

**2013 Prize List**  
**39th FONTERRA - MANAWATU SCIENCE AND TECHNOLOGY FAIR**  
**2013 PRIZE LIST**

**ART SECTION**

**The S+ART Trust Art Section**

2nd Place \$60 voucher                      Jenna Borst, Carncot School  
 1st Place \$100 voucher                     Jayden Adam, Feilding Intermediate

There were two sections for the Photography contest, the first a natural photo and the other acknowledging the theme expressed in a creative/enhanced manner.

**PHOTOGRAPHY SECTION**

**The S+ART Trust Photography Section**

**Natural Photo**

2nd Place \$60                                     Rebecca Nesdale, Feilding Intermediate  
 1st Place: \$60 voucher                        Jack Nesdale, Feilding Intermediate

**Creative/Enhanced Photo**

2nd Place \$60                                     Oliver Morritt, Feilding Intermediate  
 1st Place \$100                                    Matthew Oke, Feilding Intermediate

**SCIENCE PRIZES**

**Massey University and AgResearch Highly Commended (Certificates)**

74	Jennifer Morris & Sophie McIhatton, Bunnythorpe School,	<i>Mangaone Stream pH</i>
73	Jacintha Persson, Whakarongo School,	<i>Lung Capacity</i>
98	Erin Shailer, Carncot School,	<i>Sustainable Future</i>
20	Max Hogan, Feilding Intermediate School,	<i>A Frosty Affair</i>
64	Luke Scott, PNINS,	<i>Just How Cool are You?</i>
208	Lucia Marshall, Palmerston North Girls' High School,	<i>Tunnel Trouble</i>
77	Katie Atkins, PNINS,	<i>Music Makers</i>
60	Zoe Croton, PNINS,	<i>How do road racing</i>
	<i>bicycle gears</i>	<i>work?</i>
209	Henare Ratana-Hartley, Hato Paora College,	<i>Wings</i>
107	Kavish Desai, Palmerston North Intermediate Normal	<i>Vegetarian</i>
	<i>Marshmellow</i>	
112	Ivanna Botica-Redmayne, Carncot School	<i>What Spoils Milk?</i>
44	Cooper Hamilton, Feilding Intermediate School	<i>Feel the burn</i>
204	Evie Mansfield, Palmerston North Girls' High School	<i>I've got this sinking</i>
	<i>feeling - an</i>	<i>everyday</i>
	<i>earthworm's journey</i>	
	<i>through extreme weather</i>	
48	Samuel McCreary, PNINS	<i>Flushed Away</i>
26	Lachlan Walcroft, Ashhurst School	<i>Battle of the curds</i>
110	James Harris, Cornerstone Christian School	<i>What colour attracts</i>
	<i>flies?</i>	
4	Thomas McCreary, Linton Country School	<i>Honey I Shrunk the</i>
	<i>Kids</i>	
122	Aisha Loumachi, Carncot School	<i>Treats for Trots</i>

**Massey University and AgResearch Distinction Prizes - (\$60 vouchers)**

76	Lydia Bamford, PNINS	<i>Mooo</i>
89	Ajay Bansal, PNINS	<i>Save elec - tough road ahead</i>
95	Olive Rose Gurney, PNINS	<i>Stretch the Mozzarella</i>
53	Tharushi Bowatte, PNINS	<i>Green Resolution - synergy in</i>
	<i>action</i>	
35	Charlotte Williams, Ross Intermediate School	<i>Dark or Light - can we</i>
	<i>taste a</i>	<i>difference?</i>
30	Laura Dodd, PNINS	<i>Bird magnet</i>

