

LIVING IN YOUR GREEN HOUSE LESSON PLAN 4-6

The best place to start being green is in your own house and at school. Your behaviour and the choices you make can have a big effect on the surrounding environment. The Green House education kit should be used in conjunction with the North East Waste Forum's mobile waste education unit - The Green House - visit to the school. The lesson-plans and worksheets contained within the kit can be used before, during and/or after The Green House visit. This kit is designed to allow teachers to stimulate student thinking and give clear guidance as to how they may become 'waste wise' community members. The premise of **reduce and avoid, reuse and recycle** is the foundation for the lessons involved in this kit and the Green House visit.



Lesson One introduces and defines basic concepts such as resources and waste. It encourages consideration of waste reduction, appropriate disposal, waste avoidance and links to greenhouse gas emissions and water consumption. It also introduces students to a learning matrix where, with their teacher's assistance students can select activities to undertake during and after the Green House visit.

The learning Matrix is a flexible form of delivering outcomes that enables students to select activities that suit their particular abilities or interests. It also allows for teachers to conduct one or more lessons on this topic or a complete unit of work extending for several weeks. Instructions on how to use the matrix are contained in this package.

It is intended that these lessons are taught in combination with a Green House visit and schools can book The Green House by contacting greenhouse@northeastwasteforum.org.au or your local council for further assistance.



North East Waste Forum

www.northeastwasteforum.org.au

To book The Green House contact greenhouse@northeastwasteforum.org.au
The Green House education Program is available for schools in the NEWF Region incorporating Ballina Shire, Byron Shire, Richmond Valley, Clarence Valley, Kyogle and Tweed Shire Councils.

LESSON AIMS AND OBJECTIVES

Introduction to Living in Your Green House.

Outcomes:

At the end of the Lesson students will:

- Have gained knowledge of resources and waste.
- Comprehend waste avoidance, reuse, recycling and disposal
- Apply this knowledge and understanding to waste reduction and avoidance strategies
- Analyse information and issues arising in waste management
- Evaluate the impact of waste disposal on the physical and social environment

Key Skills:

The Lessons aim to develop skills in:

- Observation
- Collection of data while in the field
- Application of data in the classroom using graphing, sketching and other geographical tools
- Interpretation and analysis of data collected

Resources:

- Teacher resources - Appendix 1
- Curriculum links for NSW K-6 schools - Appendix 2.
- Student Work Sheet One - Living Green in Your House and at School -Appendix 3*
- Teacher Work Sheet One - Living Green in Your House and at School -Appendix 4
- The Green House Learning Matrix- Appendix 5
- Wising Up to Waste Crossword - Appendix 6
- A Waste of Words Find-a-Word - Appendix 7
- A Climate Change and Waste word game - Appendix 8
- The Green House Walls - Appendix 9

* Student copies of Appendices are not marked with the word Appendix--

LESSON STRUCTURE

Time	Script	Presentation, Tips and Resources
5 min	<p>Introduce the Topic: Living Green at Home and at School</p> <p>This lesson is designed to stimulate student thinking around the subject of waste in their daily lives. Ultimately students should feel a sense of understanding and be stimulated to get involved in this important facet of their education and daily life.</p> <p>Brainstorm for 3 minutes with class about what "Living Green" means.</p> <p>Explain to class what going to be happening in this and subsequent lessons and what they will learn.</p>	<p>Use white board for brainstorm</p>
<p>10 min</p> <p>10 min</p> <p>10 min</p>	<p>Hand out the student work sheet</p> <p>1) Define key words</p> <p>Introduce the concept of a resource and ask class for examples. Write these on the board and instruct class to copy onto worksheet. Repeat for waste. Read or have students read the paragraph on waste</p> <p>2) Introduce the concept of the waste hierarchy. Have students put the words Avoid/Reduce, Reuse, Recycle, Dispose in the correct order in the waste hierarchy triangle on their worksheet</p> <p>3) Explore the concepts from the hierarchy.</p> <p>The balance of the worksheet provides information and requires students to give examples from their home and school experience.</p> <p>Teachers can reiterate and emphasise points and discuss as necessary. Where students are to add examples it is suggested at some point the list(s) be padded up by teacher input from the solutions worksheet or a lists developed with student input on the whiteboard that all students can copy down.</p> <p>Additional resources can be found on the NEWF website under the Education Section and School resources. These include:</p> <ul style="list-style-type: none"> • Preparing a low waste lunch • Setting up a school compost heap • Setting up a school worm farm • Implementing a recycling system in the school • Conducting a waste audit • School waste fact sheets <p>With section of the lesson completed the students will be suitably informed to make The Green House visit far more meaningful, enjoyable and help reinforce the central themes of waste and waste minimisation.</p> <p>If the lesson is completed after Green House visit it will serve to</p>	<p>➤ Teacher Worksheet 1</p> <p>➤ Student Worksheet 1</p> <p>You can draw a triangle on the board for this. See solutions teachers Worksheet</p> <p>Show graph of schools waste available in Schools Waste Fact Sheet – www.northeastwasteforum.org.au - A_Z of Waste</p> <p>Low waste lunches are at www.northeastwasteforum.org.au under Education projects/ Early childhood/ resources The Green House Poster Walls – Appendix 9 or available for download in poster</p>

