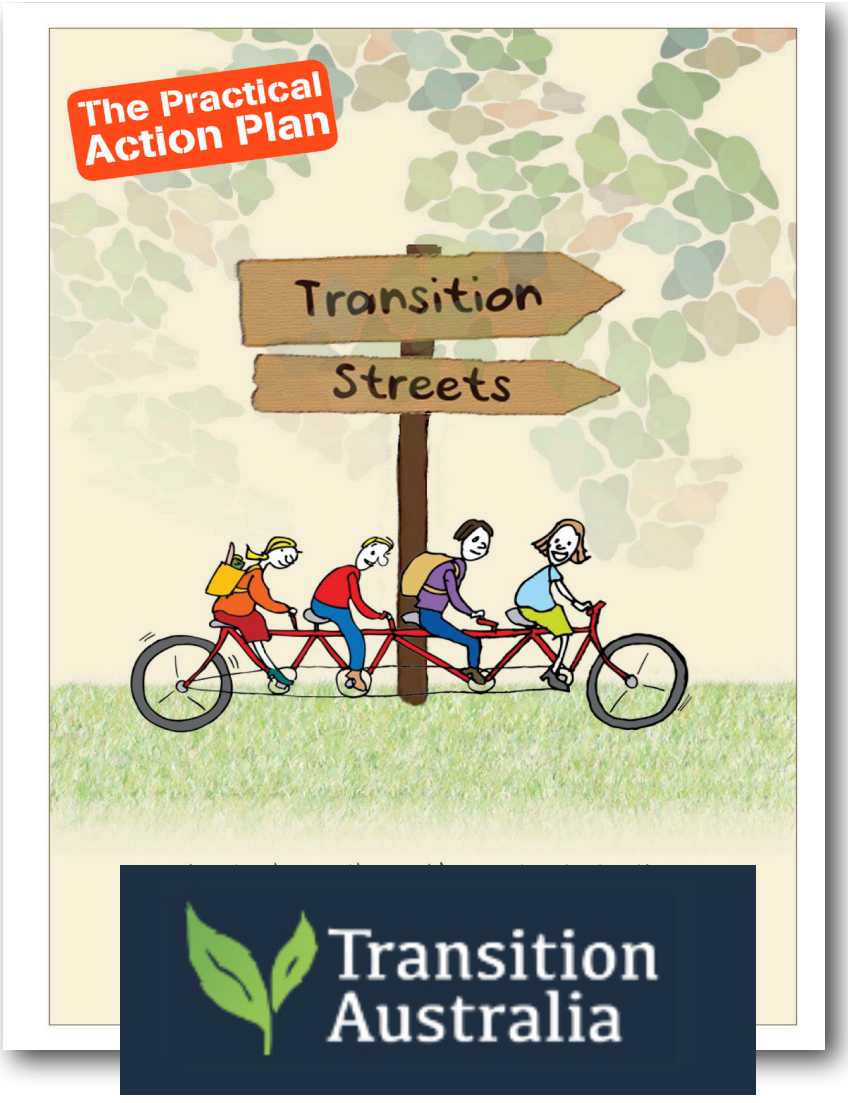
June09/20



Your Group's Schedule and Contact Information

Topic	Date & time	Host	Coordinator
1. Introduction			
2. Energy			
3. Food			
4. Water			
5. Transport			
6. Waste			
7. Next Steps			

Name	Phone	Email	Address

Introduction

Transition believes that by coming together at local levels, we can:

- reimagine and rebuild our world;
- rebuild a caring, connected culture;
- reconnect with nature;
- reclaim the economy;
- re-skill and reimagine work.

The program in this workbook has been developed to help you start that rebuilding beginning with simple, practical changes to your home and your habits.

A fun journey to a lower energy, less resource consuming way of life, that also helps you save money, reduce your carbon dioxide (CO_2) emissions, and help minimise your household's reliance on fossil fuels, and as a bonus, improves your health.

More about the Transition Movement can be found here [1.1] - see back cover.

The program is based on seven group sessions.
Five of these cover areas of our lifestyle where we can easily reduce energy use, and save money.

Session 1: Getting Started	**Session 4: Water**	**Session 6 : Waste**
Session 2: Energy	**Session 5: Transport**	**Session 7: Next Steps**
Session 3: Food		

- Groups meet every 2-4 weeks for 2 hours having read the chapter for that session. Extension materials, practical action plans, and detailed background information is available online for each session.
- Transition is democratic and inclusive, so while each session requires a coordinator, a notetaker, and a timekeeper, these roles should be shared and rotated - for more support, comprehensive session facilitator guides can be found here [1.2]
- This first session is also about **Healthy Groups** - learning how to work well together. So before you start - read through, discuss, and agree on the group guidelines.
- The program is about change - so discover where you stand now through one of the online Global Footprint Quizzes [1.3] or the worksheet at the end of this session.

Group Guidelines

It is important to agree on some guidelines for how your group will work so it will be a more satisfactory experience for everyone. These agreements are in place to support the unity and stability of the group, and to create an atmosphere of mutual support and trust. It is important that all group members collectively agree to these at your first session. You may want to revisit them, and feel free to edit, adapt, or add to them as your group sees fit.

✔ **Confidentiality**: We agree to respect the privacy of any personal information shared at the meetings and we agree not to discuss this information outside the group in a way that would mean a person could be identified.

✔ **Support**: When possible, we will offer practical and emotional support to any team member who is experiencing difficulty in attending the sessions (or achieving the actions).

✔ **Respect:** We will strive to ensure that time is shared equally between team members in terms of speaking and listening, and that differences of opinion are allowed and respected. Our abilities to change will vary, based on a variety of factors such as income or time, age or disability.

✔ **Punctuality**: We agree to arrive on time for each session and to start promptly so that everyone can benefit from the full two hours.

✔ **Commitment:** We commit to attend all the sessions when possible, and to let the other group members know when we cannot. If someone is attending in our place, we will ensure they know what's been discussed previously. We also commit to have read the relevant workbook section before each session and be prepared to take some actions each time.

Session 1 : Getting Started

Item	Time
Read through, discuss, and agree on the group guidelines.	10 min
Introduce yourselves – who's in your household, where you live and your situation; whether or not you or your household have explored sustainability issues before; why you've decided to participate in Transition Streets, and what you hope or expect to get out of it.	30 Min
Use the worksheet on Page 2 to plan your group schedule for discussion sessions — how often, where, and who will facilitate the discussion - also complete the contact details.	10 min
Share the results of your Global Footprint Quizzes around the group and note what areas you want to work on or learn more about - remember the Group Guidelines in your discussion, this is the starting point of the journey.	30 min
Transition groups are great at helping people develop visions of the future they want, and then making possible the steps towards it. Take time now to imagine and describe some of those future worlds.	30 Min

Imaging the Future You Want To Create

Close your eyes and imagine walking down the street in 2030.

Urban Agriculture:
Food will be grown closer to home, organically, in intensive systems that enhance biodiversity, and we'll all have the skills to do it. It will change the way our towns and cities look and feel.

Water
Cooperation between industry, agriculture, and urban infrastructure to harvest, preserve, and fairly distribute, fresh, clean water to communities in balance with the needs of the natural environment.

Waste
Community networks to handle unwanted or surplus items in a circular fashion - refuse, reduce, reuse, repair, re-gift, recover, recycle - rethink.

Productive Trees:
In the future, why would we plant ornamental, unproductive trees, when we could plant fruit or nut trees? Let's reimagine our towns and cities as food forests.

Neighborhoods
Planning and decisions made in a decentralised, engaged, bottom-up way, with the role of government being to support what communities are deciding. Networks that share skills, information, and tasks, so everyone is both supported and enabled to give back.

Community Energy
Power generation, and distribution, will be in community ownership, creating local jobs, energy equity, and reduced Greenhouse Gas Emissions

Cycling
Part of global sustainable transport, learning bike repair skills, supporting new cyclists to gain confidence, developing CO2 free local distribution networks.

Before you close Session 1, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

transitionaustralia.net

My Ecological Footprint

Circle your answer and then add up your score for each section - fill in the total on page 2

Food

1. ___of my food is packaged	All [100]	Most [75]	Half [50]	Some [25]	None [0]
2. I waste __ of my food each day	All [100]	Most [75]	Half [50]	Some [25]	None [0]
3. __of my food is processed	All [100]	Most [75]	Half [50]	Some [25]	None [0]
4. I compost my vegetables & fruit	All [-100]	Most [-75]	Half [-50]	Some [-25]	None [0]
5. __of my food is grown locally	All [-100]	Most [-75]	Half [-50]	Some [-25]	None [0]
6. Each week I eat meat___	More than 7 times [600]	Each Day [400]	A Few Times [300]	Eggs/Dairy only [200]	None [0]

Water

1. Shower or bath___minutes	> 10 [200]	10 [100]	4 or less [50]	flannel [25]	None [0]
2. Flush the toilet ____ time	Every [50]	Half [25]			
3. Brush teeth with tap left___	On [50]	Off [25]			
4. Have Low Flush Toilet	No [50]				Yes [-50]
5. Have Low Flow Shower & Taps	No [50]				Yes [-50]

Energy Use

1. Winter Thermostat set on___	> 23 [150]	18-21 [100]	18 or less [-25]
2. Use a dishwasher	Often [100]	Sometimes [50]	Never [-50]
3. LED lights	None [50]	Some [25]	All [-50]
4. Energy Efficient Appliances	None [50]	Some [25]	All [-50]
5. Leave and Turn off TV & Lights	No [50]	Maybe [25]	Yes [-50]

Shelter

1. My house is a____	big block [50]	small block [25]	terrace [0]	apartment [-50]
2. Our second home is____	Holiday [400]	Rental [200]		None [0]
3. Rooms per person	> 3 [200]	2-3 [100]	1-2 [100]	One [-50]

