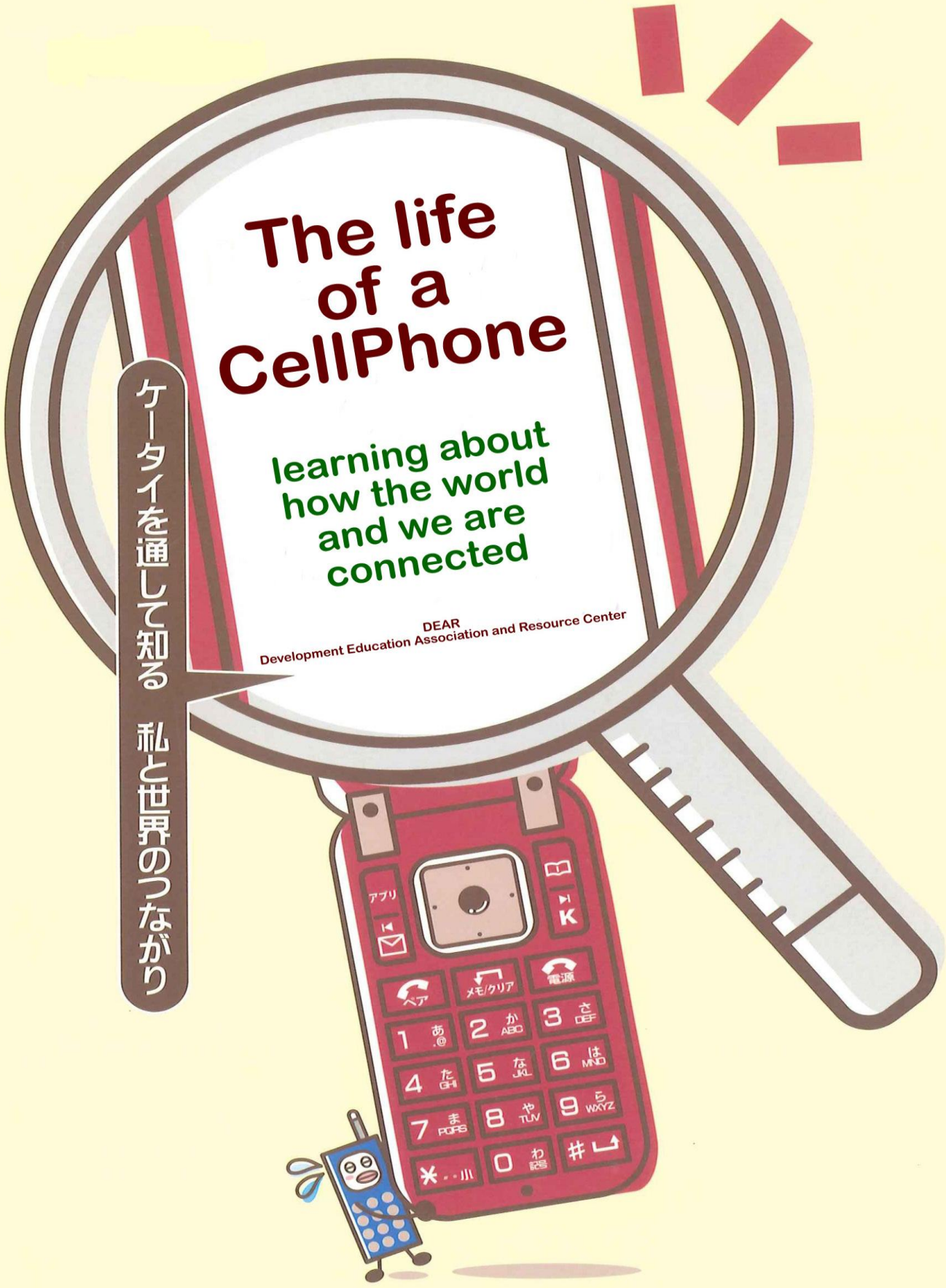
Development Educaiton Study Kit

The life of a CellPhone

learning about how the world and we are connected

DEAR
Development Education Association and Resource Center

ケータイを通して知る 私と世界のつながり



DEAR 開発教育協会
特定非営利活動法人 開発教育協会

Note: The English translation of the Development Education Teaching Materials produced by Development Education Association and Resource Center (DEAR) was organized by Education for Sustainable Development Research Center (ESDRC), Rikkyo University.
For more information, please contact Naomi Kamijo (kamijo@rikkyo.ac.jp).