	<p>reinforce what students have learnt and allow them to personalise what they have learnt.</p> <p>** If time is short, or the school has not received the teachers kit prior to The Green House visit, please provide copies of The Green House walls to the students to review and research in class to complete Matrix exercises.</p>	<p>format or on-line viewing at www.northeastwasteforum.org.au</p>
15 min	<p>4) Introduce the Learning Matrix</p> <p>The 'Green House Learning Matrix' has been developed to allow teachers a one day follow up or several days if that suits curriculum guidelines and timetables. The Matrix is designed to allow students to follow their interests and capabilities whilst gathering information and presenting works that demonstrate what they have learnt.</p> <p>It is important that students receive a copy of the Learning Matrix before or as soon as possible after their Green House visit. Some of the tasks will require them to search out and copy information from the Green House poster walls which are in Appendix 10 or available for download on www.northeastwasteforum.org.au (to save on printing costs).</p> <p>As the amount of time spent on these tasks is unknown by the Green House development team the teacher can reduce student requirements by deciding which of these tasks may be selected, for example limiting selection to Knowledge and Comprehension or Verbal and Mathematical tasks only.</p> <p>The matrix tasks are considered least challenging in the Knowledge row, to most challenging in Synthesis and Evaluation rows. If this is an assessable task a sliding scale of points earned is used, for example 1 -6 points for Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation respectively. Alternately students can be required to do three Knowledge tasks or two Comprehension and Application or one Analysis, Synthesis and Evaluation.</p> <p>If students have finished their tasks early the 'Waste of Words' find-a-word, 'Wising up to Waste' crossword and Climate Change word game are available to keep their minds busy. Drawing of posters is also a fun way for students to express their new found knowledge and provide educational information on class walls.</p>	<ul style="list-style-type: none"> ➤ The learning matrix – one copy for each student ➤ The Wising up to waste Crossword ➤ A Waste of Words find-a-Word ➤ A Climate Change and Waste word game
5 min	<p>Ensure students have selected a task or set this as homework if time is short. Again the Matrix can be done entirely in class with the provision of copies of the Green House poster walls.</p>	

Feedback

We welcome any feedback or suggestions you have in relation to the information presented in this kit, and in particular, the learning matrix. Please email education@northeastwasteforum.org.au or contact the NEWF Education Office on Ph. 6685 3651.

Teaching Resources

Sustainable Schools NSW

www.sustainableschools.nsw.edu.au

Resource Centre, Developing a plan & Our Community

Environmental Education Unit, Curriculum Support

www.curriculumsupport.education.nsw.gov.au/policies/envired/index.htm

Environmental Education Policy & Implementation documents, Audits and action plans & Sample SEMPs

Local Programs & Support from: Dorrroughby Environmental Education Centre

Telephone: 6689 5286

www.dorrroughby-e.schools.nsw.edu.au

Excursions, fieldwork, environmental activities, school planning

Catholic Earthcare

www.catholicearthcareoz.net

A-Z of Waste Fact Sheets

www.northeastwasteforum.org.au

NSW Department of Environment and Climate Change

<http://www.environment.nsw.gov.au/warr/index.htm/>

Waste Wise in Schools, Sustainability Victoria

<http://www.sustainability.vic.gov.au/www/html/1861-waste-wise-schools.asp>

Waste Management Association of Australia

<http://www.wmaa.asn.au/>

Resource Smart Victoria

http://www.resourcesmart.vic.gov.au/for_educators/waste_and_recycling_3168.html

A very comprehensive user guide for completely transforming way waste is dealt with in schools. This website provides information, tools, training packages and anything you may need to know regards changes to make to reduce your schools environmental footprint.

Lessons in 'How To Recycle ffectively'

http://www2.epa.nsw.gov.au/resources/spd_mur_infoall.pdf

Murphy who works at the Materials Recovery Facility (MYF..Murf) takes participants through all recycling processes and the suitable and non suitable products. Presented in cartoon style and good for all ages.

