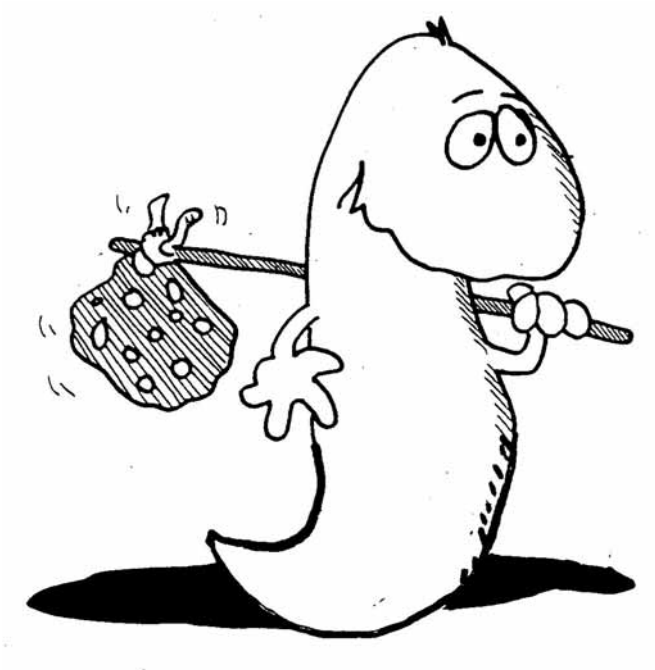


REDUCE

Students Identify and Develop Waste Reduction Activities in the Classroom



OBJECTIVE:

Students will understand that waste is not just landfill space and pollution but use of raw materials. Reduction is the first step in minimising waste. Reduction can start in the classroom.

BACKGROUND INFORMATION:

Everything we use is made from earth's resources. Some of these are renewable but many are not. If a sustainable future is to be assured, we need to conserve all our resources, especially non-renewable resources and energy. Reduction is the most important part of the 3R's of solid waste management: reduce, reuse, recycle. Reduction keeps materials out of the waste stream. Waste minimisation aims at eliminating waste before it is produced and reducing its quantity and toxicity. Waste prevention, or to avoid making waste altogether is the primary goal.

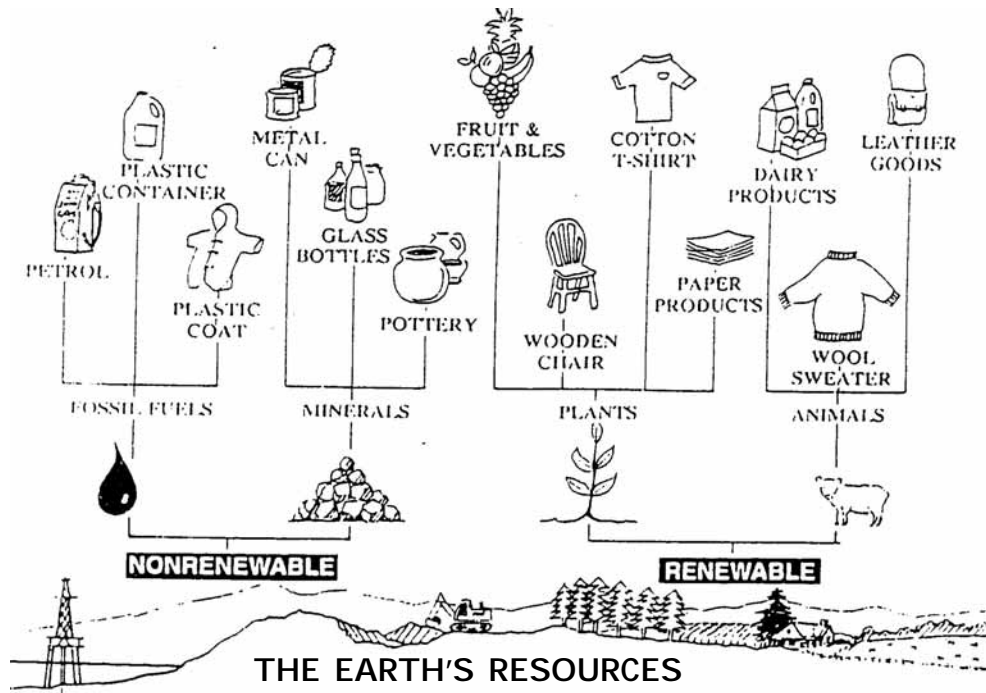
Reducing the quantities of waste we produce, lessens some of the resources and money spent on waste collection and disposal.