Education for Sustainable Development Research Center, Rikkyo University(ESDRC)
3-34-1 Nishi Ikebukuro, Toshima-ku, Tokyo 171-8501 Japan
TEL/FAX: + 81- 3-3985-2686
E-mail: esdrc@grp.rikkyo.ne.jp
URL: http://www.rikkyo.ac.jp/research/laboratory/ESD/

ESDRC
Education for Sustainable Development Research Center
Rikkyo University

The Education for Sustainable Development Research Center (ESDRC) was founded based at Rikkyo University in March 2007, with the aim of helping to consolidate ESD (Education for Sustainable Development) in our society. It was chosen as part of the 'Open Research Center' Project of the Japanese Ministry of Education, Culture, Sports, Science and Technology in 2007, concerning 'Developing Research and Educational Programs on ESD'.

Development Education Association and Resource Center(DEAR)
2-17-41-3F Koishikawa Bunkyo-ku, Tokyo 112-0002 JAPAN
Tel: +81-3-5844-3630 Fax: +81-3-3818-5940
E-mail: main@dear.or.jp
URL: http://www.dear.or.jp

DEAR 開発教育協会
DEVELOPMENT EDUCATION ASSOCIATION & RESOURCE CENTER

The Development Education Association and Resource Center (DEAR) was founded in 1982. with the aim of to network with members at local and national levels to promote Development Education. The role of DEAR is,

- To communicate with the government and give suggestions on its policy
- To develop networks and exchange information with related organizations in the world.
- To research Development Education.
- To gather information on Development Education in both Japan and the world and share the information.
- To help to provide learning opportunities in communities and schools.

Development Education Study Kit

The life of a CellPhone

Learning about
how the world and we are connected

Edited and Published by
ESD Research Center, Rikkyo University (ESDRC)
Development Education Association and Resource center (DEAR)

March 2007

To The Reader Of This Booklet

“Now put away your cellphones!”
This is something that always had to be said before class began at the high school where I used to teach. Needless to say, students kept checking their phones and sending emails during breaks, and even when classes began.

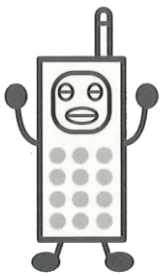
Today, over 75% of Japanese own cellphones (as of 2006). The rate is even higher among high school students, with over 90% of students in Hyogo prefecture, for example (Kobe News, December 30, 2003) and, according to a survey, 99% of students at the high school where I used to work. They tell us that cellphones are “something I can’t live without” and “a part of my life.” We decided to create this educational booklet having observed this strong obsession and thinking, “If they are so interested in cellphones, couldn’t we use them as an entry point for learning? It is a very familiar item to the students, so let’s think of lesson plans that will show how our consumption and the world are connected.”

The cellphone has brilliantly been able to fulfill the needs of today’s consumer: it is cheap, simple and convenient. New models are being developed one after another and subscriptions continue to grow in number. But what is it like on the flip side of this little device that continues to capture the attention of so many people?

Through this device the size of our palm, we can observe the different problems facing today’s globalizing, mass consumer society: the scramble for raw materials, labor issues in factories that manufacture components, the environmental impact and recycling. When we look at these issues from the perspective of the cellphone, which is something very familiar to us, they will seem more real to us.

We hope that this booklet will be a tool that nurtures the reader and teaches him or her to see the links between cellphones and people, the environment, etc. We hope that it teaches the reader to understand the structures that exist around these issues and the problems arising from them. We also hope that it helps the reader notice these contradictions and, despite it being difficult, take action towards making a better world, rather than remaining unaware and irresponsibly consuming the things that surround us that have been produced all over the world, “as long as it’s cheap.”

Saori Yoshida (High School Home Economics Teacher)



Contents

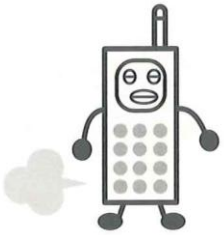
The aim of this study kit

- To learn about problems surrounding cellphones, which are so familiar to us and, through this, think about how we and the world are connected.

- To use this as an opportunity to think about what we, as cellphone users and people involved in the cellphone industry, can do to respond to the problems, considering the producers and the environment both inside and outside of Japan.

Target

Students in junior high school and above



Features of this booklet

1. Looks at diverse aspects of the cellphone, from manufacture to disposal

2. Uses a variety of participatory study tools

3. Nurtures the ability to see the connection between consumer products and people, the environment, etc., to understand the structures that exist around these issues and the problems and their background, and to take action towards making a better world.