Syllabus Links

Appendix 2

The **Green House Teachers Kit** complies with the aims of The Human Society and Its Environment K-6 Syllabus to develop in students the values and attitudes, skills, and knowledge and understandings that:

- enhance their sense of personal, community, national and global identity, and
- enable them to participate effectively in maintaining and improving the quality of their society and environment

The Kit fulfills the objectives to:

- Gain **Knowledge and understandings** of Environments and Social systems and structures
- Develop **Skills** in Acquiring information, Using an inquiry process and Social and civic participation
- Foster **Values and Attitudes** with interest in, and informed and responsible attitudes towards, people, cultures, religions, societies, environments and learning, with a commitment to: Ecological sustainability

More specifically the following **Stage 1-3** outcomes are fulfilled in the abridged focus areas below:

Stage 1 Outcomes	Stage 2 Outcomes	Stage 3 Outcomes
<p>Environments ENS1.6 Relationships with places Demonstrates an understanding of the relationship between environments and people.</p>	<p>Environments ENS2.6 Relationships with places Describes people’s interactions with environments and identifies responsible ways of interacting with environments.</p>	<p>Environments ENS3.5 Patterns of place and location Demonstrates an understanding of the interconnectedness between Australia and global environments and how individuals and groups can act in an ecologically responsible manner.</p>
<p>Students in Stage 1 will learn about: Environment</p> <ul style="list-style-type: none"> • adaptations to environments to fulfill needs • changes to the immediate environment as a result of meeting needs and wants • personal and shared values and responsibilities towards features, sites, places and environments • care of resources, including waste disposal 	<p>Students in Stage 2 will learn about: Environment</p> <ul style="list-style-type: none"> • environmental changes • management and care of features, sites, places and environments 	<p>Students in Stage 3 will learn about: Environments</p> <ul style="list-style-type: none"> • effects of human and natural changes on environments • ecologically sustainable development of environments • different perspectives about the maintenance and improvement of environments

Living Green in Your House and at School

Avoid Wasting Our Green Planet!!

The best place to start being green is in your own house and at school. Your behaviour and the choices you make can have a big effect on our environment.

First we need to understand a few important words:



What is a **resource** ?.....any land, raw materials or human activities that are considered valuable and used by people.

What are a few examples?

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What is **waste** ?.....an unwanted or undesired material or substance.

What are some of the common names we give to waste?



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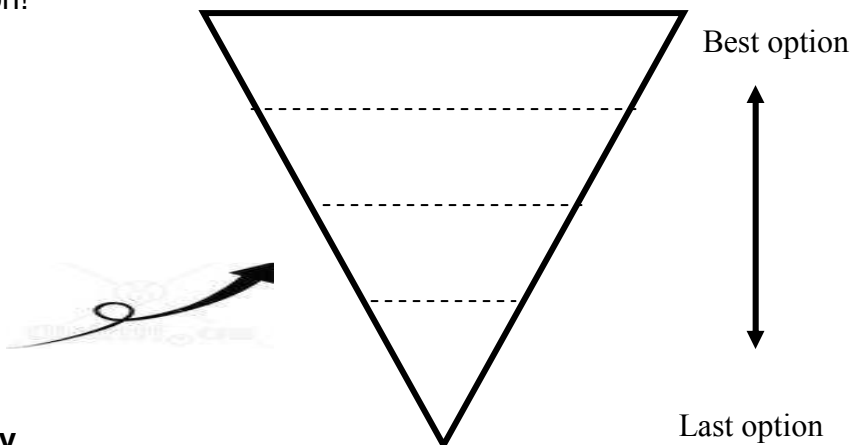


When we buy products we need to think about what **resources** have been used and how much will be **wasted**? We should try to buy items that will not have a negative effect on the environment.

We need to **reduce** or **avoid** products that cannot be **reused** or **recycled** as much as possible. This way our resources can be used for as long as possible with less environmental impact. We are trying to **sustain** or keep our resources instead of **wasting** them.

The simple rule is Reduce and Avoid, Reuse, Recycle and if there is no other choice then Dispose. We refer to this as the **waste hierarchy**.

Let's get our thinking caps on!



**In the triangle fill in
The Waste Hierarchy.**

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Think before you buy!

Before we buy anything we need to think about exactly how much we need. If we don't buy things we don't need we will create *less waste*. We should not buy things that have too much packaging. We can also take reusable bags or a backpack when we shop and stop plastic bags littering our environment and ocean. Think of a product you may buy or use regularly that has lots of packaging. Are there other alternatives that you could buy or use with less or no packaging so as reduce waste? How? Write it down.

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Think before you use or eat!

How much waste will your lunch create? Will you end up with a pile of plastic wrappers, bottles and food scraps? You can buy food items that are not individually wrapped and bring them to school in reusable containers. You can take your compostable food scraps home to feed your busy and hungry worms in the worm farm. Can you think of two items in your lunch box you could change or replace to reduce waste e.g. buy bulk and pack portions in reusable container



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Think before you discard!