Transportation

1. Have __cars for each driver	2+ [200]	One [100]	Half [0]	None [-25]
2. Time we use the car__	Hour+ [200]	30-60 min [100]	0-30 min [50]	None [0]
3. To school / work by car	Alone [200	Shared [100]	Bus etc. [25]	Walk Bike [0]
4. Car Size	SUV [200]	Sedan [100]	City [50]	None [-25]
5. Each year I fly___times	2+ [400]	1-2 [200]	None [0]	

transitionaustralia.net

My Ecological Footprint

Goods & Services

1. New set of clean clothes each day	Several [100]	Once a day [50]	Sometimes [0]
2. Wear clothes that have been mended	No [0]		Yes [-25]
3. My clothes are always new	Yes [200]	Some [25]	No [-50]
4. I donate surplus clothes	No [100]	Some [25]	All [-50]
5. __% of my clothes are never used	75% [100]	50% [75]	25% [50]
6. __ pairs of new shoes each year	7+ [100]	3-6 [75]	0-2 [25]
7. __ electronic devices at home	15+ [200]	10-15 [100]	5-10 [75]

Waste

1. All my garbage would be ___litres	100 [100]	50 [50]	15 [25]	None [-50]
2. Recycle paper cans glass & plastic	None [200]	Some [100]	Half [50]	All [-100]
3. Clean & reuse things many times	No [25]		Yes [-25]	
4. Repair things when possible	No [25]		Yes [-25]	
5. Always bring my own bags	No [25]	Yes [0]	Make them [-25]	
6. Shop online ___ times a year	15+ [200]	10-15 [100]	5-10 [50]	0-5 [25]

Add Up your Scores ----- Total / 300 = Earths ----- Earths x 2 = (global)Hectares

Food	Water	Energy	Shelter	Transport	Goods	Waste
Total		**Earths**		**Hectares**		

County	H	R	County	H	R	County	H	R
Australia*	6.6	5.7	USA	8.1	(-4.5)	Canada*	7.7	7.4
France	4.4	(-2.4)	Japan	4.5	(-3.9)	China	3.6	(-2.6)
Brazil*	2.8	5.9	Indonesia	1.7	(-0.4)	Kenya	1.0	(-0.5)

This chart shows the 2016 data, the H global hectares footprint per person, but the R global hectares shows what bio-capacity is still available, and except for the large open countries (*) we are already in deficit in every part of the world.

This worksheet is based on the Conservation Station worksheet.
and data from Open Data Platform [data.footprintnetwork.org] more here [1.3]
including information on the **Overshoot Day** - the day in the year when we start "eating" the Earth.

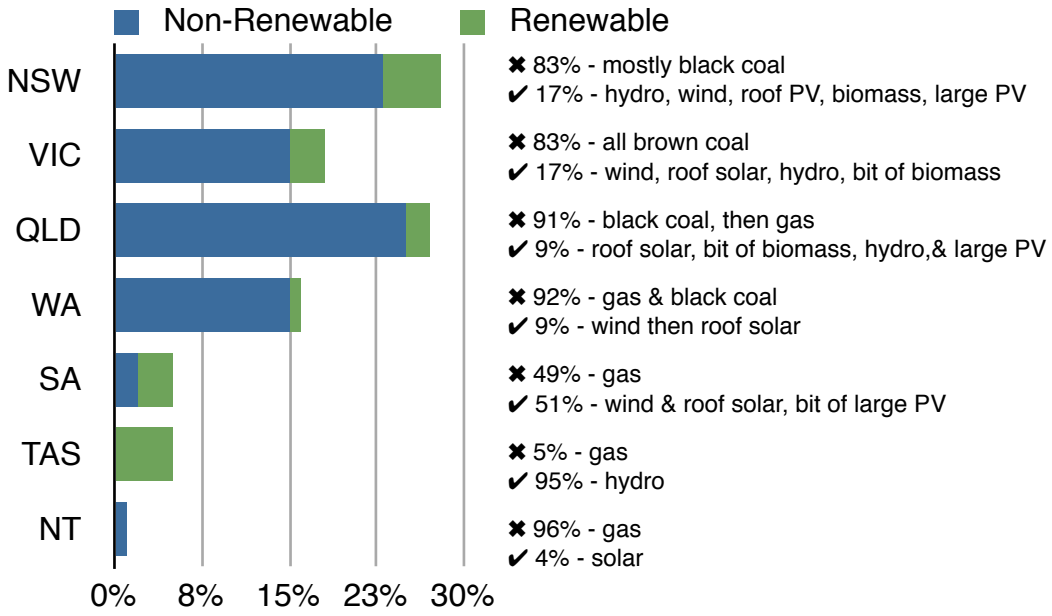
Session 2 : Energy

In this session we look at use of electricity, gas and renewable energy.

Demand for energy continues to grow faster than the world's population due to:
- rising living standards and increasing energy demands in developing countries,
- increased heating and cooling in all countries due to climate instability, and
- the surge in electricity powered technologies.

Fossil fuels (coal, oil, and gas) still dominate electricity generation, and these are becoming even higher CO2 emission industries as the accessible mining sources run out, and as bulk export and shipping of natural gas expands globally.

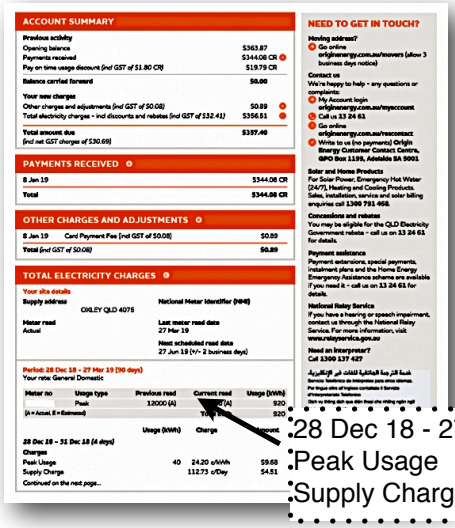
Nationally, 81% of our electricity is produced from coal or gas, and 19% from renewable sources - a third each from wind, hydro, and roof top solar (2019). The mix varies by State.



How Much Energy Do You Use?

Household Comparison

Usage (kWh)
(meter readings used) 920


ACCOUNT SUMMARY

NEED TO GET IN TOUCH?

PAYMENTS RECEIVED

OTHER CHARGES AND ADJUSTMENTS

TOTAL ELECTRICITY CHARGES

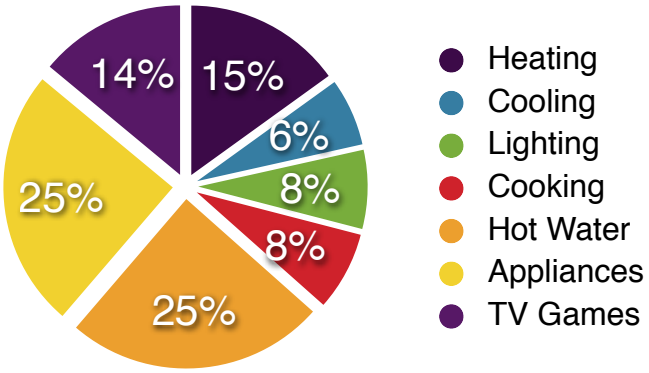
Your bills show you how much electricity you use per quarter and also the fixed supply (connection) charge. It shows how your household compares to others in your area - go to: energymadeeasy.gov.au for a detailed comparison by postcode and season.

28 Dec 18 - 27 Mar 19 (90 days)			Charges
Peak Usage	920	24.20 c/kWH	$222.64
Supply Charge		112.73 c/Day	$101.45

Worksheets for detailed electricity and gas usage can be found here [2.1]

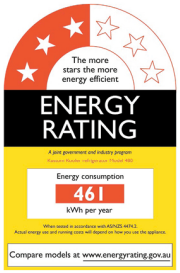
transitionaustralia.net

How Much Energy Do You Use?



Where does your energy go? You might be surprised - the Australian climate is kind to us and our major appliances and systems are pretty energy efficient (- look for the energy rating stickers)

But our hot water systems are old tech and our smaller items, lights, and set-ups that we tend to leave on stand-by, can be energy hogs.



For a detailed look at energy use and what to do about it go to our website [2.2]

Low-No Cost Tips for Saving Energy at Home

Living Areas

- √ In summer, keep cool by closing windows, doors, curtains and blinds.
- √ Use fans instead of air conditioners and set your air conditioner to 26°C.
- √ Aim for natural cross flow ventilation when the sun is off the house.
- √ In winter, reduce draughts by closing windows, doors and curtains.
- √ Set central heating to 18°C, dress warmly and use blankets and throw rugs.
- √ Put in LED lights and turn them off when not needed.
- √ Switch off appliances at the wall - most keep using energy in stand-by mode

Kitchen

- √ Make sure there is plenty of space around your fridge so it works efficiently.
- √ Check that the fridge door seals work, and keep the door firmly closed.
- √ Make sure the fridge and freezer isn't too full.
- √ Use the lids on pots and pans to reduce cooking time.
- √ Wait till the dishwasher is full, then put it on.

Bathroom and Laundry

- √ Use cold water for washing hands and clothes.
- √ Use a clothesline instead of the dryer.
- √ Set your hot water to 60°C and then use hot water as little as possible.
- √ Wait till the washing machine has a full load, then put it on.
- √ Put in low-flow shower-heads - and aerator heads on taps.
- √ Have shorter showers - no more than 4 minutes - use a timer.

Pools

- √ Use a pool cover to keep the heat in and put in an efficient filter pump.
- √ If you want a heated pool, install a solar heating system.
- √ Only use the lighting you need for pool safety.

Planned Spending for Saving Energy at Home

Heating & Cooling : 21% of our energy use

$$ Draught-proof and Ventilation - sealing gaps around doors & windows, adding self closer to vents, covering fireplace openings, using carpets and floor rugs.

$$$ Insulation - clean and replace or install ceiling insulation batts to R4.1 rating, install underfloor insulation to R2.25, insulate walls to R2.4 rating.