- 25 Kelly Levin, PNINS  
 104 Cody Larsen, PNINS  
 93 Rebecca Gibbs, PNINS

*Banana ripening  
 To swim or not to swim  
 Spray and walk away*

### **Fonterra High Distinction Prizes - (\$100 cheques)**

- 202 Ganan Jeyakumar, PNBHS  
*infiltration  
 use*

*Effect of compaction on  
 rate and pastoral land*

- 127 William Limsowtin, Feilding Intermediate School  
*Feilding*

*Smoke levels in*

- 85 Hannah Sowman, PNINS

*Repellant*

- 28 Courtney Laing, PNINS

*Best seat in the house*

- 114 Catriona Yule, PNINS

*Whey to go*

- 83 Holly Nicholson, Cornerstone Christian School

*Praying Mantis Paradise*

- 100 Grace Mainwaring, PNINS

*Tempting Tweet*

- 21 Thiliner Ariyaratne, PNINS

*Manawatu river*

- 50 Cameron Mabey, PNINS

*Get fit improve*

*memory*

- 119 Kurt Amey, PNINS

*Worming around*

- 200 Alex Johnston, PNBHS

*Cherry slug yeah right*

- 47 Levi Jorgensen, Cornerstone Christian School

*Fluoride, the hard truth*

## **TECHNOLOGY Prizes**

### **Massey University and AgResearch Highly Commended (Certificates)**

- 156 Maddison Mcqueen-Davies, PNINS  
*gluten free*

*I can't believe it's*

- 158 Ezra Morrison, Cornerstone Christian School  
*performance bar*

*Reload - Kids sports*

- 164 Toby Linton, PNINS  
*school*

*Scratch your way around*

- 165 Ethan Yates, Cornerstone Christian School  
*feeder*

*Self replenishing bird*

- 170 Amanda Budvietas, PNINS

*Sweetness to max*

- 175 Klynton Durham, Whakarongo School

*The Waiter*

- 153 Grace Boykett, PNINS

*Get a grip*

### **Massey University & AgResearch Distinction Prizes - (\$60 vouchers)**

- 150 Sidney Gilchrist, Carncot School

*Breast Dressed*

- 157 Amanda Dever-Tod, PNINS

*Just add yoghurt*

- 168 Caleb Simpson, Cornerstone Christian School

*Stop that H<sub>2</sub>O*

- 159 Matthew Gerrand, PNINS

*Mad on Apps*

### **Fonterra High Distinction Prizes - (\$100 cheque)**

- 171 Lily Tongs, Cornerstone Christian School

*Tap It!*

- 154 Phoenix Reid, Monrad Intermediate School

*Grocery Grabba*

- 163 Roosje Overdiep-Sturgess, Carncot School

*Sandal Shower*

*Scrubbers*

- 176 Luke August, Monrad Intermediate School

*You wouldn't read*

*about it*

- 88 Molly Rose Mulholland, PNINS

*Rongoa Rata*

- 128 Alannah Gray, Ashhurst School

*The amazing bridges*

- 250 Reuben Osborne, PNBHS

*Lamb Weigh*

## **JUNIOR SCIENCE and TECHNOLOGY Prizes**

### **The S+ART Trust Commended (Certificate & Fonterra Goods)**

3	Max Fry, Whakarongo School	<i>Fizz 'n Screws</i>
4	Thomas McCreary, Linton Country School	<i>Honey I Shrunk the</i>
<i>Kids</i>		
5	Alice Moir, Linton Country School	<i>Making Manure</i>
7	Thomas Van Stipriaan, Whakarongo School	<i>Propellor Power</i>
8	Scott Grady, College Street Normal	<i>Insects vs Water</i>
3rd Place (Electrical Experiment Set & Fonterra Goods) Whakarongo School		Sophie Collis,
2nd Place (All Terrain Robot & Fonterra Goods) Whakarongo School		Flynn Wilson,
1st Place (Wire Control Robot & USB Interface Kit & Fonterra Goods) Whakarongo School		Jasmine Perrson,