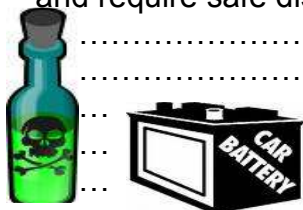
Is there any other way your waste items might be able to be used by others to reuse or recycle. Your old furniture, toys, clothes, sporting goods and books can all be put to good use helping others find what they need. There are many community groups you can *donate or even sell* your unwanted items to. Selling your second hand items can be done in the paper, online or from your garage. Can you name some of the places you could give your unwanted items to?



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Councils usually provide places for you to discard dangerous household and electronic (e) wastes. These should not be put in your ordinary household or school bin as they are bad for the environment.

Can you think of 5 household items that would be hazardous or toxic if disposed of in an ordinary bin and require safe disposal?



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Australian households and business generate more than 41 million tonnes of waste per year. Can you imagine what that would look like in one enormous pile (average car weighs around a tonne)? Do you believe we should all start thinking about what part of that pile is discarded by us!!!!



Living Green in Your House and at School

Avoid Wasting Our Green Planet!!

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First we need to understand a few important words:

What is a **resource** ?.....any land, raw materials or human activities that are considered valuable and used by people.

What are a few examples?

air, water, land, food, timber, plastic, labour, minerals, metal, time, rubber, concrete, glass, telephone, stereo, bed, car, bike etc.....

What is **waste** ?.....an unwanted or undesired material or substance.

What are some of the common names we give to waste?

rubbish, trash, garbage, junk, broken, second-hand, used, unwanted, discarded.etc.....



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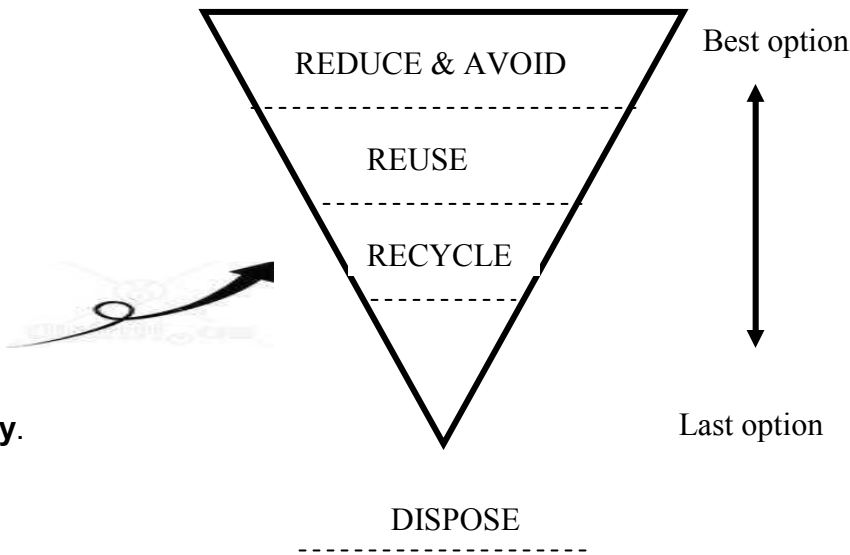
When we buy products we need to think about what **resources** have been used and how much will be **wasted**? We should try to buy items that will not have a negative effect on the environment. We need to **reduce** or **avoid** products that cannot be **reused** or **recycled** as much as possible. This way our resources can be used for as long as possible with less environmental impact. We are trying to **sustain** or keep our resources instead of **wasting** them.

The simple rule is **Reduce and Avoid, Reuse, Recycle** and if there is no other choice then **Dispose**. We refer to this as the **waste hierarchy**.

Let's get our thinking caps on!



In the triangle fill in The Waste Hierarchy.



Think before you buy!

Before we buy anything we need to think about exactly how much we need. If we don't buy things we don't need we will create *less waste*. We should not buy things that have too much packaging. We can also take reusable bags or a backpack when we shop and stop plastic bags littering our environment and ocean. Think of a product you may buy regularly. Are there other options that could reduce waste? How? Write it down.

Avoid upgrading technology before you really need to or before it is broken
Buy fresh foods more regularly instead of frozen, tinned or plastic wrapped



Think before you use or eat!

How much waste will your lunch create? Will you end up with a pile of plastic wrappers, bottles and food scraps? You can buy food items that are not individually wrapped and bring them to school in reusable containers. You can take your compostable food scraps home to feed your busy and hungry worms in the worm farm. Can you think of two items in your lunch box you could change or replace to reduce waste e.g. buy bulk and pack portions in reusable container

Tinned fruit – buy fresh fruit, save the tin and compost the peels/cores
Juice – buy large bottle and decant portions into drink bottle, make fresh juice
Yoghurt - buy in bulk and pack for school in reusable containers



Think before you discard!

Is there any other way your waste items might be able to be used by others to reuse or recycle? Old furniture, toys, clothes, sporting goods and books can all be put to good use helping someone else. There are many community groups you can *donate or even sell* your unwanted items to. Selling your second hand items can be done in the paper, online or from your garage. Can you name some of the places you could give your unwanted items to?

