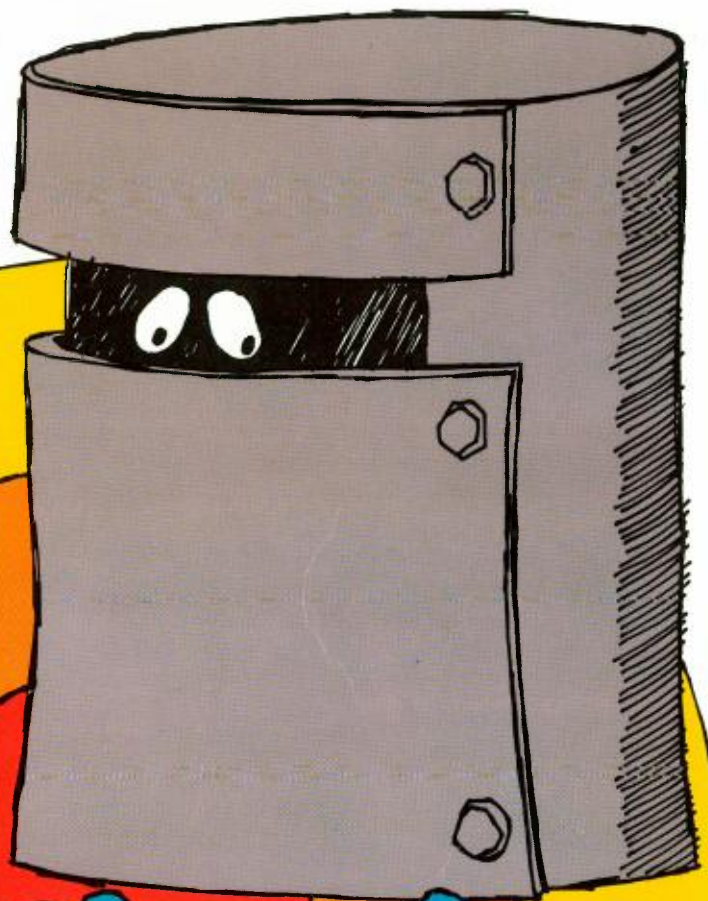


THE  
PERFECT  
FOIL



# investigating metals



Volume 4

MINI BOOKLET (i)

## AIM

The aim of this material is to promote in children an interest towards the environment and to encourage positive action towards its management.

## OBJECTIVES

This material seeks to:-

- \* promote environmental awareness towards the elimination of litter and littering and to inquire into its related aspects of recycling, packaging, waste disposal and consumerism.
- \* encourage an attitude of responsibility for the selection, use and final disposal of those products which can form part of the litter problem.
- \* provide an opportunity for children to be actively involved in environmental inquiry and problem solving.
- \* extend pupil awareness into an understanding of those interdependencies and interrelationships which exist in their environments.

Titles in the Series include:-

Right On.

Glass - Handle With Care.

Beaten To A Pulp.

- \* The Perfect Foil - Investigating Metals; Ages Ago; Rock Hard; Tins 'n Things; Recycling and Re-using Metals.

It's Plastic.

ISBN 0 7240 5704 3

... but what  
is it?

Imagine you have to describe metal to someone who has never seen, tasted or touched it.

What will you say? Does looking it up in a dictionary or encyclopaedia help?



ENVIRONMENT PROTECTION  
AUTHORITY NSW  
LIBRARY  
SER/NSWSPCC  
LOC: LRC/23  
ACCN: 980041

# METAL DETECTOR

1. Make a list of the metal objects around you. What do they feel like? Tap some. What do they sound like?

2. Draw the largest and the smallest metal objects you can find. Beside each say how it is used. Why do you suppose metal was used to make them?

3. What about at home? Where is metal there? Make a list for each room.

Kitchen	
Lounge	
Bathroom	
Bedroom	
Dining Room	

What toys do you have made from metal?

How much metal do you throw out at your place? How was it used? Why was it thrown out? Make a chart telling all these things.

Day	Item	Used as	Thrown out because....

Do you save any metals? Which ones? Why?

# Find out...

...how strong different pieces of



Make sure you write down their

thickness,

Length,

and how much

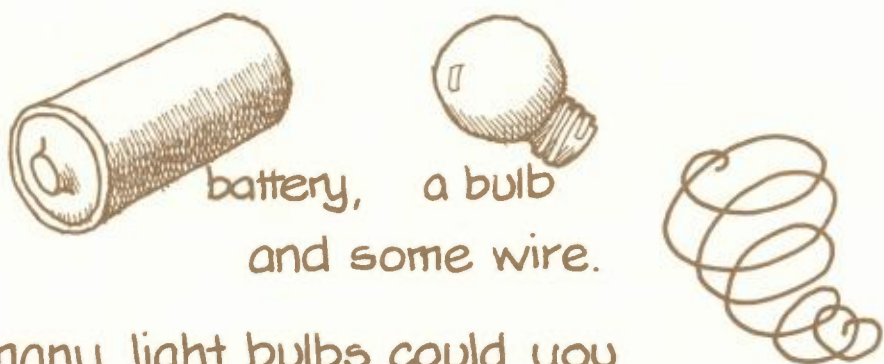
weight

these wires can support.