$-$$ Shading and Ventilation - grow shade trees and plants, install verandahs & shutters

$-$$$ Double Glazing - DIY shrink film through to new installed double glaze windows.

$$ Personal Fans - ceiling fan or focussed zone fans instead of large zone systems

Lighting - 8% of our energy use

$ LED lights - replace all existing with 10x more efficient LED bulbs and tubes.

$$ Skylights - install solar powered LED skylights in utility areas, plus pantry and toilet.

$ Timer Switches - install time and motion sensors on selected lights

$$ Rewire - one light per switch instead of one switch turning on more than one light.

Cooking - 8% of our energy use

$ Mini Electrics - match small fan-forced ovens, microwaves, rice cookers, sandwich makers, and steamers to your food preferences - can be efficient if used for short times

$$ Induction Cooking - less wasted heat and less CO2 than gas range tops.

Hot Water - 25% of our energy use

$ Thermostat - install a controller so you can select the temperature to suit the use - 40 C for showers and 50 C for dishes for example.

$$$ Heat Pump Hot Water - very efficient source of hot water, can act as a solar “battery” if linked to solar PV and timed to heat at midday using the surplus electricity.

Appliances - 25% of our energy use

$$-$$$ Replacement - compare the energy rating of your existing appliances to new ones, and also the age and ongoing repair costs, as replacement might be recommended. eg: front load washing machines vs top load; chest vs upright freezers.

$ Placement & Ventilation - fridges and freezers need good ventilation to run efficiently, redesigning spaces and venting cupboards and pantries might be needed.

Zero Retirement - consider not using the appliance - air dry, non-iron, hand sweep - sell or gift, and borrow when needed - use a library of things, sharing sheds, neighbours.

TV & Games - 14% of our energy use.

$ Power Controllers - any step to reduce stand-by, to limit extended item charging.

$ Timers - any step to ensure items are only used when needed.

Zero Alternatives - explore other ways to entertain, other activities.

Solar Power & Renewables

Switching to “Green Power” with your electricity supplier won’t save you money, but will ensure that a growing percentage of power is sourced from renewable sources.

Domestic Solar Power - solar photovoltaic (PV) panels, usually roof mounted, and connected to the main electricity grid by an inverter, are now in over 2 million homes (17% nationally) Most States are offering rebates and incentives to reduce the overall cost - payback times can be as short as six years.

Challenges

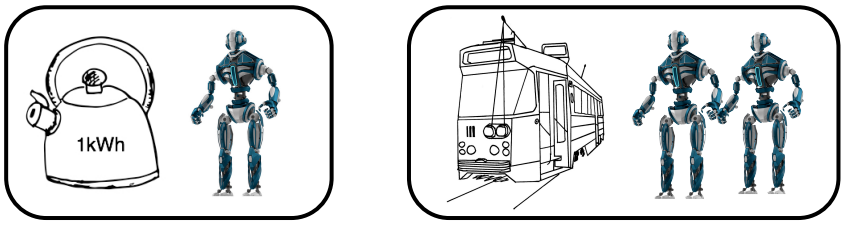
These are designed to be a fun way of exploring issues, making us aware of how reliant we are on the resources we have, as well as encouraging longer-term behavioural change.

For one week – Take a meter reading (Smart Meter / scroll button / 03 reading in kWh) Wait a week and take another, at the same time as before. How much did you reduce your usage by? Did it hurt? Which things would you consider doing long term? How does this compare to your average daily use according to your audit? How much ($) did you save?

For one week, or one day – Try to go for a week (or a day) without TV, or lights, or heating. What did you give up for a week (or day)? Was it hard?

For one week – Make sure there is never more than one light globe per person on in your home - but do consider personal safety. Could you achieve this? What were the problems that stopped you achieving this?

Kids Fun - if 1 kWh is like having a “servant” for an hour - can you work out how many “servants” you have in a typical week? Hint: Toast for breakfast can add up to 1 ”servant” Watching TV a few hours each night can add up to 4 “servants” in a week. Boiling a kettle can add up to 1”energy servant” - catching a tram to work can add up to 2 “servants”



More Energy Robot pages on the website [2.3]

Suggested Session Plan	
Catch Up - how has everyone’s week been?	10 min
Review Energy - what surprised you? how did your energy use compare? look back at where energy goes - how you you compare?	30 min
Low Cost Actions - which of these are you already doing? can you suggest other measures, other great ideas? how much ($) did you save?	30 min
Planned Spending - which of these have you already done? how has it worked out? what actions do you think you might take on?	30 min
Challenges and Fun Ideas - suggest other ideas and activities?	10 min
Before you close Session 2, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

Further Information and Resources on our website.[2.4]

Session 3 : Food

In this session we will look at the where and how of our food

Global food production doubled from 1960 to 2000 as we industrialised agriculture, but climate change impacts, and population growth, predict a further 70% increase will be needed by 2050 if we continue on the same path. However the ecologic cost of having the current huge variety of out-of-season, imported, and convenience packaged foods is huge - 30% of our ecologic footprint .

- processing, packing, transport, storage and waste disposal consumes fossil fuel & energy.
- large scale single product farming - monoculture - has depleted soil & caused erosion.
- modified “high yield” crops need chemical fertilisers and pesticides (most made from oil).
- Industrialisation needs money and so concentrates ownership and control.
- convenience packaging needs salt & fructose for shelf life, and colouring for marketing.
- high turnover, large scale farming needs locked in, large volumes, of water.

More on the industrialisation and ecologic footprint [3.1]

So Where Do You Stand Now on Food?

Let us start with a food audit of your meals and food sourcing [a full detailed audit [3.2]]

What is Your Typical Mix of Food Types?

Tick Your Usual	Meats	Veg	Fruit	Dairy	Grains	Fish	Nuts
Breakfast							
Lunch (workdays)							
Lunch (weekends)							
Dinner							
Tea Breaks or Snacks							

Keep a diary of your meals for a week and make a note of:

- the source of each part - Imported, product of Australia, or sourced local item / home grown
- the type of packaging - all waste (red bin), recyclable (yellow bin), or your bags & handling,
- the degree of pre-processing - raw-fresh, half process (dried,frozen), processed/ready to eat
- the waste part - scraps fully compostable, everything eaten, cooking/washing water waste.
- the cooking energy required - 30 minutes, 1 hour, more than 1 hour

.....and estimate the percentages for each aspect - eg:

Source of Food	[12] imported	[80] Australian	[8] local / home

Source of Food	[ ] imported	[ ] Australian #	[ ] local / home #
Type of Packaging	[ ] all waste	[ ] recyclable	[ ] own bags
Pre-Processing	[ ] raw-fresh #	[ ] half processed	[ ] ready to eat
Waste Component	[ ] compostable	[ ] everything eaten	[ ] water to waste
Cooking Energy	[ ] 30 minutes	[ ] one hour	[ ] more than 1 hr

and, using a Season Food Guide [3.3], check the raw/fresh, local/home, and Australian produce #, and try to estimate how “sunlight powered” In Season vs “fossil fuel assisted” Out of Season / Hot House Grown, your meals might be:

[ ] Seasonal / Sunlight	[ ] Fossil Fuelled

The Issues Around Food

Sources of Food

Food Miles - a study found that the total distance for all transportation for a typical food basket in Melbourne - 29 common food items, was 70,803 km - twice around the earth [3.4] [rice 9700, sugar 2300, chips 2000, tea 8300] this is expected for Imported Foods, but mass produced Australian Products can also gain travel miles between picking, and packing.

Pesticide Residues - are also an issue [apples 15%, lettuce 4%, bread 2%] [3.5] because weeds and pest insects love acres of monoculture, high volume farmed food. The industrialisation of rural regions also sparks social issues like worker exploitation, and animal cruel factory farming.

Local and Home Grown - knowing where your food comes from, meeting the growers and makers, knowing what is in your food, and seeing your money recycle through the community. But what do the claims mean? - **organic**, **chemical free**, **biodynamic**, and **permaculture** [3.6]

Types of Packaging

Some packaging may be necessary for processed and bulk foods, and there are studies that show that the plastic waste is less climate damaging than the effect of 20% of food wasted through damage or spoiling in shipping, storage, and supermarket display. [3.7]
But there is no reason (apart from economic) why the packaging is not fully recycled or reused. There are government standards that label recyclable plastic, and programs like REDcycle that manage soft plastics that otherwise become waste. [3.8]

Do It Yourself options are plentiful - start with local, low food miles, shops and farmers markets; take your own produce and carry bags; reuse your own containers for tricky items - honey, peanut butter, cleaning liquids; and use beeswax or silicone wraps and cloth fridge bags to store foods.

Pre-Processing

Raw & Fresh - hygiene and storage. Wash all food preparation areas, wash and scrub home harvested produce before bringing inside, and wash and rinse produce just before eating or making into the meal. [3.9]

Half Processed - longer life preserved foods - dried fruit, vegetables, and meats; dehydrated products like spaghetti; bottled and canned foods (oxygen, bacteria, and mould free); jams & passata, are convenient and help us extend seasonal foods, but check the ingredients list on commercial items. [**3.10**]

Ready to Eat - basically engineered food. While convenient and tasty, the ingredient list highlights the salts, sugars, colourings, and flavour agents, needed to give these an appealing appearance, a long shelf life, and to use up cheaper base ingredients. [3.11]

Waste Component

Compostable - the most basic is fruit and vegetable peelings and cuttings saved for your compost bin. But by using a Bokashi type fermentation system, prepared foods, meat, dairy, egg, coffee & tissues can also be turned into compost. [3.12]
Everything Eaten - thoughtful planning means no wasted food, just enough for the one meal, or a cascade of left-overs into other meals. [3.13]
Water Waste - hygiene and meal preparation comes first, but develop a plan for the separation and collection of this water, and use it to grow more food.