Salvation Army, St Vincent de Paul, Lifeline, Red Cross, Scrappy Joe – metal,
Scout and Girl Guides – aluminium, glass, corks, Freecycle – online, Asthma
Foundation etc.



Councils usually provide places for you to discard dangerous household and electronic (e) wastes. These should not be put in the bin as they are bad for the environment.

Can you think of 5 household items that would be hazardous or toxic if disposed of and require safe disposal?

Adhesives, batteries – car and household, paint, turps, kerosene, acetone (nail polish remover), paint thinners, petrol, herbicides, old fire alarm, pesticides (rat poison), gas/gas bottles, pool acid & chlorine, bleach, drain cleaner etc.



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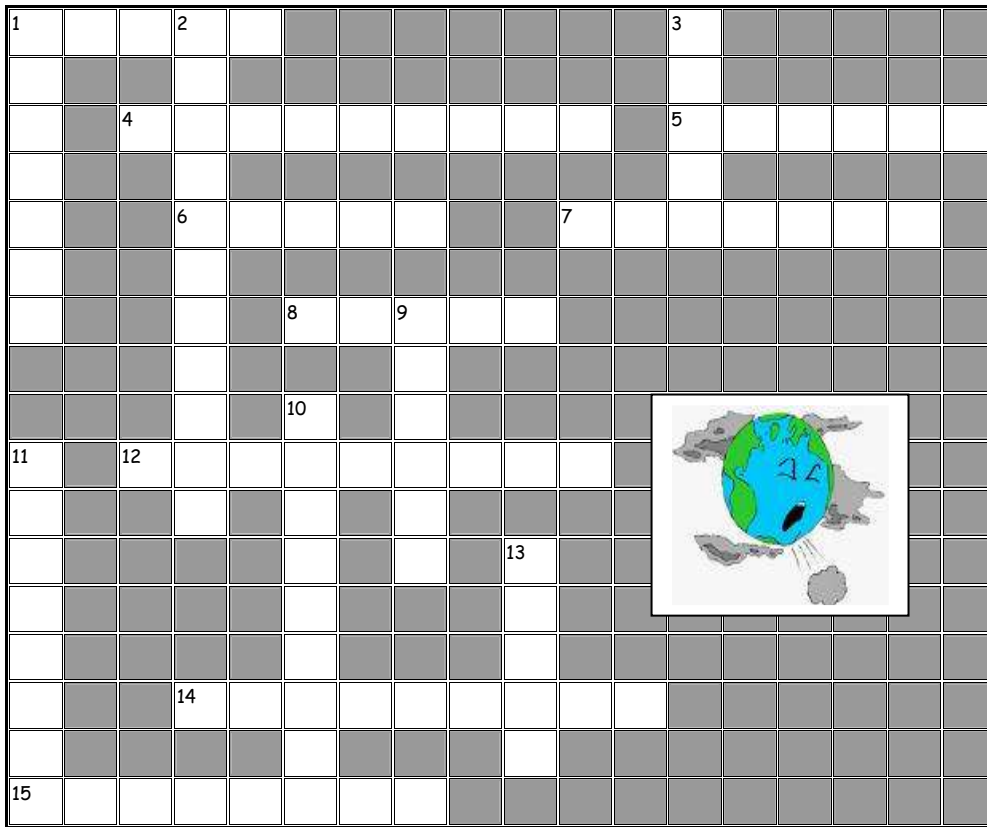


The Green House Learning Matrix Appendix 5

Multiple Intelligence	Verbal	Spatial	Kinaesthetic & Musical	Interpersonal/ Intra personal
Blooms Taxonomy				
<p>Knowledge Count, quote, recall, state, read tell, identify, list, describe, define, name, repeat</p>	What are the 4 levels of the 'Waste Hierarchy'?	Draw a cross section or picture of a compost bin or a worm farm	Mime what happens to your recycling from when you finish a can of drink to where it ends up.	In pairs create a picture book about a recycling hero (e.g. Wally the Worm, Rachel Recycler)
<p>Comprehension Discuss, restate, explain, review, describe, locate, identify, summarise</p>	From the ' Ecological Footprint' wall, find and copy 3 Top tips to reducing your ecological footprint.	Complete the 'Waste of Words' find-a-word	Write a radio Jingle about recycling or reusing.	Make a poster to show people how to 'Smart Shop' and help save the planet
<p>Application Use, apply, interpret, calculate, demonstrate, illustrate, dramatise, construct</p>	Write a letter to your local council asking for a visit to show you how to set up a worm farm or compost or to conduct a rubbish sort.	Complete the 'Wising up to Waste' crossword. OR Draw an A4 size picture of a 'low waste lunch' box with contents. Label the foods shown. Why did you choose them and how are they contained.	Write and perform a song about any of the topics covered in class or at the Green House. (e.g. Let's Not Waste Away, Reduce Recycle Rap etc.)	In pairs write and perform a song about anything you remember from the Green House. (e.g. The Landfill Lurch, Eco Footprint Stomp, Say No Say Yes etc.) Think of common tune to match it to.
<p>Analysis /Synthesis Compare, contrast, analyse, group, order, separate, investigate, plan, predict, develop, arrange, organise, devise, improve, imagine</p>	Write a story on the importance of reducing waste (think the 3 RE words).	Draw a map of your school complete and mark positions for recycling and organic bins	Make a birthday card out of second hand paper, magazines and ribbons.	Create a cartoon about reducing waste in your home.
<p>Evaluation Recommend, decide, evaluate, criticise, select, rate, judge, conclude, assess, debate</p>	Make a list of things you can do at home to make your house 'Green'.	Draw a Wheelie bin outline. Make a collage and fill it with pictures of materials which can be recycled in your Council area from magazines	With recyclable materials (from home or the school) create a sculpture or musical instrument	In a group of 3 come up with an advertisement about reducing waste and explain your ideas to the class