Methods to reduce waste include purchasing only what you need, changing packaging, substituting reusable items for disposable ones and developing products that are more durable or at least repairable. The amount of rubbish you throw away can be reduced by cutting down on what you buy. Buy only what you need (don't let advertising talk you into buying anything you could just as well do without). To achieve a genuine reduction in the waste stream, it may be necessary to reject excess packaging. Recyclable packaging or a reduction in the volumes and types of packaging should be encouraged. Our purchasing patterns need to change. It is better to buy durable rather than disposable, and not to buy as much. Buying from bulk bins reduces packaging.

Significant reduction in waste can be achieved by simple changes to work practices and procedures. Overseas examples show 75% of the changes necessary to reduce waste and improve operating efficiency can be attributed to good housekeeping and only 25% of the changes required technical modifications requiring capital expenditures.

Paper and cardboard amounts to 80% of the waste in the commercial sector. When a paper recycling programme is implemented in an office block, costs are substantially reduced.

The survey of Gisborne household rubbish showed over a quarter of it was paper.



Class Plan (Levels 1 and 2)

1. Explain to students what waste reduction means. How does reducing waste before we create it help preserve resources and landfill space?

Here are some ways to reduce waste:

- ❖ Share copies.
- ❖ Use blackboard whenever possible.
- ❖ Start a reuse it box for scrap paper.
- ❖ Use refillable pens.
- ❖ Use old exercise book paper for drawing.
- ❖ Use refillable items for juice bottles, lunch box, etc.

2. Using the plastic gloves, remove each piece of rubbish from the class rubbish bin and place on a newspaper covered table. Ask students how they could better use each item, e.g. reuse it, recycle it or use durable products instead of disposables.

3. **Lessons from your Lunch:**

- ❖ For thousands of years, we survived without aluminium foil, plastic wrap, lunch paper etc to keep food fresh. Next time you pack a lunch, think, about the effect of each packaging item you use. What happens to either foil, plastic, or paper when you throw it out? Is it biodegradable? Can it be recycled? What resources does it use? Could you use a reusable container instead? Ask your friends to look closely at what is in their lunch boxes.
- ❖ Plan an environmentally friendly picnic. Only bring what you will eat or use.

Materials:

- ▶▶ Class rubbish bin (full).
- ▶▶ Plastic gloves.
- ▶▶ Lunch boxes (full).

Class Plan (Levels 3 and 4)

1. Explain to students what waste reduction means. How does reducing waste before we create it help preserve resources and landfill space?

Here are some ways to reduce waste:

- ❖ Share copies.
- ❖ Use blackboard whenever possible.
- ❖ Start a reuse it box for scrap paper.
- ❖ Use refillable pens.
- ❖ Use old exercise book paper for drawing.
- ❖ Use refillable items for juice bottles, lunch boxes etc.

2. Using the plastic gloves, remove each piece of rubbish from the class rubbish bin and place on a newspaper covered table. Ask students how they could better use each item, e.g. reuse it, recycle it or use durable products instead of disposables.

Materials:

- ▶▶ Class rubbish bin (full).
- ▶▶ Plastic gloves.

1. **A Waste Free School**

Develop an overall plan for the school to reduce waste (including energy, paper, food, wrappers, litter), introducing separation and recycling schemes, checking litter, composting garden and food wastes, incorporating environmental education into all areas of the curriculum.

In these and other ways the whole school community becomes involved – Board of Trustees, school management, teachers, students, parents, neighbours, PTA, class leaders.Everyone must contribute and take responsibility for this exciting project! Phone the Gisborne District Council for assistance with this activity.