Cooking Energy

Time is Money & Energy - cooking multiple meals at the same time - so investigate pressure cooking, pans matched to tasks, microwave, solar & turbo ovens [3.14]

Spending On Food Options

Nil Free Food - check out your local Food Swap groups, explore apps for “excess produce” groups, and guerilla gardening, even check out dumpster diving. [3.15]

Nil-$ Go Vegetarian - avoiding the problems of animal rights, factory farming, and hormones in meat, plant farming is 20 to 50 times more efficient than meat production, and contributes 5 to 30 times less in greenhouse gas emissions. Try fewer meat meals and smaller portions, and if you do buy meat, swap quantity for quality, and grain-fed for grass-fed.

$$ Sustainable Seafoods - while an excellent food source, global fish stocks are declining and many species are endangered - shop using a sustainable seafood guide [3.16]

$ Farmers Markets - and local food swaps, farm gate sales, and community gardens - explore your local area and enjoy the fresh, seasonal foods. A food swap described [3.17]

$-$$ Shop via OpenFoodNetwork.org - go online via the search directory or the interactive map, and discover specialist shops, bulk food wholesalers, food co-ops, organic farms, orchards, and vineyards. Plan a visit or order online. [3.18]

Grow Your Own

$ Small Space Container Garden - herbs like thyme, rosemary, basil, mint, and garlic chives, salad & asian greens (rocket, lettuce, tatsoi) and strawberries. If a bit more room go for pots of dwarf tomatoes, and chilli bushes. But check - good sun, not too hot, and water often.

$ No Dig Garden - on a base of wet newspapers (weed barrier) build a “lasagne” of alternating brown (carbon-based - straw, leaves, wood chips, newspapers) and green (nitrogen-rich - manure, compost, worm castings.) layers. Water each as you build. Perfect for potatoes, beans, pumpkins, & in second year for deeper rooted vegetables - carrots, onions, beetroot.

$$ Suburban Bush Tucker - edible Australian native plants like muntries, finger lime, warrigal greens, apple-berry, native pig-face, midgen berry, and sea-celery, can add spice to small gardens. In larger spaces, trees like riberry, and macadamia. [3.19]

Waste & Compost

$$ Worm Farm - go from a basic funnel in the ground, to a three layered structure on legs, Starting with a box of special worms (Tiger or Indian Blue - not garden earthworms) this will rapidly compost fruit and vegetable kitchen waste, and produce highly nutritious liquid fertiliser.

$$ Bokashi System - Collect your fruit and vegetable peelings and buy a Bokashi type fermentation system, so that prepared foods, meat, dairy, egg, coffee & tissues can also be tuned into compost.

Extending Shelf Life

$-$$ Food Preservation - invest in or share a bottling kit, preserving jars, or a food dehydrating cabinet, and take a class or learn online how to process foods into jams, pickles, sauces, and dried fruits and vegetables. [3.20]

Nil Minimalism - sort your pantry, bring older items to the front, sort your fridge and cloth wrap cucumber, herbs, capsicum, celery, beans and eggplant, don’t pack the shelves - let the fridge breathe on the inside. Store potatoes and onions in the dark and cool and away from each other, because like bananas, they give off a gas that quick-ripens and spoils other vegetables.

One important issue is the huge amount of water used to grow food.
In Melbourne per day, our houshold use averages 262 litres,
but the food for that household uses 475 lt per home, per day. [3.20]

Challenges

These are designed to be a fun way of exploring issues, making us aware of how reliant we are on the resources we have, as well as encouraging longer-term behavioural change.

For one meal – Just for you (or organise a multi household street event) - try to source everything from just your local region - maybe only things from your farmers market.

Forever – Make one day a meatless day, and then see if you can add more days.

Over one month – Letter-box survey your neighbours asking who composts, and who has chooks, worm farms, and bokashi bins, then suggest starting a food waste share program - swap food scraps for fresh eggs, or worm castings and juice, or just help someone with no garden manage their scraps.

One weekend - look up the OpenFood Network or online search your town and plan a family walk, bike, or car trip, to visit a community garden, food co-op, organic farm, or just to find a new wholefood grocer.

During the year - look up Permablitz online. Explore going on a blitz to help out and learn garden skills, and then consider using a blitz to build or revamp your own garden

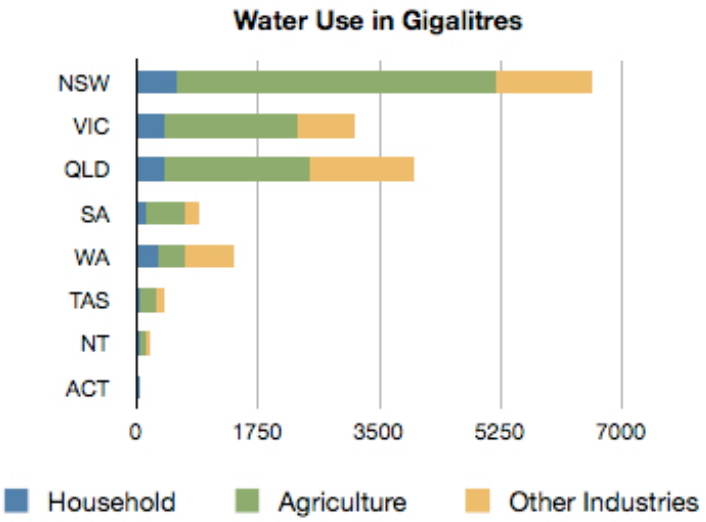
Kids Fun - start a carrot top garden, or plant seeds in soil or potting mix in an egg carton. Give them their own space in your garden. Ask older kids to write out, and illustrate, vegetarian or local food recipes, and make a street recipe book.

Suggested Session Plan	
Catch Up - how has everyone's week been?	10 min
Review Food - what surprised you? what did you discover looking at your eating and food purchasing patterns?	30 min
Issues Around Food - which of these have you already considered when making food choices? did anything change your mind?	30 min
Planned Spending - which of these have you already done? how has it worked out? what actions do you think you might take on?	30 min
Challenges and Fun Ideas - suggest other ideas and activities?	10 min
Before you close Session 3, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

Session 4 : Water

In this session we will look at the use of fresh water.

Only 2.5% of the water in the world is fresh or salt free. Two thirds of this is locked up in snow and ice, and a third is underground in soil and aquifers. Only 0.3% is available in rain, rivers, and lakes. With climate change predicted to make rain events more unpredictable - more droughts and more floods - water conservation and management is becoming crucial.



Most of our fresh water is used in Agriculture. Other Industries include manufacturing, electricity and gas production, and commercial business
In QLD and WA, Mining is a large water user in the Other Industries data.

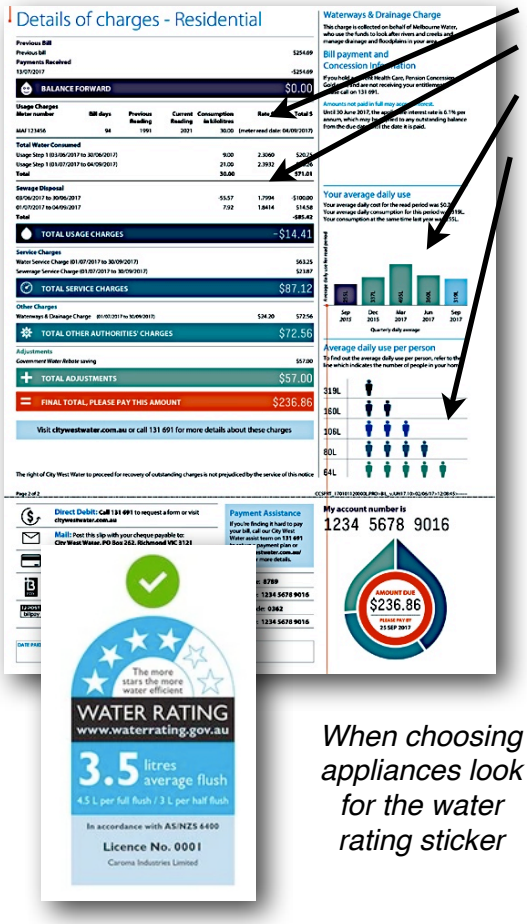
Our national average per person is 262 litres/day for household use.

This varies by State (litres/day/person)

NSW	- 204	WA	- 322
VIC	- 177	TAS	- 189
QLD	- 214	NT	- 602
SA	- 177	ACT	- 209

How Much Water Do You Use?

a

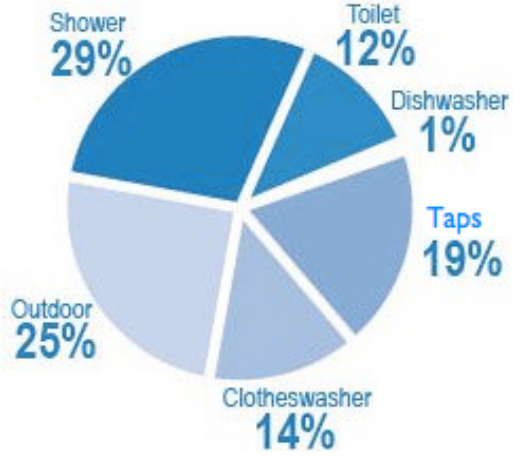


Your bill will show the details of the meter reading the service supply charges (cost to be connected) comparison with your use, and the year before and a guide to how you rate with other households

Worksheets for water usage on our website [4.1]

When choosing appliances look for the water rating sticker

Where Do You Use Water at Home? [4.2]



Why Save Water at Home?

Domestic water use is only a small part of our national use, but everything we do to save water (and money) at home has other impacts too. [4.3]

- **Reduce energy use and greenhouse gas emissions:** It takes energy to pump, treat and supply water to our homes. We then use energy to heat that water. For every drop of water you don't use, you are saving energy and reducing greenhouse gas emissions.
- **Support the natural environment and wildlife:** Becoming water aware at home spills over into being water aware in business, in choosing what we buy, what we use, and our politics. Good water management policy and water efficient infrastructure is vitally important.

Low-No Cost Tips for Saving Water at Home

Anywhere with a Tap

- √ Fix any leaks - a new washer or tap head can saves litres per hour in drips
- √ Turn off the tap when not actually using the water.
- √ Collect any clean (enough) water from one task and use it in another.
  (Rinse water can be used for the first wash of dirty dishes or watering plants)
- √ Install aerator or low flow heads to make taps efficient water misers.

