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To: Christchurch primary & secondary schools; Christchurch preschools

From: Earthly Delights Ltd

The Christchurch City Council is offering to subsidise worm farms and composting workshops to schools and preschools in order to promote education in managing domestic organic wastes. Earthly Delights is the delegated agent for this service.

Most fruit and veggie waste, tea bags, coffee, and some paper scraps, can be recycled into garden fertiliser, using Compost Worms. Other forms of composting, such as “hot” composting (for garden wastes) and bokashi (for food scraps) are also methods of converting organic wastes into useful soil conditioners.

By targeting schools, the Council hopes to create a robust learning platform for children and their parents.

The following letter contains information on the subsidy available from the Council, and some things to consider when deciding if a worm-based recycling system is right for your school.

Please contact Annmarie Banchy, director of Earthly Delights for more information, and to set a date for your workshop and/or worm farm.

### **The Subsidy**

The Christchurch City Council will pay for:

1. Composting Workshops for your parent community; and
2. 50-70% of the cost for a Worm Farm for the school.

The following applies to all schools:

<b>Service</b>	<b>Description</b>	<b>School pays</b>
Composting Workshop for <b>Parenting</b> Community	1 Hour talk on Garden Composting, Worm Farms and Bokashi with handouts.	\$ 0 – School is to advertise the talk throughout the school community. Possible gold coin for fundraising.

Hungry Tiger (900 high) or Lil' Pig (600 high)  600 x 600	Takes 15- 20 litres per week. 200 & 300 litre capacity, vertical-flow unit.	\$ 90.00
Hungry Beast  2000 x 600 x 600	Takes 25-60 litres per week. 750 litre capacity, horizontal flow.	\$ 170.00

### **Things to Consider**

The Compost Workshop is a general discussion and training on Composting, with a focus on worms. Garden Composting and Bokashi will also be covered, and some supplies will be available for purchase at a reduced cost. These talks are offered to schools, regardless of whether they decide to have a worm farm at the school. The school is asked to promote the talk to their parenting community, and provide a place for the event.

Although classroom talks to children about worms are not subsidised, Earthly Delights is happy to offer this for a fee to be discussed – generally \$40.00 for 1 hour, and we bring worms and Council brochures to handout.

If you are going to have a worm-farm installed, someone at the school needs to oversee the process – this person is often associated with a science curricula, and can also be joined by the caretaker or landscaper.

The worm farm needs to be sited on the ground, near a water source, convenient, and out of direct sun. The school is responsible for it's own security of the site.

How much organic waste does your school generate? How much of this do you want to recycle? What's in your waste? Where does it collect?

Attached please find a waste survey that will help you evaluate these questions. Once you know what you are dealing with, we will help you set a realistic goal as to how much waste you want to recycle. Then we'll know which recycling unit is right for your situation.

### **What does the School need to do next?**

Besides paying for the recycling unit, the school must take responsibility for implementing the system into school processes. Often this means identifying one person in the school to “champion” the project, and oversee the following:

- Collection
- Operation
- Communication
- Celebration
- Utilisation

### ***Payment***

After an initial assessment of the School's needs, a quote is prepared and reviewed with the School. If accepted, then Earthly Delights will invoice the School upon delivery of the unit. Payment is appreciated within 30 days unless otherwise arranged. The CCC subsidy is automatically deducted from the invoice, so there are no subsidy forms to fill out (yeah)!

### ***Collection***

Collection involves identifying where the waste sites are at your school, and how often these need emptying. Look at your waste survey, and see if some sites can be combined into one collection zone to make the system easier to implement. The more you understand about your waste (or "waste stream"), the better prepared you will be to set up a collection system.

Please consider the following:

How many buckets will you need? We recommend having two for each collection site to enable a simple swap (one empty clean bucket for a filled one).

Can food scraps be kept in the bucket overnight? Lids are important to keep flies out, and control the smells. You may need a central collection zone to accumulate filled buckets if emptying is done separately.

Can kids lift and transport the buckets? Do you need a wheeled trolley?

What about gloves and coats to protect clothes and hands? Spillage is possible so important to anticipate the mess (part of training). We recommend coats that are beautifully decorated with school spirit, to maintain sense of pride during collection.

Pre-treating/sorting the waste. Surprisingly a lot of whole fruit and bread turns up in the collection bins, as well as plastics and packaging. The bread will need to be removed, as well as packaging, and the whole fruit crushed up a bit (can be done easily with a big stick of some sort...I'll show you).