# Find out...

....a way to light up a torchbulb using a



battery, a bulb  
and some wire.

How many light bulbs could you light up with one long piece of copper wire?

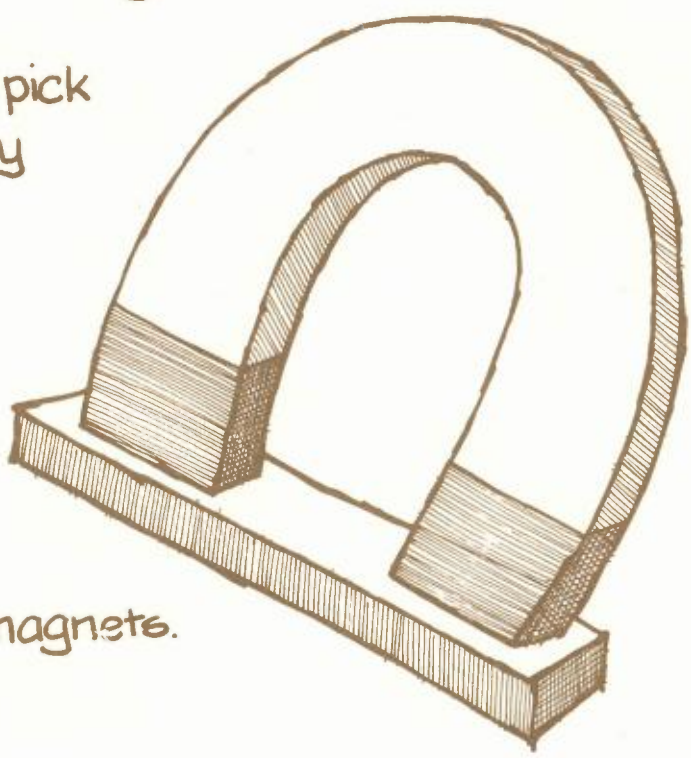
..... which metals stick to a magnet?

..... which cans you can pick up with a magnet. Are they steel, aluminium, tin?

.... if a magnet will work under a sheet of paper, plastic or wood.

Write up your results.

.... what you can about magnets.



# What happens when you...

.... place a block of wood,  
plastic and some metal in the  
fridge and leave it there for  
20-30 minutes.

Which feels colder? Why?

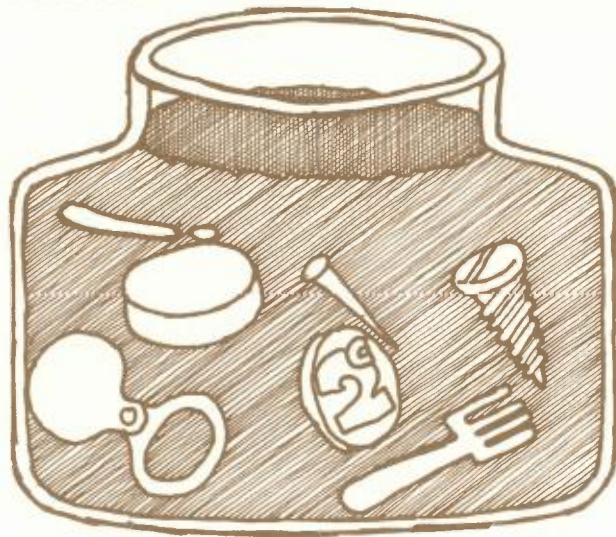
When the wood, plastic and  
metal are no longer cold place  
them on a hot water bottle.

Which is warmest? Why?



# What happens when you...

....bury different types of metal in soil and leave it for a few weeks?



....leave steel wool, aluminium, pins, paper clips and nails outside on a plate of water?

	Week 1.	Week 2.	Week 3.	Week 4.	Week 5.
Steel wool					
Pins					
Paper clips					
Nails					
Bottle top					
Aluminium foil					

# pins and needles

**Have** pliers, pins or needles, candle and cold water ready. Check to see what happens when you take a pin, or a needle, and try to bend it with pliers. What happens?

**Now** test another pin which was heated until it glowed. Make sure you hold it with the pliers.



Drop it into water for one minute.

**What** happens when you try to bend or break it with pliers? Test again but this time take the pin from the flame very slowly. Is there a difference?

What does this tell you about metal?

**Caution:** Always be very careful when using candles or sharp objects.



**'DO  
THE RIGHT  
THING'**



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LITTER REDUCTION CAMPAIGN  
1982

This book has been printed  
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For further information and materials contact  
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157 Liverpool St.,  
Sydney.