Kitchen

- √ Don't rinse dishes under a running tap, use a bucket or second sink.
- √ Collect any running water in a tub or bottle and use it on plants
- √ Wash vegetables and salad in the spinner bowl and save that water too.
- √ Don't defrost under running water, plan ahead and fridge defrost.
- √ Wait till the dishwasher is full, then put it on, and use it instead of the sink.
  (modern dishwashers use far less water than a couple of smaller hand-washed jobs)

Bathroom

- √ Fit a low-flow shower head.
- √ Don't leave the tap on when brushing your teeth - rinse, spit, on off.....
- √ Buy a shower timer (or one song on the phone) for a 3-4 minute shower.
- √ Consider a basin (sponge or cloth) bath if just a quick clean is OK.
- √ Use a bucket to collect the cold shower water before it starts to run hot.
- √ Ban baths - or for kids, just enough water to clean them (and for a couple of splashes)

Toilet

- √ Install a two button, low flush toilet cistern (flush water tank)
- √ If stuck with an old cistern, explore using tank inserts to reduce overall volumes.
  (clean river stones, a bottle filled with water or sand - just don't block or jam it)
- √ Only flush when necessary - "if it is yellow, let it mellow....." you get the idea.

Laundry

- √ Double check that things need full machine washing - maybe rinse & air dry?
- √ Start with a 4-star water and energy efficient washing machine, preferably a front loader, and then read the book - find the right setting for the task (water level, temperature, number of rinses, wash times) - and fully load per cycle.

Outdoors

- √ Redesign your garden - replace the grass lawn (or let it go brown in summ

- √ Replant with local Australian native plants and trees - these will already be drought tolerant, and will suit the local native birds and insects.
- √ When needed - water deeply and infrequently, to encourage strong roots and deep water storage both in the ground and in the plants. Worms like that too.
- √ Mulch deeply - it stops evaporation, chokes weeds, and give mini-beasts a home.
- √ Rake and broom clean paths - don't use water spray cleaning.
- √ Hand water, don't use sprinklers unless supervised - intelligent watering works best.
- √ Got a pool - use a pool cover to stop evaporation, use a cartridge filter instead of wasteful back-washing, divert rain-water to top it up.

Planned Spending for Saving Water at Home

Greywater

Used water from bathrooms and laundries, some kitchen water (but not toilets, and dishwashers)

$ Grey Water Diverter Funnels - rubber or silicone funnels that can be pushed into outlet pipes, usually at inspection points, to block and divert the water into garden hoses. This is not recommended for edible plants or herbs, good for general gardens & grass [4.4]

$$$ Grey Water Systems - using commercial parts and plans to permanently divert grey water into a sequence of settling, filtering, and treatment processes, so that the end water can be used across the whole garden. Some systems use above ground pods, others use pipe and sand/gravel sub-soil networks. [4.5]

Rainwater Collection

$$ Downpipe diverters - replace sections of downpipes with leaf filter and diverter modules - connected to suitable diameter hoses to garden beds or storage tanks. [4.6]

$$$ Tanks - research first - a litre of water weighs I kilogram - so tanks need flat stable bases or stands. They also need clean input water, so gutters, diverters, and filters will need to be kept clean. Water from a tank flows according to the height from the top of the water in the tank to the final outlet point - hydrostatic pressure - but 1 meter only produces 1.4 PSI and a garden tap is typically 40 PSI - you may need a pump as well.

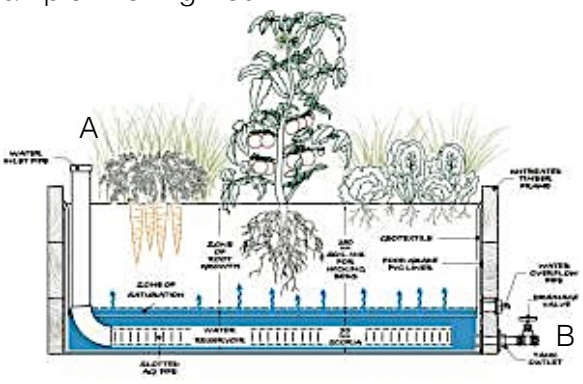
$$ Swales - study the flow of rain water across your garden. Think about changing the levels of garden beds, or building earth walls to create mini dams, or just small barriers to slow the flow of water across the garden.[4.7]

Warning - tanks and pools of still water are breeding grounds for mosquitoes

Garden Beds

$$-$$$ Wicking Beds - these are [4.8] constructed garden beds that enclose a water-proof inner membrane. This holds an inlet stand pipe (A); and is punctured by a drain pipe with tap (B). The bottom of the inlet pipe is covered with a layer of washed sand or gravel (the water layer), topped with a water permeable geo-fabric to separate the soil and plants from the water. The soil bed sits on the geo-fabric. The water in the base comes up to the plants as water vapour and straight into the roots, making these efficient and easy to manage systems.

Sample Wicking Bed



$-$$ Soaker Hoses - there are three types - above ground, granular rubber, hoses that weep water under pressure; - below ground, plastic piping with pre-cut slots that leak water at all pressures; and - plastic kit systems that drip and micro-spray from various screw in fittings and heads, while under pressur

Challenges

These are designed to be a fun way of exploring issues, making us aware of how reliant we are on the resources we have, as well as encouraging longer-term behavioural change.

For one day – Fill a bucket (10-15 litres) per person in your household. Can you get through the day without turning on a tap? Drinking, cooking, washing and using the dirty water for the toilet. Achieving 20 litres/day is a UN Water Target, many people have less.

For one week, or one day – Try to collect all the used water (use it on the garden), and measure and record it, and compare this to your State's average use per person data.

For one week – Break your habits - plan how you wash & shower; organise meals to make dish washing minimal and efficient; re-organise your plants for efficient water use;

Kids Fun - Ask them to write 3 minute shower songs, and record them for playback. Take them to a native plant nursery and let them choose a plant each. Assign them to path sweeping and make hand watering sessions part of their household duties.

Suggested Session Plan	
Catch Up - how has everyone's week been?	10 min
Review Water - what surprised you? how did your water use compare? step through the places of water use - how you you compare?	30 min
Low Cost Actions - which of these are you already doing? can you suggest other measures, other great ideas? how much ($) did you save?	30 min
Planned Spending - which of these have you already done? how has it worked out? what actions do you think you might take on?	30 min
Challenges and Fun Ideas - suggest other ideas and activities?	10 min
Before you close Session 4, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

Session 5 : Transport

In this session we look at transport - freight and people.

All forms of Transport combined - cars, trucks, public transport, domestic flights and shipping - contribute 18% to our Greenhouse Gas emissions, the second largest after Electricity (33%).
And it is growing by 10% per decade despite more efficient vehicles, and energy saving programs.

The main part of the problem is cars, vans, utes, and light trucks, making about half of those emissions (equal per year to Queensland's entire coal and gas fired electricity emissions).

This is because we have :

- some of the worst polluting cars - no greenhouse gas emission standards on cars and many active inefficient, high polluting older cars;
- high car use - 87% of us travel by car to school or work (only 5% public transport, 5% walking,1% bike) and we have high distances travelled per person (8,800 kms national average)
- low public transport usage - despite it being at least 1/3 cheaper per kilometre than net car costs (and we have an underfunded train, tram, & bus infrastructure by world standards)

Transport solutions - improving city planning; investing in public transport; encouraging people to shift out of cars and on to public and active transport modes; and adopting technological developments such as renewable powered electric cars, buses, light rail and trains are together capable of reducing greenhouse gas pollution levels globally by 15 - 40% from business as usual, by 2050 (IPCC 2014).

So What is Your Transport Mix?

Enter km or ✓s to show your relative use of each	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Car, Ute, SUV, Van							
Tram / Bus							
Train / Light Rail							
Bike / Walk							
Car Pool / Ride Share							
Service or Delivery to you							

what about your holidays each year?

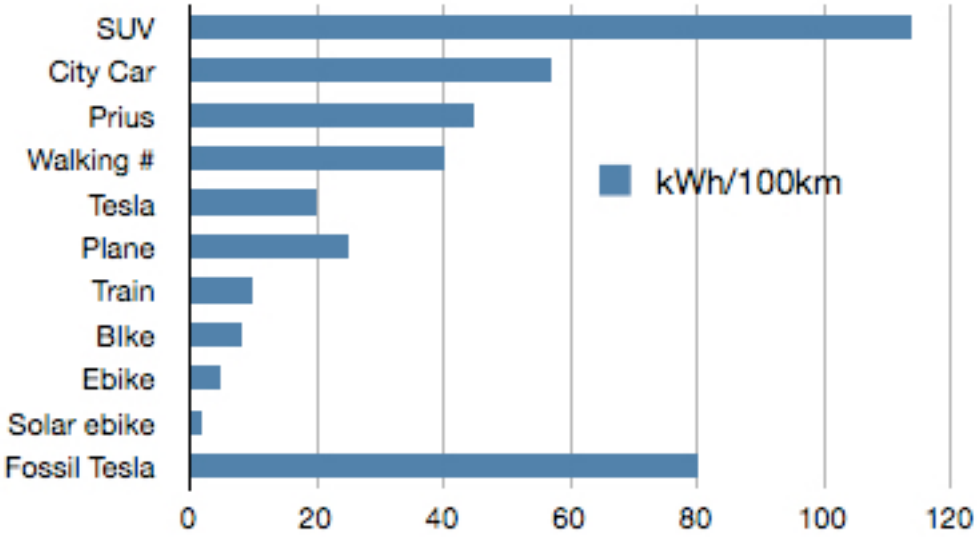
Overseas Holiday		Interstate Holiday		Local Holiday	

Urban Planning & Safety

Now go back and circle the daily transport choices that you had to make because of poor urban planning (you had no option other than use a freeway, public transport timetables don't suit, etc.) or for safety reasons (poor lighting or access, infrequent services, general safety, etc.) and an extra big tick where good planning supported your choice.

How Much Energy Does it Take?