### **Fonterra Youth Science and Technology Prizes** (\$30 Voucher & Fonterra Goods)

155	Jessica Goodman, PNINS	<i>H<sub>2</sub>O Stop or Go?</i>
44	Cooper Hamilton, Feilding Intermediate School	<i>Feel the Burn</i>
53	Tharushi Bowatte, PNINS	<i>Green Resolution – synergy in</i>
<i>action</i>		
115	Katherine Mitchell, PNINS	<i>Why dog urine kills grass</i>
200	Alex Johnston, PNBHS	<i>Cherry slug yeah right</i>
1	Flynn Wilson, Whakarongo School	<i>A drought? ... I sea the</i>
<i>solution</i>		
65	Lydia Whyte, Carncot School	<i>Just Water</i>
32	Joaquin Taylor-Maclean, Cornerstone Christian School	<i>CO<sup>2</sup> Racing Cars</i>
81	Lily Viles, PNINS	<i>Organic Zap free</i>
114	Catriona Yule, PNINS	<i>Whey to go</i>

### **Fonterra Science Encouragement Prizes** (\$50 voucher + Fonterra goods)

*For exhibitors who's project shows potential for excellence. The aim of this category is to encourage researchers to continue in the fields of Science and Technology.*

169	Joshua Fail, Cornerstone Christian School	<i>Sun to Go!</i>
66	Briana Crabtree, Monrad Intermediate School	<i>Ka Tipu Ake</i>
27	Izaak Morrison, Cornerstone Christian School	<i>Bean me Up</i>
105	Jacob Spillane, Ross Intermediate School	<i>Total Recall</i>
130	Joanna Sunga, PNINS	<i>Goldfish Maze</i>
37	Kaiya Pfeffer, PNINS	<i>Does salty water turn</i>
<i>into salty rain?</i>		
123	Sibel Atalay, PNINS	<i>Hot Strings</i>
57	Sarah Royds, PNINS	<i>Heating water with</i>
<i>compost</i>		
48	Samuel McCreary, PNINS	<i>Flushed Away</i>
153	Grace Boykett, PNINS	<i>Get a grip</i>

## **SPECIAL PRIZES**

### **AgResearch Prizes and Internships** (\$200 cheque)

*For research thoroughness and understanding of a topic relating to Agriculture.*

202	Ganan Jeyakumar, PNBHS	<i>Effect of compaction on</i>
<i>infiltration rate</i>		<i>and</i>
<i>pastoral land use</i>		
38	Emily Hunt, PNINS	<i>Drought detection app for</i>
<i>farmers</i>		

1 Flynn Wilson, Whakarongo School  
*solution*

*A drought? I sea the*

### **Internships**

250 Reuben Osborne, PNBHS

*Lamb Weigh*

202 Ganan Jeyakumar, PNBHS  
*infiltration rate*

*Effect of compaction on  
and*

*pastoral land use*

119 Kurt Amey, PNINS

*Worming around*

66 Brianna Crabtree, Monrad Intermediate School

*Ka Tipu Ake*

251 Zoe Glentworth, PNGHS

*Pepper Spray for Little*

*Biters*

36 Ethan Johanson, Ross Intermediate School

*Do fuchsia need weta?*

### **New Zealand Institute of Agricultural and Horticultural Science Prizes (\$50 Voucher)**

*For science investigation and/or technology project that relates to*

**Agricultural Science** 250 Reuben Osborne, PNBHS

*Lamb Weigh*

**Horticultural Science** 115 Katherine Mitchell, PNINS

*Why dog urine*

*kills grass*

**Animal Science** 129 Alistair Keay, Ashhurst School

*The Story of*

*Sally*

**Soil Science** 202 Ganan Jeyakumar, PNBS

*Effect of*

*compaction on infiltration*

*rate*

*and pastoral land use*

### **Central Association of Science Educators Prize (\$100 cheque)**

*For an intermediate and secondary student who creates a project that has education applications*

