

## Considering Waste, Science & Psych:

Leading & supporting advanced shifts to  
sustainable living.

Anne Pettit – Pettit Projects

Perth, Western Australia

[apettit@inet.net.au](mailto:apettit@inet.net.au)

When it comes to sustainable living,  
our perceptions of waste,  
our exposure to relevant science &  
our understandings of ourselves  
are interrelated and can limit or support our actions.

Noticing and blending concepts  
& ideas could make sustainable choices  
more obvious, appealing and do-able...

Its important to trim your waste-line  
with all the usuals: Reduce  
Re-use  
Recycle

But IT'S TIME to RETHINK WASTE  
to really appreciate its significance as a  
sustainability issue & be able to respond...

What if we consistently expanded our notions of  
waste and noticed that...

- **Waste is using more than you need of anything to get something done.**
- **Waste is using something that you're not actually getting anything for.**
- **Many things are not rubbish just because we've finished with them or because we don't want them any more.**

These wastes are habitual & accepted & built in to many aspects of our lives every day...at home, at work, EVERYWHERE.

Could an awareness of these types of waste be promoted and supported to become second nature and bring about some easily made changes in energy, water and materials use and their disposal?

You don't have to be Einstein...  
but a little science goes a long way.

An awareness of some basic science concepts that relate simply and directly to the comforts and costs etc of daily living could make sustainable choices more obvious and appealing.

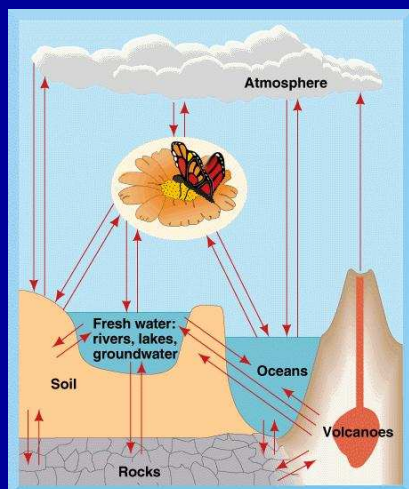
Here is just a sample:

The basics of  
our liveable world:

Clean air  
Fertile soils  
Safe, adequate water  
for all

The unique, liveable status of our world is maintained by the cycling of elements and molecules through air, water, rocks, soil, plants and animals – including ourselves. It's called biogeochemical cycling...

Biogeochemical cycling of carbon, oxygen, nitrogen, phosphorus and water etc maintain our liveable world...



The CARBON cycle is the driver –  
it's the ENERGY system.

ENERGY heats & cools things,  
moves things, makes light and sound,  
drives weather systems and all the growth  
& metabolic processes of plants & animals.

A whole lot of living is about HEAT EXCHANGE.

Consciously or unconsciously we are either using  
or battling heat loss or gain in many ways every  
day and night. We take advantage of or enhance  
or prevent heat exchange by convection,  
conduction, evaporation or radiation through  
materials, air and water.

Clear information and appropriate examples can  
show the depth of this relationship and how it links  
with \$ costs and environmental impacts.

A whole lot of living is about EATING.

Many aspects of energy's role in sustainability can be woven into discussions about eating - from photosynthesis to fossil fuel origins and issues, to consumption and recycling nutrients back to support clean air, fertile soils and safe adequate water.

A WHOLE LOT OF LIVING is about SHIFTING ELEMENTS and ENERGY around.

This approach suggests supporting any tips for energy saving with easy to understand information about the principles behind the tips.

The same applies to other aspects of learning for sustainability...

## Microbes & insects?

### Misunderstood and underrated!

For many people, knowledge of microbes and insects is limited to notions of them as 'germs' and creepy crawlies.

As educators, we can do much more to counter this attitude by providing some balance - promoting the vital role that microbes and insects play in our world.

## Mini beasts, maxi benefits...

- Detritus feeders return elements to their biogeochemical cycles.
- Bacteria on our skin, in our noses and in our guts keep us healthy.
- Yeasts and moulds are important in beer and cheese making.
- Bees and other insects are vital for pollination - and you can forget food production and biodiversity without them.
- Worms and a vast array of microbes are the difference between sand and fertile soils.

## **It seems obvious, but...**

**'When things have what they need,  
they THRIVE.'**

**'When things don't have what they need, they DON'T  
THRIVE.'**

For example, many bacteria thrive in warm, moist conditions – not on dry surfaces. Providing an environment that denies bacteria what they need can help us prevent infections without the use of chemicals.