We know how much heat energy is in a litre of fuel, so we can use kilowatt hours to compare forms of transport (including human power if we add in food energy too #)



Public or mass transport compares well if it is fairly full, but electricity from non-renewable, fossil fuel based generation blows out any energy advantage in electric cars and bikes.

(the Walking # data assumes high transport supermarket shopping and falls dramatically if you switch to home grown and local, low food mile sources, and vegetarian diets)

More about energy efficiency in transport on our website [5.1] and our transport footprint [5.1.1]

Tips for Transport Efficiency

Walk or Ride

- √ A staggering 50% of trips are less than 2 kilometres. And many bicycle trips actually take less time than the same trip by car. (Add in the exercise and proven boost to mental health!)

Driving Well (when you must use a car)

- √ Regularly check your tyre pressure. Under-inflated tyres can increase fuel consumption by 3 per cent and take 10,000 kilometres off the tyre's life.
- √ Service your car regularly. A well-tuned car can use 15 per cent less fuel.
- √ Slow down. Driving at 90 kilometres per hour uses 25 % less fuel than driving at 110 k/h.
- √ Don't idle. If you are stopping for more than ten seconds, turn your car off.
- √ Drive smoothly. Stopping and starting uses more fuel.
- √ Under 70 km/h - Open your window rather than using your air conditioner. Air conditioning can increase fuel consumption by 10 per cent. Over 70 km/h the drag caused by having your window down will use more fuel than the air conditioning.
- √ Screw on your fuel cap firmly to avoid evaporation and leaks when turning corners.
- √ Travel light. Don't use your car to store tools and sports equipment, an extra 50 kilograms of weight increases fuel consumption by 2 per cent.
- √ Remove roof racks and anything fixed to the outside of your car when they are not in use to minimise wind resistance.

Plan Ahead

√ Organise a number of small errands into one trip to save time and fuel. Consider if a phone call, email or letter would do instead. Make a shopping list in advance.

√ Use Google Maps or a local map app to explore the transport options - use the walk and transit options to compare trips - add on the car parking costs and time wasted.

√ Talk to friends and co-workers and explore ride sharing and car pooling options.

√ If you can buy a transit card, keep it topped up, it might seem like money spent. But if it means you can quickly take a public transport option it will save you, and the planet, in the long run. Also check your event ticket, many now include free public transport to reduce congestion.

Planned Spending for Better Transport

Bicycles

$ Basic Bikes - any good quality bike - but buy from a bike shop and have it fitted to your size and how you plan to use it - learn how to service it, or visit a Repair Cafe.

$$ E Bikes - as above, but learn about charging and maintenance, and learn how to ride one - it is not the same as a pedal bike, and how the power kicks in can affect your ride.

$$$ Cargo Bikes - pedal or electric, these can replace a family car, plus it is lots of family fun.

More about bikes, bike safety, and electric bikes [5.2]

Hybrid & Electric Cars

$$ Petrol Hybrids - Petrol drive cars with electric motors that support the petrol motor. They smooth out the starting and low speed running and improve fuel economy by assisting when the petrol engine's revolution (spinning) range is most fuel inefficient. They can have low speed, short run EV (electric only) options, handy in car parks. They charge their battery when driving on petrol.

$$$ Plug-In Hybrids - Electric drive cars with petrol engines that charge the battery pack, and support the electric motors under heavy load, high road speed, or when the battery is low. These can be changed from electric power sockets at home and from fast charger stations. These do not drive like petrol or hybrid cars. The petrol engine only runs in its most fuel efficient range so overall fuel efficiency if high, and general daily use can be entirely battery only.

$$$$ Electric Vehicles - Electric drive and high capacity battery cars. These are recharged from dedicated home electric sockets and special fast charge stations. The electric motor technology monitors most aspects of the car and mildly adjusts driving and braking to maximise battery range so that 200-300 kilometre trips are normal. These cars are also quick and nimble on the road. [5.5]

Car Share

Nil Car-Pooling - the most basic is to talk to friends, co-workers, or neighbours and arrange sharing around each other's cars and common destinations.

$ Ride Sharing - many commercial driver services, and some hire car services offer booking apps that allow multiple passengers to share all or part of the total trip or car hire period. More [5.3]

$ Car Share - with online booking systems and membership requirements, these range from using a private car for short trip and holiday trip use, to commercial car and van short use systems. The advantage is reduced net car ownership, no servicing and maintenance costs for the user, and fall-backs for breakdown or other road issues. More [5.4]

Holidays

Local is Best - cutting back on travel costs means more luxury and special activities, it also boosts the local economy and helps decentralise and grow regional communities.

Challenges

These are designed to be a fun way of exploring issues, making us aware of how reliant we are on the resources we have, as well as encouraging longer-term behavioural change.

For one week – keep a travel diary and then sit down and map each on Google Maps, see what walking and public transport options you might have taken. Were you surprised, or did it just make the current poor infrastructure more obvious?

On one weekend – Go to a local professional bike shop (or e-bike or cargo bike shop) and get up to date with current bike technology, design, and commuter options.

On one weekend – Plan a public transport outing. Pack a picnic and travel out and around on the networks sightseeing as you go, or plan a no-car picnic at a park or beach accessible by train or bus, or bike (- if you already ride)

For one week or more – Join or organise a local "Walking School Bus" so that groups of neighbourhood kids are supervised as they walk to school.

Anytime – even if you don't go, explore the options in local holidays. Newspapers and motoring organisation magazines often feature local destinations, trips, and sights. Have fun just planning a fun, interesting, or luxurious, local holiday.

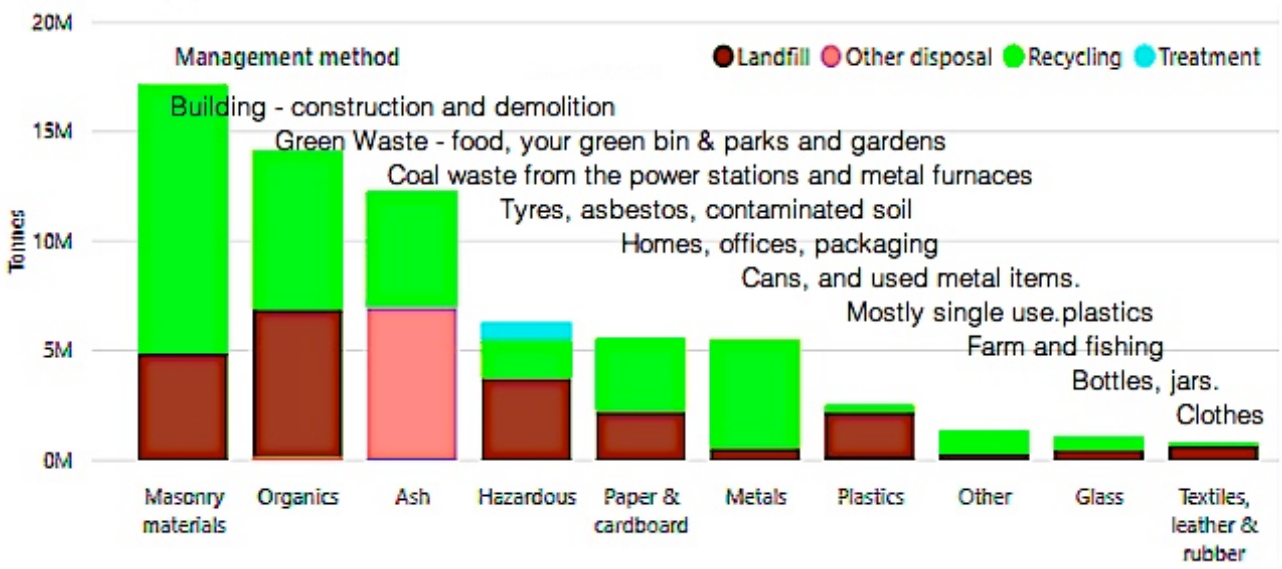
Kids Fun - anything on wheels can be fun for kids - plan walking shopping trips with bikes, scooters, skateboards, and Yes! I even saw one family shopping in a wheelbarrow.

How much space do 200 people take up? Can you draw this?
1 train carriage (54 sqm) = 4 buses (144 sqm) = 200 cars (1500 sqm) = 1 bike path (400 sqm)

Suggested Session Plan	
Catch Up - how has everyone's week been?	10 min
Review Transport - what surprised you? how did your transport use compare? were you aware of the range of energy uses per passenger?	30 min
Efficiency Actions - which of these are you already doing? can you suggest other measures, other great ideas? how much ($) did you save?	30 min
Planned Spending - which of these have you already done? how has it worked out? what options do you think you might take up?	30 min
Challenges and Fun Ideas - suggest other ideas and activities?	10 min
Before you close Session 5, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

Session 6 : Waste & Consumption

In this session we will look at what we use and the waste we produce



The figures on what we use, and what we need to manage as waste, is staggering. Annual waste comes to 3,300 kgs per person. A 1/3rd household waste, a 1/3rd commerce, a 1/3rd construction.
Overall around 53% is recycled or reused, but this varies by waste type:

Building 72% Green 54% Ash 43%(mostly roads) Hazardous 27% Paper 60%
Metals 90% Plastics 12% Other 80% (includes farm waste) Glass 57% Clothes 4%

This is only part of the story - studies suggest that we use up 70 times as much in raw resources to make each kilogram of what we then consider waste. And a lot of the “waste” was never used in the first place - a 1/5th of food bought is never eaten and gets sent to rubbish. more [6.1]

So Where Do You Stand Now on Waste?

The ABC TV series “ War on Waste” - highlighted the the areas where households and schools can make a difference with waste - a summary of the series is on the website [6.2]
But some of the facts were:

- 85% of soft plastics from bags and packaging ends up in landfill.
- On average 1/3 of household rubbish is food waste.
- Supermarkets and food retailers send about 170,000 tonnes of food to landfill each year.
- Three-quarters of clothing purchased is thrown out within a year.
- It takes 2700 litres of water to produce one item of clothing.
- 1 billion, single use, coffee cups are used in Australia every year, and not recycled.
- Glass is infinitely recyclable - but only 56% gets recycled.
- 1 billion plastic water bottles are bought in Australia every year - 20% get recycled.
- A school was sending 9 tonnes of rubbish a week to landfill - costing them $2,300 a month

How Full is Your Typical Council Bin on Collection ?