79 Ronan Carroll, PNINS

*Now you see it*

54 Jeanne-Marie Hehir, Carncot School

*Greenest growing grain*

### **MSTF-CASE Approval Prize (\$50 Voucher)**

*For a project that has shown thoroughness while adhering to the correct ethical and safety protocols.*

163 Roosje Overdiep-Sturgess, Carncot School

*Sandal shower*

*scrubbers*

### **Australian and New Zealand Council for the Care of Animals in Research and Teaching (\$50 Voucher)**

*For correct protocol through animal ethics committee, human care of the animals involved*

71 Brianna Manson, PNINS

*Lets talk cat sense*

### **Landcare Research Environment Prize and Internship (\$75)**

*For the best intermediate and secondary exhibit featuring an environment aspect. This exhibit uses both science and technology to develop a real solution to a real problem in the outdoors.*

38 Emily Hunt, PNINS (Internship)

*Drought detection app*

*for farmers*

202 Ganan Jeyakumar, PNBHS

*Effect of compaction on*

*infiltration*

*rate and pastoral land*

*use*

### **New Zealand Society of Soil Science Prize (Book)**

*For the best soil related project*

53 Tharushi Bowatte, PNINS

*Green Resolution – synergy in*

*action*

**Manawatu Branch Geoscience Society of NZ - Manawatu Branch (Book)***Science investigations related to geology and mineralogy*

87 Jack Lyon, Ross Intermediate

*River Erosion***Australian Institute of Mining and Metallurgy - NZ Branch Prize (Book)***For a project describing the properties of minerals, their uses, mineral resources and/or the mining of minerals*202 Ganan Jeyakumar, PNBHS  
*infiltration**Effect of compaction on  
rate and pastoral land*

use

40 Poppy Leney, Carncot School

*Erosion Corrosion***Massey University, Institute of Food, Nutrition and Human Health Cluster Prize**

Dairy Science Cluster Prize - (\$75)

*For an exhibit that has Dairy Manufacturing or Dairy products as its focus*

112 Ivanna Botica-Redmayne, Carncot School

*What Spoils Milk*

Nutritional and Health Cluster - (\$75)

*For an exhibit that best contributes to an understanding of the value of good nutrition and a healthy diet*

206 Brittany Vining, PNGHS

*Protein: Pro Teen***New Zealand Baking Industry Research Trust Prizes**2nd Place (\$30 voucher) *For the best investigations in some aspect of cereal and flour usage*

54 Jeanne-Marie Hehir, Carncot School

*Greenest Growing**Grain*

1st Place (\$50 voucher &amp; Book)

156 Maddison Mcqueen-Davies, PNINS

*I can't believe it's**gluten free***New Zealand Institute of Food Science and Technology Prize****Highly Commended***For the best exhibit in this area*

35 Charlotte Williams, Ross Intermediate School

*Dark or light - can we  
difference?**taste a*

76 Lydia Bamford, PNINS

*Mooo*

1st = (\$75 each) and trophy

157 Amanda Dever-Tod, PNINS

*Just add yoghurt*

25 Kelly Levin, PNINS

*Banana ripening***Massey University, Institute of Fundamental Sciences - Chemistry Prize***For the best exhibit involving chemistry*

2nd Place (\$50 book voucher)

29 Arianah Reid, PNINS

*Biogas the way for**whey*

1st Place (\$100)

65 Lydia Whyte, Carncot School

*Just Water***Massey University, Institute of Fundamental Sciences - Physics and Biophysics Prize***For the best exhibit relating to the understanding of the principles of Physics***Physics** 2nd Place (\$50 book voucher)

127 William Limsowtin, Feilding Intermediate School

*Smoke levels in**Feilding*

**Physics 1st Place (\$100)**

79 Ronan Carroll, PNINS

*Now you see it***Massey University, Institute of Fundamental Sciences - Biology Prize****Biology 2nd Place (\$50 book voucher)***For the best exhibit relating to the understanding of biology*

