

METAL CANS PRACTICAL, CONVENIENT



STUDENT SCIENCE, SOCIAL SCIENCES AND SUSTAINABILITY ENQUIRIES FROM:



www.packaging.org.nz



www.canzbac.co.nz

MOTIVATIONAL VISUAL CLASSROOM DISPLAY

To motivate your class prior to starting the unit, involve your students in setting up an attractive display of different types of packaging. Include products that are packaged in metal cans, paper, boxes, cardboard, plastic ... and have students add to the display as the unit progresses.

TUNING IN TO PACKAGING

- Pose the question 'what is packaging?' Can the students define or say what it is? What does the dictionary say? Would it be correct to say that packaging is the container or wrapping that a product is sold in? Develop the idea that most products that we buy and use come to us in some form of packaging.
- Ask questions to get students thinking of the many different ways that products are packaged, **eg**
 - *the packaging used for our Christmas presents?*
 - *what different types of packaging are used for the food we buy from the supermarket?*

Have groups brainstorm a 'huge' list of different types of common packaging and report back to the class.

- As a home assignment, have students make a list of all the ways that food and drinks are packaged in their kitchens, fridges and pantries. What was the most common type of packaging they found? Collate all class results and display in as a simple table, **eg**

How our food is packaged

Milk	Plastic bottles
Cheese	Foil and plastic wrapping
Fruit	Steel (tin) cans
Spices	Glass bottles, cardboard packets
Beverages	Aluminium cans

- Have students continue home investigations for packaging used in areas such as: garden shed, tool shed, bathroom ...
- Arrange for groups to visit the supermarket (or accompany family members) and note down all the different types of packaging found.
- As a class, have students speculate on why certain products are packaged in certain materials and not others, **eg**
 - *why is paint packaged in steel cans?*
 - *why would we not package baked beans in a paper or plastic wrapping?*



JUST FOR FUN

Run a class competition where students are challenged to come up with the 'silliest' (most inappropriate) type of packaging possible for a product and draw/design their packaging. Discuss why they are totally inappropriate. Choose the top three by popular vote. Make a humorous display of the 'silly' solutions.

REASONS FOR PACKAGING

- What reasons can the students think of for why we package products. These could be as simple as: to make it look attractive; easy to handle; can recycle it ... Have them list all their reasons from least to most important.
- Have students visit: www.packaging.org.nz and play video #2 – *Packaging in a Modern Society*. What does it tell us about the most important (primary) reason for packaging (to protect the product and make sure it gets to the end user in perfect condition)?
- Were students surprised that this is the most important (prime) reason for packaging?
- Replay the video and focus on the \$3.5 billion of goods that we sell overseas every year, the reasons why it is so important that the products we sell overseas reach there in perfect condition and the role that packaging plays in making sure this happens.
- www.packaging.org.nz > select Packaging Information and discuss the following ideas developed:
 - *preventing spoilage of food products between grower and consumer and why large differences exist between the developed and developing world*
 - *the reasons why we have been able to reduce the amount and weight of packaging material used*
 - *the % of people in NZ who now have access to a kerbside or drop-off recycling scheme.*



AND ENVIRONMENTALLY FRIENDLY PACKAGING



FOCUS ON METAL CANS

- Can students name the two materials that are commonly used to make metal cans? **eg** aluminium and steel?
- Have each student run a metal can scavenger hunt at home to find out what products are packaged in cans. Report back to the class. What was the class total? Did their list include: food and drinks, paint, fly spray? Did they count other product cans such as car polish, CRC®, and many kitchen/bathroom cleaning products?
- Did students check their household emergency kit? What are the advantages of storing food and drink in cans in the emergency kit? **eg** long life and not easily damaged.
- How many cans are opened in each household each week? Investigate what your household does with these cans when they are finished with them. Is your family aware that both steel and aluminium cans can be recycled? Do they recycle all of the cans their household uses?



1 recycled aluminium can saves enough energy to run a television for 3 hours.

LET'S GET RECYCLING

- Have students contact the local council to find out what can recycling scheme is available in your local area. If there is not a 'kerbside' bin recycling service, have them find out if there is a 'drop-off' place to recycle cans. Are there any restrictions on the types of cans they will accept? If so, ask why they are restricted.

• www.canzbac.co.nz/recycling_home.htm

Have students visit the above website section to find out what types of steel and aluminium cans they are able to recycle, **eg all food cans, lids from glass jars and bottle tops, aerosols, paint cans, variety cans such as cooking oil cans and biscuit tins, beverage cans.**

- Ensure they know about any special measures they should take before recycling, **eg making sure a paint tin is empty, removing paper from a biscuit tin, empty out aluminium cans.**
- Invite the school caretaker and principal to explore with the class the idea of starting a can recycling project at school. Run a recycling competition between classes.

CARRYING OUT METAL CAN RESEARCH

- **Steel Can Research:** www.canzbac.co.nz/education.htm
- Have groups conduct online research to answer the following:
 - *the average number of cans per household used per week*
 - *why are they the easiest packaging to recycle?*
 - *what % of a can is recyclable and how often can this be done?*
 - *steel cans were first developed to solve what problem?*
 - *what improvements have we made in steel making over 30 years?*
 - *what savings are made by recycling steel rather than making it normally and how does this help the planet?*
 - *what happens to this new recycled steel?*
 - *what are we helping to do when we recycle our steel cans?*
- Use a multimedia/data projector to view and discuss the information found at: www.canzbac.co.nz/index.htm
- Focus again on the percentage of a can that is recyclable.
- If we use more than 40 million cans every year and on average only one in six of these cans is recycled, how many more cans are available for recycling?
- How does the one in six recycled per household compare with their family and class average for recycling cans?
- Discuss and ensure the students understand the meanings of the three major reasons for sending our steel cans back.
- **Aluminium Can Research:** www.recycle.novelis.com
 - > select aluminium recycling and discuss the following:
 - *the energy saved by aluminium recycling*
 - *how many times can an aluminium can be recycled?*
- Select 'Life-cycle of an aluminium can' video clips and have students discover full life cycle of the aluminium can from bauxite to recycling. Compare facts with steel cans.
- Visit the Auckland City Council website to discover fascinating facts about aluminium can and steel can recycling.
www.aucklandcity.govt.nz/council/services/rubbish/mrf.asp
 - > select Education Centre.

GETTING THE MESSAGE OUT

- Have each student conduct an investigation at home to find out their families current knowledge about recycling all cans, lids etc and how often they are recycled. Work through the recycling section of the CANZBAC and Auckland City Council websites with older family members.
- Set up a can recycling station (bin) at home and encourage family members to use it regularly.
- Write letters to the local paper explaining the reasons why we should recycle cans.
- Have students design colourful posters and slogans that will encourage people to recycle cans. Arrange to display these at the local supermarket, council and information centre. Use fridge reminders at home.
- Give weekly reports to assembly that both encourages other classes to get involved and reports on the progress that is being made.
- Run regular school-wide and household surveys to jog memories and monitor recycling progress.
- Shoot a video to promote the recycling of cans for parents and other classes.



This extensive school educational resource on packaging in New Zealand can be purchased online at the Education Programmes section of: www.packaging.org.nz

The metals section of this resource provides a wealth of information for students and classroom projects.