Type	How Full
General Waste - Red Bin	Full 3/4 Full 1/2 Full 1/4 Full Empty
Recycling - Yellow Bin	Full 3/4 Full 1/2 Full 1/4 Full Empty
Green Waste - Green Bin	Full 3/4 Full 1/2 Full 1/4 Full Empty

Does your council take food recycling in the Green Bin ? (FOGO)

The Waste Hierarchy - waste avoidance and resource recovery strategy

The original 3R's strategy - Reduce, Reuse, Recycle - was easy to understand and got action underway, but it did not try to design waste out of the system in the first place.
So it has been expanded and current government and industry waste hierarchy policies now focus on avoidance rather than better disposal methods. The most important action starts with avoid & rethink & reduce, with the need to treat and dispose being the least of the activities.

This same strategy can be applied to domestic waste management.

Refuse, Rethink & Reduce

- ☐ Refuse plastic bags, go prepared with re-useable bags, containers and carry bags.
- ☐ Reject the poorly packaged option. Look for alternative items, or try other outlets.
- ☐ Rethink the source of supply - consider farmer's markets, local suppliers, places where you can question the design, packaging, materials, and drill back to the production methods.
- ☐ Rethink services and conveniences - can a bit of forward planning reduce the waste you have to deal with, reduce the amount of materials used, and reduce nett energy or fuel use?
- ☐ Actually rethink every purchase - do you really need it? Are you reacting to advertising?
- ☐ Reduce the chemicals in the home - try simple natural cleaners like vinegar/lemon juice liquid cleaner, or bi-carbonate of soda scrub.
- ☐ Refuse to use anything made with PVC, or polyvinyl chloride, as these create dioxins during manufacturing, use, and disposal. And dioxins are known carcinogens.
- ☐ Refuse (by Returning) excess packaging on consumer items and electronics.
- ☐ Rethink the use of virgin materials, look for the things made from pre-used materials, encourage a circular economy where resources go back into productive use.
- ☐ Reduce nett waste by choosing biodegradable options when available.

Reuse

- ☐ Choose new items that promise to have a long life. Re-fillable water bottles, stainless steel lunch boxes, metal cutlery sets, cloth napkins, handkerchiefs, cotton and bamboo cloths.
- ☐ Research big purchases and household appliances for ease of repair, degree of recyclable materials at the end of it's life, lack or otherwise of toxic materials, & durability of surfaces.
- ☐ Do It Yourself options are plentiful - make your own carry bags, beeswax food wraps.
- ☐ Reuse containers and shop at bulk foods stores, find shops and markets that let you drop off clean empties and take the same, newly filled with products, including wine and milk.

Rehome, Repurpose (recycle)

- ☐ Rehome surplus items through Charity Op Shops, lists on Gumtree or Freecycle.org, posts on local Good Karma and similar neighbourhood, or special interest, Facebook Groups.
- ☐ Rehome by organising neighbourhood Garage Sales and Swap Meets.
- ☐ Repurpose by inventive use of old furniture, building materials and fittings as new items.
- ☐ Repurpose chipped cups as pots for plants, old sheets as soft cleaning cloths, an old suitcase as a pet bed, shattered pottery as tiles in a garden mosaic.
- ☐ Repurpose (recycle) in using things for other functions, like a mattress inner-sping unit as a vertical pot plant holder or growing wall,

Rot & Compost, Recycle

- ☐ Collect your fruit and vegetable peelings and cuttings and create a compost bin. Use a Bokashi type fermentation system, so that prepared foods, meat, dairy, egg, coffee & tissues can also be tuned into compost.
- ☐ Use cardboard and newspaper to make weed mats, or shredded as carbon rich additions to the compost bin or as mulch.
- ☐ Develop a plan for the separation and collection of waste water, and use non-greasy grey water to grow more food.
- ☐ Recycle glass separately to avoid contamination with other things in your Yellow Bin.
- ☐ Recycle by pulling things apart and making art, toys, kids play items, and by correctly recycling the parts that won't contaminate the recycle pathways (dispose what is left)

Treat & Disposal (the things you can not deal with yourself)

- ☐ Take advantage of Waste Recovery Programs - toner ink to "Cartridges 4 Planet Ark" boxes at Post Offices or other office supplies outlets, mobile phones to "Mobile Muster" or similar collection points, fluorescent tubes and bulbs to council and library collection bins,
- ☐ Investigate your council's e-waste program, and ask about old paint and oils collections.

If in doubt, go online to the many State sponsored sites, like Sustainability Victoria, that allow a search by item, to find the correct recycle options and service locations more [6.3]

What Are Other New Ideas & Actions?

Buy Nothing Project - a global network of local groups that don't sell, swap or barter, but gift into each group, posting what they have in surplus, and asking when they need something - the challenge is see if you can go 7 days without buying anything. Most groups focus on building hyper-local gift economies (and sustainable communities)[6.4]

Repair Cafe & Fix-It - Repair Cafés are free meeting places, all about repairing things together.
You will find tools and materials to help you make any repairs you need. On clothes, furniture, electrical appliances, bicycles, crockery, appliances, toys, etc.. You'll also find expert volunteers, with repair skills in all kinds of fields. This is a national network dedicated to avoiding waste. [6.5]

Zero Waste Festivals - volunteer groups, working with private suppliers, are working on making large music, arts, and sports festivals zero food and drink waste events. They do this by supplying all the food vendors and outlets with durable, washable, plates, bowls, cup, mugs, and eating implements, and setting up wash stations and supervised waste recycling bins so that the nett result is minimal landfill, some clean grey water, and happy participants. One festival of 16,000 people, over 4 days, reported a drop in landfill from 16 tons to one 240 litre bin. [6.6]

Tool Library & Library of Things - or Sharing Sheds - lots of names, but basically a subscription based lending library of power tools and serious handy-person equipment at one end, to the sort of things found in the pantry, kitchen, sewing room or play-room at the other. Pretty much everything you might need for a project or party. Booking are usually made online, with set times for use and return, so other borrowings can be booked up. Just about everything is donated, and the aim is to reduce costs, get maximum use and life out of items, and save waste.

Community Litter Action - illegal dumping and general litter costs local government around $70 million a year in collection and clean up costs. Community and volunteer groups like “Clean Up Australia” the various “Adopt A ....road, highway, town” groups, and bodies like “ Riverkeepers” are running clean up and collection events, and campaigns to raise public awareness.
There are also citizen action apps like “Snap Send Solve” that send notifications to councils, water authorities, and supermarkets of illegal or inappropriate dumping, and use photos to help prosecute offenders. [6.7]

Challenges

For one week - every time you get out a commercial cleaner, go online and look for a natural or low impact alternative like borax, eucalytus oil, lemon juce, vinegar, or salt.

Over one month - keep a diary of the tools and implements you use just once, and then think about sharing them with your neighbours, or donating them to a library of things.

Over one month - revisit the Bin Collection quiz - did you manage to reduce your waste?

Kids Fun - give out extra pocket money, but for spending at your local Op Shop, and talk about the bargains and the landfill saved. Organise a junk craft day - get ideas from books at your library. Organise a toy and game clean up and let them decide on keep-gift-donate.

Suggested Session Plan	
Catch Up - how has everyone’s week been?	10 min
Review Waste - what surprised you? what did you discover about the different product streams and industries?	30 min
Where Did You Stand - have you seen the ABC TV’s War on Waste? how waste-aware where you before this session?	30 min
The Waste Hierarchy - which of these have you already done? how has it worked out? what other actions do you think you might take on?	30 min
Challenges and Fun Ideas - suggest other ideas and activities?	10 min
Before you close Session 6, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

Session 7 : Next Steps

In this session we will look at what we might do next.

Wikipedia gives a good summary of the Transition Town movement [7.1] but basically, it started in 2004 when people applied permaculture principles [7.2] to the problem of Peak Oil [7.3] - how would communities survive if everything running on cheap fossil fuels - food, transport, housing, and business - became expensive or scarce? The lucky outcome was the realisation that when local communities created a common vision of an energy independent future, it started to happen. What they discovered was that each level of society - individual, street, neighbourhood, local business, local government - did what they could to be part of, and support, that common vision.
The range of issues has expanded as we experience the environmental impacts of climate warming, and the social, civil, & economic instabilities created by globalisation - but the solutions
that come from creating, and then working towards, a common vision still work.

Environmental scientists talk about “Tipping Points” - those changes, like ocean temperatures, or atmosphere CO2 levels, that trigger a cascade of related events and permanent changes. But there are also “Behavioural Spill-Overs” - those small changes in personal actions and attitudes that trigger further action in both the same category - eg: turning off the tap when brushing your teeth can trigger rebuilding your garden with wicking beds - and in related areas - eg: pre-sorting your household waste can trigger a deeper connection to solar energy and efficiency. However, these spill-over actions are particularly strong triggers when they are seen or shared by others.

That is the point of these sessions. You have explored, with others, a small part of the progress towards a reimagined and rebuilt world - a more caring & connected culture - one reconnected with nature - a reclaimed economy - and reimagined work, and you created your own turning points

Turning, Tipping & Spill-Over Points
Reflecting on the earlier sessions - what were your “spill-overs” - your turning points?
What action did you take and then realise it had triggered more extensive actions.

	Personal - Family	Friends - Neighbours
Energy		
Food		
Water		
Transport		
Waste		

Resilient Communities

The National Strategy for Disaster Resilience (NEMC, 2009) includes the following four, core features in its description of a resilient community:

1. functioning well while under stress - members are connected to one another and work together in ways that enable it to function in the face of stress and trauma.
2. successful adaptation - a positive response to changes in the physical, social or economic environment - shifts attention to capacity in the context of change rather than focusing solely, and unproductively, on a community's vulnerabilities.
3. self reliance and self-sufficient - not reliant on long supply chains, or external finance,
4. social capacity - high levels of trust, cooperation, and strong interpersonal relationships

This gives us a framework to develop actions and activities - **An Activism Plan**

1. practice working together - small projects like a community garden, or larger projects like a sustainability festival - focus on learning to listen and engage, on delegation and sharing.
2. work on developing skills overall - draw in the already skilled as teachers; organise knowledge-sharing opportunities - talks, films, web resources.
3. build micro-networks and mesh communications - localise as many steps in systems as possible, make transparent the connections using technology and knowledge networks.
4. be human together - integrate diversity, flatten hierarchies, listen and engage.