100 Grace Mainwaring, PNINS

*Tempting Tweet***Biology 1st Place (\$100)**

251 Zoe Glentworth, PNGHS

*Pepper Spray for Little**Biters***Massey University, Institute of Fundamental Sciences - Statistics Prize****2nd Place (\$50 Book voucher)***For the best exhibit relating to the understanding of the principles of Statistics*

65 Lydia Whyte, Carncot School

*Just Water***1st Place (\$100)**

38 Emily Hunt, PNINS

*Drought detection app for**farmers***Statistics NZ Prize (\$40 voucher)***For a project involving statistics*

68 Edward Trewick, PNINS

*Koura proportions***New Zealand Statistical Association Prize (\$60)***For the best application of statistical methods and reasoning*

38 Emily Hunt, PNINS

*Drought detection app for**farmers***Massey University, Institute of Agriculture and Environment Ecology Prizes**

(\$75 Book voucher)

*For the best exhibit promoting conservation*

68 Edward Trewick, PNINS

*Koura proportions*

(\$75 Book voucher)

*For the best exhibit promoting biodiversity*

5 Alice Moir, Linton Country School

*Making manure***Massey University, Institute of Agriculture and Environment Land Based Industries Prizes****2x Intermediate (\$50 Book voucher)***For the best intermediate and secondary soil, plant, animal exhibits*

69 Marcel Cronin, PNINS

*Laser beam for better**greens*

95 Olivia Rose Gurney, PNINS

*Stretch the mozzarella***2x Secondary (\$50 Book voucher)**

206 Brittany Vining, Palmerston North Girls' High School

*Protein: Pro Teen*

251 Zoe Glentworth, PNGHS

*Pepper Spray for Little**Biters***Massey University, School of Engineering and Advanced Technology Prize****Intermediate (\$100 Dick Smith Voucher)***For an outstanding exhibit demonstrating engineering principles*

155 Jessica Goodman, PNINS

*H<sub>2</sub>O Stop or Go***Secondary (\$100 Dick Smith Voucher)**

250 Reuben Osborne, PNBHS

*Lamb Weigh***Institute of Professional Engineers of New Zealand (IPENZ) Prizes****2nd Place (Certificate)**

*Science or technology projects that illustrate how engineering is considered as the development of a concept right through to detailed design and construction*

57 Sarah Royds, PNINS *Heating water with compost*

**1st Place (\$100 Voucher)**

155 Jessica Goodman, PNINS *H<sub>2</sub>O Stop or Go*

**The BCC Innovation Award** (\$200 HiFi Vouchers)

*The BCC Innovation Award is designed to recognise creativity, clever design, new technologies or innovative strategies*

251 Zoe Glentworth, PNGHS *Pepper Spray for Little Biters*

**New Zealand Institute of Chemistry - Education Trust Prize**

*For the best exhibit relating to chemical principles*

**Highly Commended (Certificate)**

29 Arianah Reid, PNINS *Biogas the way for whey*

**1st Place (\$150)**

65 Lydia Whyte, Carncot School *Just Water*

**The Science Centre Inc Prize**

*Science investigation and/or technology project that best displays the curiosity and ingenuity of the young investigator* (\$100)

250 Reuben Osborne, PNBHS *Lamb Weigh*

**UCOL National Diploma in Science Prize**

*For the project which demonstrates the best data recording, observations and measurements*

(\$150)

38 Emily Hunt, PNINS *Drought detection app for farmers*

**Langley Memorial Prize - in memory of Keryn and Callum**

*For creativity, passion and commitment in Science and Technology* (\$75 Book Voucher & Trophy)

169 Joshua Fail, Cornerstone Christian School *Sun to Go!*

**Soroptimist Dame Ella Campbell Award**

*For a project involving plant science* (\$100)