Many of the effects of the cellphone on society are characteristic of a globalizing and increasingly information-oriented modern society, making it impossible to make sweeping judgments as to whether they are positive or negative. Links between various issues are also complex and there are many problems for which we have yet to find clear and concrete solutions. It is in our hands, and those of future generations, to find these solutions and carry them out through continuous dialog, while considering how cellphones have transformed our lives and societies.

Rather than waiting for someone to give us direction or provide policies to deal with today's increasingly complex social problems, we must think creatively about what we consider an ideal society and how we can realize it, and act upon this basis. This booklet uses participatory methods in all learning activities in order to nurture this ability.

Using This Booklet

This booklet in comprised of ten activities about the production, use and disposal of cellphones. All learning activities are participatory.

Select which of the activities to carry out for each goal, but to ensure that students are drawn as much as possible to how the issues relate to daily life, always begin by completing one of the tasks from Activity I. Activity II includes questions and answers that provide basic information required for Activity III and beyond. You may also begin with specific activities and corresponding questions to suit the target audience and time constraints.

mobile phone / cellphone

Most mobile phones already have functions other than as phones. In Japanese society today, the term "mobile phone" means more than just a phone, and this booklet uses the word "cellphone" to refer to all mobile phones. We only use the term "mobile phone" when using quotations.

What is Development Education?

Japanese society and the way we live our lives are not unrelated to global issues such as poverty and war, environmental destruction and human rights violations. Furthermore, the very same problems exist in Japan. Though development education, each of us can learn about these issues, think about them as our own problems and work towards their solution, to build a just world where people diverse in culture and ethnicity can live together.

Activity I. Cellphones in our daily lives

Today, over half of Japan's total population (including infants and the elderly) carries a cellphone. There are surely many who consider them to be an essential part of daily life. Let's think about what cellphones mean to us.

Part 1

Goal
Think about what cellphones mean to you.
An introductory activity.

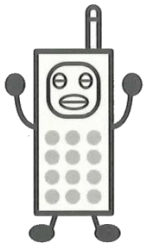
Time Required
20 - 30 minutes

What to prepare
A4 sheet of paper
felt-tip pen
(for each participant)

Procedure

1. Have the participants think about how many cellphones they have owned in the past and have them line up according to this number, beginning with the person with the least (or none). They cannot use their voices, only gestures.
* If communicating without sound is difficult, allow them to talk.

2. Once they are in a line, ask some of them questions.



- How many phones have you owned?
- How long have you had your cellphone?
  (Or how often do you change phones?)
- Why did you swap your phone for a new one?

* In particular, ask detailed questions to the person who has had the most number of cellphones.
* Ask those without cellphones why this is so.

3. Have them sit in groups of 5-6 people and ask each group to write in big letters, "To me, a cellphone is _____" on a piece of paper.

4. Discuss the response within each group. * This can also be used as an opportunity for self-introductions.

5. Introduce the different groups' opinions, selecting some of them for discussion.

Some responses to: "To me, a mobile phone is _____"

A pet, a friend, a communication tool, a way to connect me to my family, something through which I can reveal myself, a burden, something to kill time, something I feel restless without, part of my body, a timekeeper, an alarm clock, a spice, something I feel uneasy when I have with me, as well as when I don't.

Part 2

Goal
Think about what cellphones mean to you.
An introductory activity.

Time Required
30 - 40 minutes

What to prepare
post-its (approx. 30 for each participant),
craft paper (for each group),
felt-tip pen
(for each participant)

Procedure

1. Form groups of 5-6 people. Each person should write as much as they can about cellphones - what they know, any concerns, thoughts, opinions, questions... anything - with each thought written on a separate post-it.
E.g. addiction, etiquette, billing fraud, an essential item

2. Each person reads out what they have written, then sticks the post-its on a big piece of craft paper.

3. Once everyone in the group has finished, group similar post-its and write a title for each. Any related post-its can be marked by drawing lines between them.

4. Groups introduce the finished posters and discuss.

Points to Consider
During the sharing session, think about the good and bad effects of cellphones on our lives, things we share and differ on when it comes to cellphone use, and how communication has changed because of them.

Extension Activity

Deepen your understanding of the relationship between you and your cellphone by answering the questions below.

Which of the four methods below do you use to communicate the following expressions? Why?

"Sorry" - When you want to apologize
"Congratulations" - When you want to celebrate
"I have feelings for you" - When you want declare your love

1. Telephone
2. Letter
3. Cellphone email
4. Meeting directly

What were the most common answers among the participants?
How have things changed over time?
What are the pros and cons of cellphones when it comes to personal relations?

