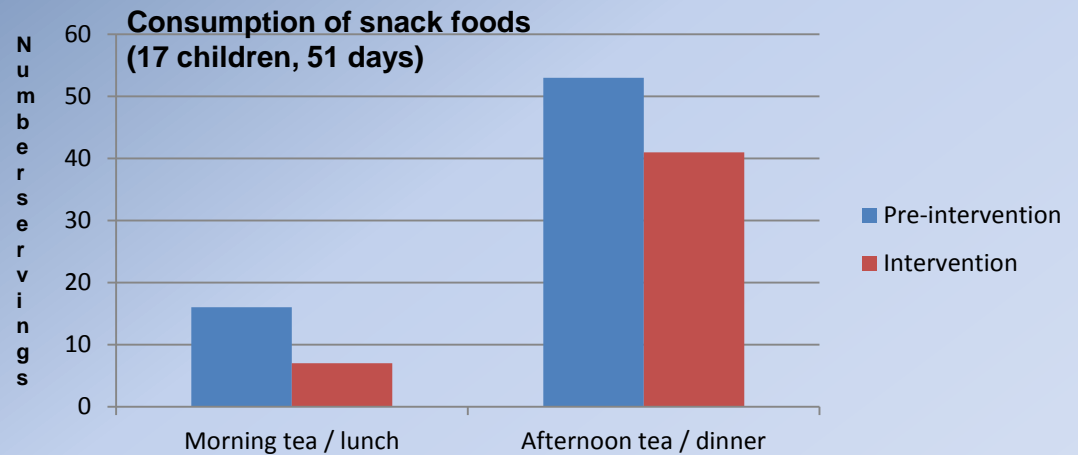
Lunches

| | Monday |
|---------|---------------------------------|
| Morning | Weet Bix with Milk |
| Tea: | Fruit and Vege Platter |
| | |
| Lunch: | Sandwiches |
| | 2 fillings offered each day: |
| | 1x basic such as jam or marmite |
| | 1x novel (see list below) |
| | |
| | Fruit and Vege Platter |
| | Dips |
| | |
| | Yoghurt (or Milk) |
| Drink: | Milk |

grated cheese and carrot
 cream cheese and pineapple
 cream cheese and celery
 egg and salad
 cream cheese and marmite
 tuna, mayo and salad
 sardines, tomato, corn and cheese grilled
 on toast
 mashed bean and cheese toastie
 cheese and marmite toastie

Results of 24-hour recalls showed no increase in any of the nutrients measured with the exception of calcium

(n= 17, 525mg to 609mg/day, p = 0.05)



Food frequency questionnaires

| | FRUIT | | VEGETABLES | | COMMENTS |
|----|-------|------|------------|------|---|
| | Pre | Post | Pre | Post | |
| 1 | 10 | 10 | 0 | 4 | Pre-intervention stated : “Doesn’t eat any vegetables” |
| 2 | 28 | 32 | 30 | 34 | Started eating passion fruit. Ate plenty of F&V but more adventurous with trying other foods. Started eating more varied grains. |
| 3 | 17 | 19 | 8 | 9 | Asks for fruit in preference to biscuits. Brother same. More willing to try new things. Not cooking separate meals now. |
| 4 | 24 | 26 | 20 | 26 | Eating more salad. Chooses salad. Loves veg. Programme is helping to increase acceptance of new foods and rubbing off on little sister. Trying other foods more readily, not just F&V. |
| 5 | 22 | 23 | 26 | 29 | |
| 6 | 6 | 9 | 6 | 5 | Eating increased quantity but not necessarily variety. |
| 7 | 20 | 23 | 24 | 29 | Big changes. Willing to try new things not just veg – wholegrain bread. Not scared. Peer support. The other kids survived. Really identified with Supersprouts. Use to dry wretch with new food but attempts new stuff more and more. Budgeting better. Less waste. |
| 8 | 15 | 17 | 17 | 30 | Eating wider variety, trying things more often, knows the difference between sometimes and everyday food. More knowledgeable. |
| 9 | 21 | 25 | 11 | 25 | Open to trying more than she would previously. Eats broccoli now. |
| 10 | 25 | 24 | 21 | 18 | |

Was it a success? Parents comments.

- He has tried a lot of new things and reflecting it at home which is having a huge positive impact on the family as a whole.
- My son has come home and asked my to buy hummus. He wants to dip his carrot into it. It is mean he is going to eat vegetables, I will do it.
- He loves the lunches! He is eating more fruit and veges at home.
- Two weeks ago it was a total mission to get the kids to eat properly, now they are coming home and asking for healthy things to eat.
- “I don’t eat that!”. “Yes you do, I have seen you”. “Oh.... okay then.” Child eats orange and smiles after finishing.

Feedback - staff

- Need for ongoing professional development re: nutrition education focussed on pre-school environment.
- Provide package of resources / teaching sessions to pre-school staff.
- Ensure integration between teaching, tasting and cooking sessions.
- Provide newsletters for parents.
- Integrate 'healthy eating' teaching into rest of days activities i.e. sorting, colouring, songs.

Struggled with time and resources to provided lunches
- menu planning, shopping, preparation, tidying up.

Recommendations

- Integration of 'healthy eating' message into all aspects of child-care.
 - Use available resources - i.e. Healthy Heart Award
 - Instigate and apply food policy - lunch boxes, celebrations etc.
 - Example setting from staff
 - Use stories / songs / activities
 - Visual displays
- Involve parents
 - Provision of fruit and vegetables
 - Help with gardening, process cooking, collecting resources etc.
- Vegetable garden and process cooking
- Tasting sessions

Thank you!

The Heart Foundation



The Olive Tree Charitable Trust

Fonterra

4-Square Awapuni

Awapuni Nurseries

Mrs Lola Haggarty

Mrs Megan Wilson



Elise, Josh, Alex, Bronwyn, Sam and Bob