

# RECYCLE THAT MOBILE PHONE

## CROSS CURRICULA ENVIRONMENTAL EDUCATION



### TUNING IN TO MOBILE PHONES

- Can the students ever imagine a time when there were no mobile phones? How would people have communicated? Interview older family members about pre-mobile phone days and report back to the class.
- Tell students that portable mobile phones for public use were not produced until the mid 1980s in USA and even later in New Zealand.



#### IMAGINE THIS!

**Martin Cooper of Motorola pictured with his 1973 invention – the first hand-held mobile phone (nick-named 'the brick'). It was over 25 cm high excluding the aerial, weighed about 1kg and had only talk, listen and dial features. Full story at: [http://en.wikipedia.org/wiki/Martin\\_Cooper](http://en.wikipedia.org/wiki/Martin_Cooper)**

- Did the students know that the first mobile phones could only be used for dialing a number, speaking and listening – just like an ordinary phone? Are they surprised to learn this? What advantages can they see this may have had over phones of that time? What changes did it bring about?
- Allow time for groups to conduct online research on the history of cell phones at:  
<http://tech.msn.com/products/> > select Cell phones > select Slideshow – a history of cellphones.
- Have students pay attention to the new features that have been added to mobile phones over the years.
- Create a timeline of mobile phone development display.
- Have students brainstorm and list the many functions of a modern mobile phone, **eg**
  - voice messaging
  - picture messaging
  - watching videos
  - txt messaging
  - browsing the web
  - video calling
- What features do students think are the most valuable to have and to use? Justify.
- Is there a school policy on mobile phone use in place? Interview the principal on reasons for this school policy.

### MOBILE PHONE USE SURVEY

- How many class members have their own mobile phone or have regular access to a mobile ?
- How many family members have their own mobile phone?
- How many times a day/week do students use a mobile?

#### Environmental Education Curriculum Links

##### Social Sciences: Social Enquiry – History:

- Understanding some of the affects and benefits that past and modern mobile phone communication has had on society.

##### Health: Healthy Communities and Environments

- People and the Environment. An examination of the interrelationships between the technology of mobile phones and the environment.
- Identifying and promoting the positive steps we can take to ensure our environment is protected while enjoying the benefits of modern technology.
- **English:** Reading, Writing, Speaking, Listening and using Visual Language to promote important environmental messages.
- **Mathematics:** Statistics.

#### Links to The Arts: Best suited to Levels 3-4+

- Have students list their mobile phone use in order of purpose, **eg**
  - txt to friends
  - txt or phone call to mum etc.
- What do older family members use their mobiles phones for, in order of purpose?
- Graph and display survey results.

### WHY DO WE UPGRADE OUR PHONES

- Have students find out how many family members have upgraded their mobile phone at least once? How many times have they upgraded? Find reasons why they upgraded their phones, **eg**
  - new features
  - easier to use etc.
  - new colours
  - more compact ...
- Calculate the number of mobile phone upgrades for all students and families in the class.
- Calculate the average number of mobile phones currently in use in each household.

### A STUDENT RESEARCH PROJECT

- Print out and distribute to students the Ministry for the Environment article 'The safe disposal of mobile phones' at: [www.mfe.govt.nz](http://www.mfe.govt.nz) > click on publications > click on Waste > scroll down and click on 'The safe disposal of mobile phones'. Print out the html or pdf version of the article.
- Divide into research groups.



# THE WHY AND THE HOW



- Through group and class discussion, have students focus on and answer the following:
  - *the estimated number of mobile phones in households in New Zealand*
  - *the average amount of time for replacement of mobile phones*
- *the (estimated 25%) percentage of mobile phones in New Zealand households that are no longer in use (calculate this number using the 3.8 million total number of phones).*
- Have students find out the number of mobile phones no longer in use but still in their household. Have any family members disposed of their mobile phones? How did they do this?
- Introduce students to the word *toxic* – meaning hazardous substances that are very harmful to humans. Did they know that mobile phones contain a number of (heavy) metals that are harmful to the environment and potentially toxic to human health. Discuss what the article says about the dangers of simply throwing a mobile phone in a bin. Where will it end up? What could be the consequences?

## WE CAN RECYCLE OUR MOBILE PHONES

- Remind students of the *reduce, reuse, recycle* environmental slogan. What does it mean? Discuss and/or research the recycling schemes that are in place at school and in the local district? Why do students think it is very important to reduce, reuse and recycle?
- Using the article, ensure students understand that 90% of the materials used in mobile phones can be recycled and recovered to use again to make new products. List some of the new products that can be made from mobile phone recycling, *eg*
  - *plastic road cones*    - *copper spoutings and wire*
  - *recovering metals such as copper and silver*
- Tell students that many mobile phones are still able to be used and that these can be shipped to other countries where people less well-off than ourselves can have the benefits of having a mobile phone.
- Tell students that both Telecom and Vodafone have mobile phone recycling schemes in place and that both these companies encourage people to drop their old mobile phones into the recycling bins at their mobile phone retail stores. Their aim is to see every discarded mobile phone recycled and/or reused. Have students visit:  
[www.telecom.co.nz/content/0,3900,203941-203113,00.html](http://www.telecom.co.nz/content/0,3900,203941-203113,00.html)  
[www.vodafone.co.nz/recycling](http://www.vodafone.co.nz/recycling)  
for further research about their recycling schemes.

## LET'S GET THE MESSAGE OUT

- Tell students that to achieve the environmental goal of 100% recycling of mobile phones, people must be told that the recycling scheme exists and how to access it.
- The student task is to get the recycle mobile phone message out to other students at school, families and to the wider community. How will they go about it?
- As motivation, have students visit a student website [www.bebo.com/recycleurfone](http://www.bebo.com/recycleurfone) developed by New Zealand students to promote recycling using the message – **drop it in the box.** What important environmental messages does it promote?
- As a class or in groups, run a brainstorming session where students are challenged to come up with innovative ways to get this important environmental message out. Possible solutions include:
  - **Making a Movie.** A group becomes a movie making team and plans, scripts and shoots a DVD movie (ie iMovie).
    - *include interviews with students and family finding out how aware people are of the recycling schemes and the benefits*
    - *be based on getting the recycling/reuse facts across*
    - *could include specially invented recycling characters to add some humour*
    - *play movie to other students and to families at home.*
  - **Create a Web Page.** A specially constructed web page for your school/class website giving mobile phone recycling information. Include links to Ministry for the Environment safe disposal of mobile phones and to Telecom and Vodafone recycling information sites. Include a Flash or Quicktime version of the movie on the web page.



**This could  
be your old  
mobile phone**

## FURTHER ACTIVITIES

- *a poster display at a local shopping centre or supermarket*
- *colourful A5 reminders for the family fridge*
- *letters to the local paper and arrange for the local community radio station to interview students*
- *email schools in different regions of New Zealand – inform them of your campaign and enlist their help (email info at: [www.tki.org.nz/e/schools/](mailto:www.tki.org.nz/e/schools/))*
- *Run a mobile phone recycling scheme at school*
- *Visit the Telecom or Vodafone websites for further ideas.*