Wising Up To Waste

Using and understanding these words at home and in school is a start to helping our environment.



ACROSS

1. To use something again.
4. When we create p.....n we damage our environment.
5. We can what we buy to avoid having to much.
6. We can save trees by recycling this product.
7. This the last option if an item cannot be reused or recycled.
8. Unwanted or left over materials or food.
12. We can collect valuable resource off our roof and gutters in these (5,4).
14. Many products come wrapped in this. (clue: p.....).
15. We can reduce waste at school by having lunches (3,5).

DOWN

1. Making new materials from used materials.
2. We do not need plastic bags if we take these shopping with us (8,3).
3. The workers inside our compost orfarm.
9. If we off electrical appliances we can save energy.
10. Any land, raw materials or human activities that are considered valuable and used by people (clue: r.....).
11. When we dispose of waste it gets buried in? (We used to call them 'the dump'.)
13. Some items may not be environmentally friendly so we can choose tod them.

A Waste of Words



Hunt down all the words about reducing and avoiding waste.
We need to find these words and use them in our homes and at school!

- AVOID
- COMPOST
- DISPOSE
- ECOLOGICAL
- ENERGY
- ENVIRONMENT
- GLASS
- GREENHOUSE GAS
- LANDFILL
- LEACHATE
- MULCH
- PACKAGING
- PLASTIC
- POLLUTION
- RECYCLE
- REDUCE
- RESOURCE
- REUSE
- SHOPPINGBAG
- SWITCHOFF
- WASTE
- WORMS

Try to find **all 22** words on this board.

K	V	P	W	A	C	D	J	D	I	S	P	O	S	E
L	U	P	S	C	I	T	S	A	L	P	C	K	G	Z
G	N	I	G	A	K	C	A	P	O	K	P	R	V	I
W	G	L	A	C	I	G	O	L	O	C	E	E	Z	O
A	A	V	O	I	D	G	L	R	O	E	N	S	W	P
S	B	Q	Y	E	L	U	Y	M	N	N	V	O	O	L
T	G	J	Y	A	T	M	P	H	E	E	I	U	R	E
E	N	C	S	I	R	O	O	K	L	R	R	R	M	A
G	I	S	O	T	S	U	H	V	C	G	O	C	S	C
E	P	N	H	T	S	C	X	H	Y	Y	N	E	T	H
S	P	L	X	E	L	J	X	D	C	Q	M	M	I	A
U	O	J	G	U	R	E	R	S	E	L	E	A	Y	T
E	H	A	M	E	C	U	D	E	R	P	N	Y	X	E
R	S	W	I	T	C	H	O	F	F	U	T	W	C	E
W	L	L	I	F	D	N	A	L	E	M	Z	X	W	I





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- POLLUTION
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- REDUCE
- RESOURCE
- REUSE
- SHOPPINGBAG
- SWITCHOFF
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- WORMS

Try to find **all 22** words on this board.

K	V	P	W	A	C	D	J	D	I	S	P	O	S	E
L	U	P	S	C	I	T	S	A	L	P	C	K	G	Z
G	N	I	G	A	K	C	A	P	O	K	P	R	V	I
W	G	L	A	C	I	G	O	L	O	C	E	E	Z	O
A	A	V	O	I	D	G	L	R	O	E	N	S	W	P
S	B	Q	Y	E	L	U	Y	M	N	N	V	O	O	L
T	G	J	Y	A	T	M	P	H	E	E	I	U	R	E
E	N	C	S	I	R	O	O	K	L	R	R	R	M	A
G	I	S	O	T	S	U	H	V	C	G	O	C	S	C
E	P	N	H	T	S	C	X	H	Y	Y	N	E	T	H
S	P	L	X	E	L	J	X	D	C	Q	M	M	I	A
U	O	J	G	U	R	E	R	S	E	L	E	A	Y	T
E	H	A	M	E	C	U	D	E	R	P	N	Y	X	E
R	S	W	I	T	C	H	O	F	F	U	T	W	C	E
W	L	L	I	F	D	N	A	L	E	M	Z	X	W	I





Waste and Climate Change

What we do with our waste has a big impact on climate change and global warming. Match the descriptions below by putting the correct number beside the correct answer in the **answer bank** and see if you can make the connections.