36 Ethan Johanson, Ross Intermediate *Do fuchsia need weta?*

**Te Reo Māori Me Te Pūtaiao Prize**

*For an exhibit presented and interviewed in Te Reo Māori at all levels*

**3rd Place (\$50 Voucher)**

66 Briana Crabtree, Monrad Intermediate School *Ka Tipu Ake*

**2nd Place (\$100 Book Voucher)**

210 Luther Ngatai and Teina Paku, Hato Paora College *Te Wahia*

**1st Place (\$200 Cheque shared)**

67 Maia Firmin and Whaiora Ngahere, Monrad Intermediate *Kino Ke Te One*

**Mina McKenzie Indigenous Science Prize**

*For the best investigation of some aspect of science to indigenous cultures* (\$100 Book Voucher)

68 Molly Rose Mulholland, PNINS *Rongoa Rata*

**The S+ART Trust Award**

*For a project that involves or shows potential for the combination of Science, Technology and Art* (\$200)

88 Molly Rose Mulholland, PNINS *Rongoa Rata*

**DairyNZ Prizes****High Distinction (\$150)**

202 Ganan Jeyakumar, PNBHS  
infiltration  
use

*Effect of compaction on  
rate and pastoral land*

**Runner Up (\$250)**

76 Lydia Bamford, PNINS

*Moouou*

**1st Place (\$400)**

38 Emily Hunt, PNINS  
farmers

*Drought detection app for*

**Dr Gregor Yeates Memorial Prize**

*For an investigation relating to Soil Biota* (\$100 Voucher)

53 Tharushi Bowatte, PNINS  
action

*Green Resolution - synergy in*

**Fonterra Internships**

155 Jessica Goodman, PNINS

*H<sub>2</sub>O Stop or Go*

38 Emily Hunt, PNINS  
farmers

*Drought detection app for*

65 Lydia Whyte, Carncot School

*Just Water*

206 Brittany Vining, Palmerston North Girls' High School

*Protein: Pro Teen*

**Massey University BEST EXHIBIT IN FAIR - RUNNER UP (\$250)**

Technology

251 Zoe Glentworth, PNGHS  
Biters

*Pepper Spray for Little*

Aim: "To use different extraction methods to develop the spray into an effective and easy to apply kawakawa insect repellent"

Science - Runner up - Not Awarded

**Fonterra BEST EXHIBIT IN FAIR - PREMIER Prizes** (\$500 each)

Technology

155 Jessica Goodman, PNINS

*H<sub>2</sub>O stop or go?*

Aim: "Designed and made a device to indicate whether the garden needs watering and for how long"

For the following award, our sponsors, The Royal Society of New Zealand, Manawatu Branch; Bronze sponsor, DairyNZ; Bronze sponsor, S+ART; Silver sponsor, AgResearch; Silver sponsor, Massey University and Gold sponsor, Fonterra have combined prize money to enable us to award

**1st = for Fonterra BEST EXHIBITS IN FAIR - PREMIER Prize for Science****1st = Science**

38 Emily Hunt, PNINS

*Drought detection app for*

farmers

Aim: "Determine if it is possible to predict soil moisture content of pasture from a digital camera image, i.e: relationship of soil moisture to colour of pasture"

65 Lydia Whyte, Carncot School

*Just Water*

Aim: "Do water bottle leech contaminants into water when left in the sunlight?"

206 Brittany Vining, Palmerston North Girls' High School

*Protein: Pro Teen*

Aim: "To investigate whether an increase of why protein in the diet of female adolescent athletes improves their endurance, agility and leg power in set physical tests"

**Recognition of schools contributing to the 39th Fonterra Manawatu Science and Technology Fair**

Ashhurst School



Bunnythorpe School  
Carncot School for Girls  
College Street Normal School  
Cornerstone Christian School  
Feilding Intermediate School  
Hato Paora College  
Linton Country School  
Monrad Intermediate School  
North Street School  
Palmerston North Boys' High School  
Palmerston North Girls' High School  
PNINS  
Ross Intermediate School  
Whakarongo School