2. **“Reduce Waste” Display**

Develop a display for the school foyer or other prominent place on the 3R's of solid waste management – reduce, reuse, recycle. Select four or five good examples of each and show how waste can be reduced (bread, paper, packaging, etc), items that can be reused (clothing, toys, sports gear, books), or recycled (cans, bottles, plastics, paper etc). Show before and after examples of repair, restoration or reuse.

3. **Brainstorm Wastes**

In groups or as a whole class discussion, list 50 (or 100) items used in and about the home, in the community, in industry, in sport and recreation ... e.g. cups and saucers,

tennis racquet, garden tools, clothes, shoes, batteries, chairs, light bulbs, cans, pens, nappies, stoves, bicycles, toys, flowers, fruit, etc.

Now for each item, consider whether we could reduce the need for this product or repair or reuse it in some way. Or could we give it to someone else who could use it? Replace it with a more simple alternative? What can be done as individuals? Families? School? Community? City? Nation?

4. **Our School Cut Out Waste!**

Promote a waste reduction campaign around the school with posters, logos, slogans, displays, songs etc. Use the best slogan and logo to design a T-shirt. Maybe a local business could sponsor printing the T-shirts!

5. **Lessons from your Lunch**

For thousands of years, we survived without aluminium foil, plastic wrap, lunch paper, etc to keep food fresh. Next time you pack a lunch, think about the effect of each packaging item you use. What happens to either foil, plastics, or paper when you throw it out? Is it biodegradable? Can it be recycled? What resources does it use? Could you use a reusable container instead? Ask your friends to look closely at what is in their lunch boxes. Plan an environmentally friendly picnic. Only bring what you will eat or use.

6. Why Reduce Waste?

Discuss, write an article for the local paper or school newsletter, prepare poster, or make up a display to explore the benefits of reducing waste.

Investigate such issues as landfill space, saving resources and energy, reducing pollution, increasing production efficiency, cost reduction, community health and wellbeing.

REDUCE

To Teach Students how to Shop Objectively -
What is Excessive Packaging?



OBJECTIVE:

Students will realise how much packaging they receive when they purchase a product and will be able to make decisions about excessive packaging and necessary packaging.

BACKGROUND INFORMATION:

Using present technology and reducing, reusing and recycling, could lower the volume of rubbish going into landfills by up to 90%. As well, it conserves raw materials and energy. Taking positive action to reduce the purchase of unnecessary packaging is one of the easiest ways to reduce waste. Supermarkets provide a good venue for examining and comparing a wide variety of packaging.

Class Plan (Levels 1 and 2 - Levels 3 and 4)

1. Visit the supermarket with the class.
2. Divide the class into groups, each group to investigate the packaging used for various categories of product, e.g. fruit and vegetables, cereals, biscuits, pet food, lollies, cleaner.
3. Discuss why this was "necessary" (freshness, marketing, keep cool).
4. Divide the class into groups. Ask each group to investigate the best materials for wrapping various products (e.g. fish and chips, iceblocks, floor cleaner, lollies).
5. Report back to class with reasons for their choice.

Materials:

- ▶▶ Class trip.

SHOPPING SURVEY WORKSHEET

	Product	Type of Packaging	Disposable or Durable	Can it be Reused or Recycled	Conclusion
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					



ADDITIONAL MATERIAL

Find the Packaging Words in the "Word Finder" Hard Stuff for Big Kids

1. Commercial Pressure
2. Household Waste
3. Overpackaging
4. Incineration
5. Manufacturer
6. Advertising
7. Legislation
8. Supermarket
9. Shopping Bag
10. Wastestream
11. Containers
12. Pet Bottles
13. Refillable
14. Labelling
15. Cardboard
16. Plastics
17. Consumer
18. Barcoders
19. Customer
20. Disposal
21. Retailer
22. Cartons
23. Packets
24. Product
25. Fottles
26. Reusing
27. Bulk Buy
28. Lining
29. Boxes
30. Aluminium Foil
31. Bag

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