1. The average weather we experience over a long period of time. Landfill waste can affect this.
2. The air around the earth that naturally contains greenhouse gases
3. Two common greenhouse gases that warm the earth so that we can live. When they increase too much they are considered pollution.
4. A measurable degree of heat. When too many gases pollute the atmosphere they trap the sun's heat and cause this to rise.
5. A word describing sunny skies, rain, drought and snow. Scientists say that climate change will affect these patterns.
6. The chemical process that our garbage undergoes when buried in landfill. This process produces the gas methane.
7. An animal that produces greenhouse gas when it burps. As this animal digests its food bacteria produces methane.

ANSWER BANK

___ COW

___ WEATHER

___ CLIMATE

___ TRUCK

___ DECOMPOSITION

___ CARBON DIOXIDE
AND METHANE

___ ATMOSPHERE

___ PRODUCTS

___ HUMAN

___ TEMPERATURE

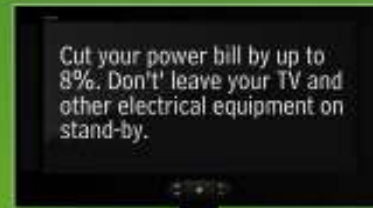
___ REDUCE

What we want to do to greenhouse gas releases. To do this we need to think about the products we buy and use everyday and find out how they are made. Then we need to consider if we really need them or if they can be reused or recycled.



Living Green at home and beyond

Why buy something new when you can find the same product second-hand. Save money and the environment – reuse, rent and recycle furniture, clothes, toys, books and more.



Cut your power bill by up to 8%. Don't leave your TV and other electrical equipment on stand-by.



Reduce your energy use, save money and the environment by using compact fluorescent light bulbs

Make a low-waste lunch for school or work and avoid packaging. Use reusable containers, include healthy fresh food and don't forget to compost your food scraps.



Source: Department of Environment and Heritage 2006
 published in Proceedings Greenways 2006, Waste Management, Resourcing 20, Canberra

Design by www.austliandesign.com

Living Green with The Green House
www.northeastwasteforum.org.au



Living Green Outdoors

Reduce your greenhouse gas emissions by setting up your own worm farm to recycle your food scraps. Nutrient rich worm juice is the perfect organic fertiliser for your garden.



Compost your food and garden waste. Home made compost can transform soil into a nutrient rich moisture holding marvel.



Avoid wasting water by using a watering can on your pot plants around the home.



A rainwater tank can reduce your water bills and provides a valuable water source for filling washing machines, flushing toilets, watering gardens and washing cars.



Mulching your garden helps maintain moisture, prevents weed growth and creates natural compost without having to use fertilisers or pesticides.



Living Green with The Green House

www.northeastwasteforum.org.au



Design by www.thegreenhouse.com

Living Green at Home



Sort your rubbish: Avoid, Reuse, Compost and Recycle. Almost one fifth of the average Australian family's greenhouse gas emissions is from waste which goes to landfill.



Reduce your energy use, save money and the environment by using compact fluorescent light bulbs

Check for dripping taps.



25% of energy used in the home is to heat water. Using solar energy to heat water produces no harmful greenhouse gas emissions and can provide up to 90% of your total hot water requirements (depending on climate and model of heater).

Recycle your food scraps with a compost bin or worm farm.



Reduce the use of chemicals in your home. Clean with green alternatives like white vinegar, baking soda and lemon juice and use reusable cleaning cloths instead of disposables.



Look for the most energy and water efficient appliances when purchasing new products. The more stars the rating has, the more efficient the product is and the more money you will save.



Shop Smart: Australians throw away 3.3 million tonnes of food every year – up to a quarter of the country's food supplies. Why? Simply because we purchase too much. Make a shopping list and buy only what you need.

Recycling starts in the kitchen. Set up your bin sorting station in a handy place where it's easy to access and take outside when full.

Recycling matters: it takes significantly less energy and water to make many products using recycled materials. Check with your local Council as to the service and facilities it provides for recycling in your local area.



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Don't waste the earth

Australian households and business generate more than 41 million tonnes of waste per year. More than half of the waste that ends up in landfill is a valuable resource including food and garden waste and recyclable products like paper, glass and metals. Once these resources are land filled, they are lost forever and their slow decomposition may results in greenhouse gas emissions^A and potentially harmful leachate^B liquid if not managed correctly. The more that we avoid, reuse, compost and recycle the less of our resources are wasted forever to landfill.