### ***Operation***

The School will be responsible for operating the recycling system by following the instructions and training provided by Earthly Delights. Operating the recycling unit means wearing gloves, managing buckets, using hose water to rinse buckets and watering the worms, sprinkling lime, dumping food scrapes, and layering with newspaper or cardboard. And watching an amazing event...worms at work.

### ***Communication***

The School is responsible for communicating to the various stakeholders involved in the collection and utilisation process. This means teachers, staff, students, gardeners, cafeteria workers, cleaning people – all need to be aware and involved. They may need to know: What food scrapes can be put into the buckets, collection details, how to operate the system (to those on that team), and how to harvest and use the fertiliser product. This may involve personal communications, notices, and posters.

### ***Celebration***

Generating excitement is very important for the success of your recycling system, and it's good marketing. Celebrate making the commitment to recycle; celebrate implementing a collection system; celebrate bringing the worms on site, and communicate to the people how well they are doing! It's also good to keep telling people how much waste is being redirected from the landfill.

### ***Utilisation***

How will the recycled material be used? The environmental benefits of using the worm castings (“Vermicast”) are grand – not only will it save you money on other fertilisers, you will also be reducing global warming. Vermicast added to the soil locks carbon back in the soil, which reverses carbon in the atmosphere associated with global warming. Okay, it’s a small part, but it all adds up! Vermicast also helps the soil be more sponge-like, and able to hold water over dryer months.

The gardener will be very interested in using the vermicast, as either a solid or liquid. The school can also sell the liquid or solid castings as a fund raiser, or some of the worms to help start other systems.

### **Which system is right for my school?**

The Lil Pig and Hungry Tiger systems are offered to preschools, as rarely is there enough waste to keep the Beast well-fed! These are also the best sizes for schools that want to focus on waste from only 1 or 2 areas (e.g. teacher’s lounge, or single classroom). Starting with a smaller unit can also be a good way to build confidence in the process, and easily on-sold to a parent if/when you upgrade to a larger unit.

The Beast is the largest system (2 meters long) and more likely to get you closer to a “zero waste” goal. It’s subsidised more (70%) to encourage schools into larger commitments to on-site waste recycling. It’s a brilliant size for boarding schools, and for schools with a dedicated cook or caretaker.

The Beast has the additional advantage of being a system that can grow as your confidence grows. The Beast has 3 compartments, and instead of starting all three, you can start less and “grow” the system as you like. This means it’s cheaper to the school as well, and perhaps less intimidating.

### **What you get for your money and subsidy**

The Hungry Tiger or Lil Pig (\$90.00)

600 x 600 square wooden bin, 1 kg Tiger Worm pack, 2 kg Earth Dust Balance, installation, instructions, training, worm blanket. Kid-focused worm talks are extra. School is to supply their own collection buckets, gloves etc. Lil Pig is 600 high, Hungry Tiger is 900 high. Buckets with lids are sometimes available for free.

Hungry Beast (\$170)

Wooden bin with 3-easy flow compartments and split lid, 3 x 1 kg Tiger Worm packs, 20 litre bucket of Earth Dust Balance, 4 empty buckets with lids (second hand, as needed and as available), fluffing fork, installation, 4 hours on-site training and/or follow-up checks, instructions, worm blanket.

The School is to supply their own gloves, extra buckets, and protective clothing for the collection people.

## Waste Survey

***The following organic food scrapes and waste can be recycled using worms:***

- Fruit
- Veggies
- Paper (hand towels, toilet rolls, coffee filters)
- Small amts of Citrus and bread can be added after the system is 6 months old
- Not too much tuck shop foods like chips, meat, pies
- Tea, coffee.

***Where does organic food wastes come from?***

Record areas that generate or accumulate organic food wastes. For example:

Kids morning tea, lunch

Teachers break room

Tuck shop or cafeteria

Classrooms

Other

***How much does your school generate?***

Using a 20 litre bucket with a lid, collect waste for two weeks from each of the areas you think generate the most organic food wastes. At the end of each day, or the end of each week, press the waste down and measure and record volume.

How many buckets did you fill in week one and week two?

***What organic wastes does this include?***

What material do you see? Fruit and veggie scrapes? Citrus skins? Bread? Can you estimate how much in each category? Are plastic wrappers and pottles present?

Fruit

Veggie

Bread

Citrus

Other

***Who are the stakeholders involved?***

Make a list of those people or roles that are involved in this project. Include teachers, students, student council, parent council, gardener, and cafeteria people.