How Active Do We Get?

There are lots of ways and places where you can make a difference & where you can get active.
But if <u>you</u> are to be sustainable, you need to balance your personal capital and surplus.
Your work situation, physical life stage, family commitments, and mental health dictates your surplus - the amount of time, energy, and money you can spare, and the amount of stress you can absorb. This surplus will vary enormously as your situation changes, and as you become activism experienced. It is fine to temporarily use up some personal capital on a key or urgent project, but give yourself time and space to rebuild. Activism burn-out is a real thing.

Capital - Surplus	Your Examples
Integrated Activism - demonstrating your activism by activities and behaviours at work, in the home, out shopping, your choice of clothes & transport - low surplus activities	
Support Activism - giving time to volunteer in organised group activites - community gardens, fund raising events, working bees, social media networking - mid surplus activities	
Engaged Activism - committed, scheduled time to volunteer in organised activities - repair cafes, litter campaigns, permablitz, food banks, rehabilitation events, film & information nights - high surplus activities	
Planned Activism - committed time as both organiser and volunteer in group activities - sustainability events, repair cafe & library of things team, protests & demonstrations - high surplus & eating into capital activities	

What Are Your Skills - What Might You Contribute

Tick any you have done,
at any level of expertise:
beginner, amateur, expert

Clothing
[ ] Knit
[ ] Spin / Card
[ ] Dye
[ ] Sew / Crochet
[ ] Embroider / Quilt
[ ] Felting
[ ] Warp a Loom
[ ] Weave

Gardening
[ ] Weed / Turn Soil
[ ] Prune Trees & Bushes
[ ] Graft Fruit Trees
[ ] Plant Trees
[ ] Build a Veg Garden
[ ] Compost / Mulch
[ ] Save Seeds
[ ] Maintain Greenhouse
[ ] Build a Herb Garden
[ ] Use Medicinal Herbs
[ ] Pick Berries
[ ] Grow Mushrooms
[ ] Make Wicking Beds
[ ] Watering Skills
[ ] Permaculture Designer

Transport
[ ] Bicycle / Skateboard
[ ] Walk / Hike
[ ] Car Service / Repair

Animal Husbandry
[ ] Bees
[ ] Chickens / Ducks
[ ] Rabbits
[ ] Worm Farm
[ ] Catch & Clean Fish
[ ] Milk a Cow/Goat
[ ] Raise a Sheep / Goat
[ ] Shear / Fleece
[ ] Raise a Pig / Cow

Building
[ ] Build / Renovate House
[ ] Make Furniture
[ ] Build Boats
[ ] Build Music Instrument
[ ] Wood Carving
[ ] Hemp / Cob Building
[ ] Ironwork / Welding
[ ] Upholster / Leather

Energy Use
[ ] Light Retrofit a House
[ ] Install Compost Toilet
[ ] Wastewater systems
[ ] Install Insulation
[ ] Harvest Rainwater
[ ] Manage Electricity Use
[ ] Use a Windmill
[ ] Design Passive Solar

Food Preparation
[ ] Cook Healthy Meals
[ ] Bake
[ ] Make Butter / Cheese
[ ] Dry or Can Fruit & Veg
[ ] Make Jam & Sauces
[ ] Brew Beer
[ ] Make Wine
[ ] Make Yogurt
[ ] Maintain Sourdough
[ ] Smoke Meat, Fish
[ ] Use Solar Oven
[ ] Make Juice
[ ] Make Sausage
[ ] Preserve in Brine
[ ] Forage for Wild Food
[ ] Gather Mushrooms

Household
[ ] Blow Glass
[ ] Make Pottery
[ ] Make Soap
[ ] Make Cleaning Stuff
[ ] Make Lotions, Salves
[ ] Make Brooms / Whisks
[ ] Make Baskets
[ ] Make Rugs
[ ] Make Candles
[ ] Repair / Alter Clothing
[ ] Darn Socks
[ ] Mend / Make Shoes
[ ] Repair / Sharpen Tools
[ ] Repair Appliances
[ ] Repair IT Electronics
[ ] Repair Nets, Macrame
[ ] Repair a Bike

Outdoors
[ ] Chop / Split Wood
[ ] Fell a Tree
[ ] Make Rope
[ ] Build a Fence
[ ] Ride / Keep a Horse
[ ] Dig a Ditch / Channel

Wellness
[ ] Listening Partnership
[ ] Give Massages
[ ] Natural Medicines
[ ] Do Foot Reflexology
[ ] Nurse the Sick
[ ] Administer 1st Aid
[ ] Yoga / Fitness Training
[ ] Energy Healing / Reiki
[ ] Stress Management
[ ] Administer CPR
[ ] Pull a Tooth
[ ] Assist at Childbirth

Play / Creative
[ ] Computer Games
[ ] Cards / Board Games
[ ] Music / Singing
[ ] Theater / Dance
[ ] Poetry / Writing
[ ] Art / Drawing
[ ] Pottery / Sculpture
[ ] Story-Telling
[ ] Photography / Video
[ ] Team Sports

Message
[ ] Teach / Mentor
[ ] Video / Social Media
[ ] Raise Money / Grants
[ ] Write / Journalism
[ ] Lobby / Legal
[ ] PR / Blogs
[ ] Public Speaking

Family
[ ] Care for Infants
[ ] Raise Children / Teens
[ ] Care for Elderly
[ ] Care for Disabled
[ ] Pet Animal / Bird Care
[ ] Give Haircuts

More.....

Groups & Activities [TBA further insert links and pages here]

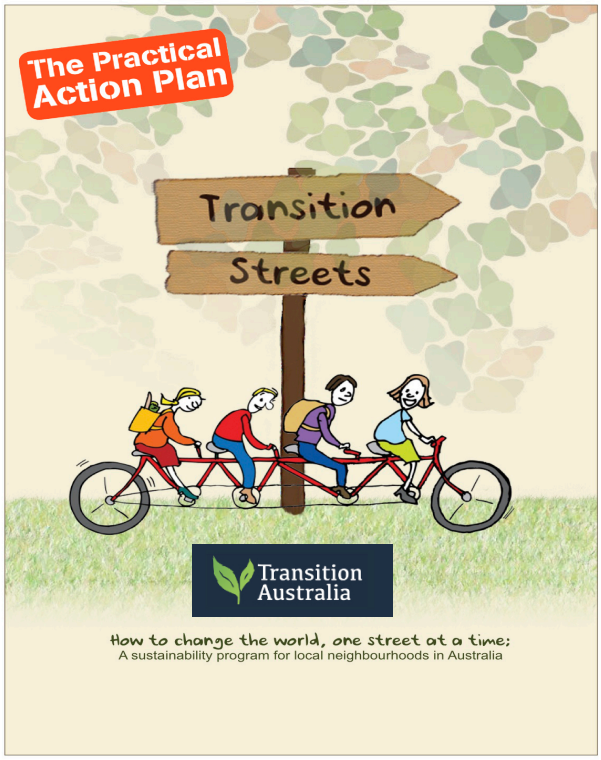
Extinction Rebellion Fridays for Future - Persistent Presence School Strike 4 Climate 350.org	Get-Up Avaaz.org	RenewEconomy Friends of The Earth
	Town Teams - Street Teams	Permaculture - Permablitz
Repair Cafe Australia	Street Library - Little Library	Boomerang Bags
Melbourne Free University - Brisbane Free University	Time Banking	Community Gardens Sustainable Gardens

Suggested Session Plan	
Catch Up - how has everyone's week been?	10 min
Review Spill-Over - what surprised you? had you already used the power of modeling behaviour?	30 min
Resilient Communities & Surplus - did this give you a framework for activism and help you find a sustainable activity balance?	20 min
Skills Audit - were you surprised by the range of skills in your group?	30 min
Groups & Activities - suggest other groups and activities?	20 min
Before you close Session 7, take time to reflect on how the session went, think of steps that might be taken in the next session, consider how the others are reacting and responding. Think Head, Hands, & Heart.	10 min

[Send your Feedback on the Handbook or Sessions]

NOTES

transitionaustralia.net



Transition Australia

How to Use this Handbook

This handbook part of a collection of resources and articles created by the team at Transition Towns Australia. The reference points like this one [1.1] mean there is more information and links to resources, groups, and activities on our website.
www.transitionaustralia.net

There are two ways to find them.

Quick Link - put the item number into Search 3.12

or

Go to Resources, then Transition Streets, and browse the entire resource bank.

Comments & Feedback - this Handbook, and the Collection of Articles and Resources are constantly being revised and updated. If you have any suggestions or criticisms, please email us on - info@transitionaustralia.net If you would like to use this Handbook in your own area, start your own group, or even modify the Handbook for your community, we are there to help. This version of the Handbook is licensed under Creative Commons - Attribution, Non-Commercial, Share-Alike 4.0

Acknowledgements - This version of the Transition Streets Handbook was inspired by previous editions published in Australia, the UK, and the USA. Special thanks to the Transition Newcastle (NSW) and Transition Streets National Working Group (NSW and VIC) - Aaron Hodgson, Alicia Martin , Allan Evans, Ben Ewald, Cathy Stuart, Christine Bruderlin, Emily Grace, George Stuart , Gillian Harris, Graeme Stuart, Hunter Water , John Merory, Julie French , Karen Toikens, Lesley Edwards, Liza Pezzano, Mary Stringer, Maureen Beckett, Max Wright, Rebecca Tyndall, Rosemary Nugent, Tom Danby, Tony Proust, and William Vorobioff.