^A Landfill gases can be captured and converted into energy in a modern landfill through a methane collection system. The energy is then fed into the electricity grid to power homes.
^B Leachate is made up of liquids from decomposing waste and water percolating through landfills.



Think about the life cycle of a product: where it comes from to where it will end up. By reusing and recycling, you are minimising the use of raw materials, as well as preventing waste in landfill. Recycling and reusing also saves tonnes of energy, and megalitres of water.

Parts of a typical modern landfill

A landfill is an intricate systems of liners, pipes and cells designed to store your waste for hundreds of years.

The diagram shows a cross-section of a landfill cell with various layers and components labeled A through K. Below the diagram are two photographs showing trucks dumping waste and heavy machinery compacting it.

- A - Ground Water
- B - Compacted Clay
- C - Plastic Liner
- D - Leachate Collection Pipes and Pumps
- E - Geotextile Mat
- F - Gravel
- G - Drainage Layer
- H - Soil Layer
- I - Old Disposal Cells
- J - Current Disposal Cells
- K - Leachate Pond

Ecological Footprint

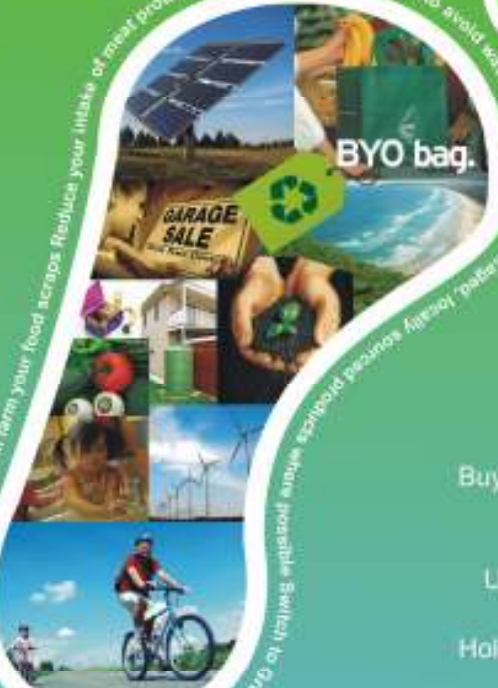


How Big is Yours?

How many planets does it take to support your lifestyle?

As the second biggest consumers of natural resources and producers of waste per person in the world, if everyone everywhere lived like Australians currently do, we'd need 4 planets to support us all! So let's act now to protect our world.

Recycle Compost or worm farm your food scraps Reduce your intake of meat products Only buy what you need to avoid wasting Buy fresh, unpackaged, locally sourced products Switch to Green-power or solar power Avoid, Reduce, Reuse, Rebuy and Recycle Compost or worm farm your food scraps Reduce your intake of meat products Only buy what you need to avoid wasting Buy fresh, unpackaged, locally sourced products Switch to Green-power or solar power Avoid, Reduce, Reuse, Rebuy and Recycle Compost or worm farm your food scraps Reduce your intake of meat products Only buy what you need to avoid wasting Buy fresh, unpackaged, locally sourced products Switch to Green-power or solar power



Top tips to reduce your footprint:

- Avoid, Reduce, Reuse, Rebuy and Recycle
- Compost or worm farm your food scraps
- Reduce your intake of meat products
- Only buy what you need to avoid wasting
- Buy fresh, unpackaged, locally sourced products
- Switch to Green-power or solar power
- Reduce your water use
- Use public transport, bicycle or walk instead of using your car
- Hold a swap party with your family and friends to exchange clothes, books, toys and music
- Be a careful and conscious consumer



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The Waste Hierarchy

AVOID



Think before you buy!
Buy in bulk and buy items with minimal or no packaging.



Say **NO**

to plastic bags
to junk mail
to buying things you don't need
to unnecessary packaging
to products in packaging which can't be reused or recycled

REUSE



Say **YES**

to buying pre-loved second hand products
to repairing and renting products
to reusable over disposable
to garage sales and op shops
to reusing items that you can



RECYCLE



It takes 80% less energy to make aluminium products from scrap than from raw materials

Cut your household waste in half by composting and worm farming.

Recycling one tonne of paper and cardboard saves approximately 13 trees

Recycling a shipping bag full of glass bottles and aluminium cans saves at least 1kg of greenhouse gas emissions

Recycling saves resources, energy and water
Choose products with recyclable packaging
Buy products made out of recycled materials
When you recycle you turn something used into a new product
Recycle right – check with your local Council for recycling services

DISPOSE

This is the last option and only things that can't be avoided, reused, recycled or composted should go into the rubbish bin.