This maxim can be used widely as a way to help guide sustainable choices more generally. By combining it with a workable knowledge about energy and an expanded understanding of waste it can be used to help us get what we want, save energy and avoid waste in many situations.

When we become aware of the significance of waste & some of the simple science in living, we can see that we are very personally linked to the world and our effects on it. So lets bring ourselves properly into the picture now:

**What we're like and  
what we like...**

At least in the scale of our endeavours,  
people are not your average 'consumers'...

We are intelligent, curious, creative,  
competitive and adventurous –

Incredibly industrious!

We love novelty, choice, comfort,  
convenience, indulging our senses...

and we REALLY LOVE to move.

And we're all different...

Our values and behaviours arise from our knowledge, beliefs and desires.

All this endeavour and variety...

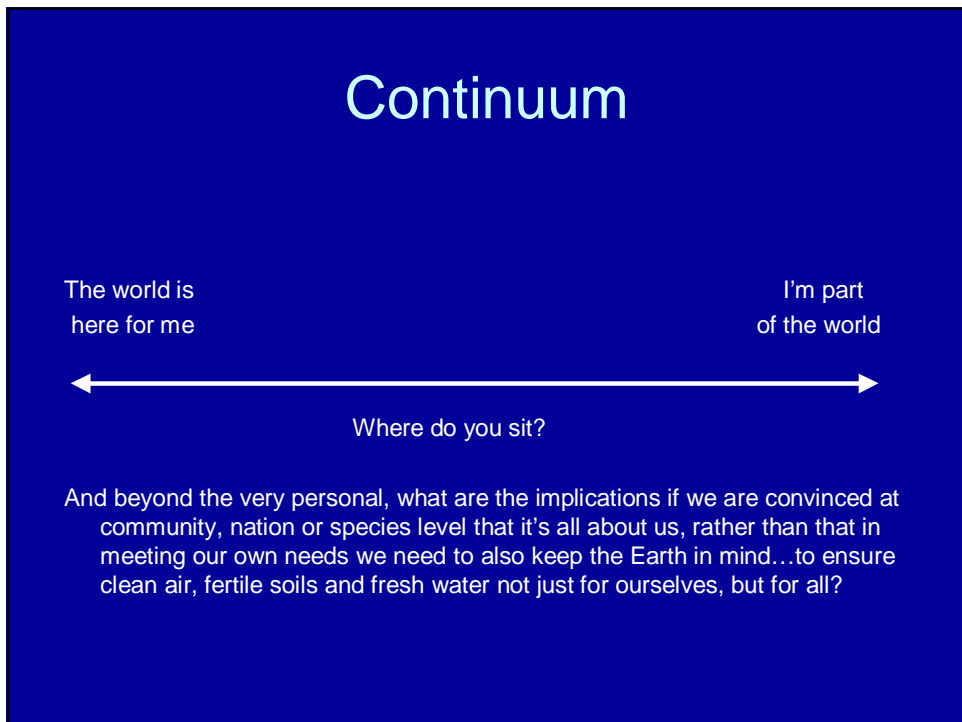
= a lot of mining, making, moving, using and throwing away stuff.

Environmental impacts of all kinds are about people meeting these needs.

But we often don't understand, don't see and don't really care about environmental impacts and that they are about us.

This says something about us and our relationship to the world.

What might that relationship be?



Can we get a grip on our  
relationship to the world...

And meet our needs with the Earth in mind?

We've got a few hurdles...

The prevailing culture accepts the way we treat the  
Earth – so why should we change?

The subtleties of language skew our view.

Many of us are pretty happy with the status quo,  
so we're disinclined to change anything.

Relying on fossil fuels and seeing growth as our  
only measure of progress doesn't encourage our  
creativity about changing.

## So what do we do?

Encourage people to think and talk about what we're like and how we relate to our world.

Open up discussion about these aspects of our lives to encourage our capacity for self-effacement.

Promote meeting our needs with the Earth in mind.

There's a time and place for being up-front about balancing our needs with the need to look after our world – and that time and place is now.

Change is possible, and we're smart enough, adaptable and resilient enough to do it.

## To wrap up...

**Concepts & ideas about** waste, science and psych need a higher and more directly relevant profile in sustainability education and debate.

This presentation is an attempt to provoke thought and stimulate discussion to contribute to that process.

To view the full Discussion Paper contact

Anne Pettit at Pettit Projects

[apettit@inet.net.au](mailto:apettit@inet.net.au) or 0430 122 931