* How much time do you spend on your cellphone in a single day?
* How much do you spend on your cellphone in a month?
* About what percentage of your attention do you give to your cellphone?
* How have your lifestyle and personal relations changed through cellphone use?

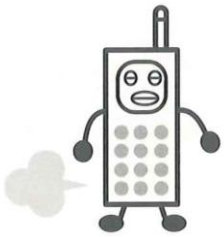
Other Approaches: Domestic Cellphone Issues

- Read newspaper articles and materials dealing with domestic concerns regarding cellphones, such as electromagnetic waves, etiquette in public spaces, online dating sites, “one-click fraud” and addiction. Identify what participants know about the issues and what they want to learn more about.
- Select one issue and gain a deeper understanding of it. Discuss what we can do to work towards resolving the issue.

Column: Mobile Phones and Media Literacy

“Media Literacy” is used to refer to the ability to analyze information, an ability that is necessary in our information-oriented society, to participate in it and achieve social success.

Media Literacy involves: 1) the ability to use information-processing equipment, 2) the ability to critically accept and interpret information, and 3) the ability to use various media to express one’s self. While there are attempts in school education to critically view or read media, such as television and newspapers, and to introduce computers and the internet, the perspective of thinking about cellphones as a form of media is often left out. It is unusual to find even a junior high school student without a cellphone these days, but schools are strengthening efforts to remove them, preventing them from being brought to school or used on school grounds. Don’t we need, however, to learn how to use mobile phones more effectively in the future?
(Reference: Keitaigaku Nyumon (An Introduction to Cellphones), Yuhikaku Publishing)



Column: Welfare and Mobile Phones

The spread of Internet email through cellphones has come to support the lives of people with hearing difficulties, who until then had not found it easy to use phones. With the emergence of mobile phones with email functions, they can now be contacted even when away from home. Further, mobile phones with services that provide the user’s location are useful not just for ensuring the safety of children but also for taking care of and locating elderly people with dementia and wandering behavior. This is linked to securing the person’s safety, but also reduces the burden on the caregiver.

The various harmful effects of mobile phones have been pointed out, but rather than mobile phones themselves being harmful, the problem is about how they are used. We want increase the possibilities for mobile phones from the perspective of welfare, keeping their negative effects in mind.
(Reference: Keitaigaku Nyumon (An Introduction to Cellphones), Yuhikaku Publishing)

Activity II. Cellphone quiz

Why has the use of cellphones spread so much? How and when did this all start?
Let's learn more about cellphones.

Goal
Deepen understanding of the basic facts about cellphones. Each quiz can also be used to introduce units on related themes.

Time Required
30 minutes or more

What to prepare
Keyword cards
(on page 16) - make blown up copies so all participants can see the words clearly)
a cellphone product catalog.

Procedure

1. The facilitator asks questions while showing the possible answers. Each individual or group selects an answer.

2. Get participants to raise their hands to indicate which answer they selected, and have them explain why they made that choice.

3. Show the correct answers, regularly showing the keywords (reasons for the spread of cellphones: increasingly lightweight, multifunctional and low prices) to provide further explanation.
* Because the number of subscribers, weight, etc. is constantly changing, use the latest available data.

Question 1 : The Birth of the Cellphone

Q. Where did the cellphone originate?

a. Japan
b. UK
c. USA
d. Sweden

A. c. USA

Commentary

The mobile phone came out in the USA in 1946. At first, it was a car phone requiring calling an operator to dial the number and keeping a switch pressed down while talking. It was featured in the movie Sabrina.

The first mobile phone in Japan came out in 1979, also in the form of a car phone. At the time, the costs involved included a 200 thousand yen deposit, a monthly fee of 30 thousand yen and 10 yen per 6.5 seconds of talk time.
(Reference: Keitaigaku Nyumon (An Introduction to Cellphones), Yuhikaku Publishing, Gyokai no Saishin Joshiki Yoku Wakaru Keitai Denwa Gyokai (The Latest Industry Information: Easy-to-Understand Mobile Phone Industry), Nippon Jitsugyo Publishing)

Question 2: The Spread of Cellphones

Q. What is the approximate number of cellphone subscribers today?

a. 23 million
b. 52 million
c. 61 million
d. 95 million

A. d. 95 million

Commentary

In 2000, the number of mobile phone subscribers overtook that of landline subscribers, at 96.48 million at the end of March 2006, accounting for 75% of Japan's population (approx. 120 million).

Procedure

4. The facilitator asks the participants, "Why has cellphone use spread so much?" and continues to quiz them to explore answers.

Question 3: Reasons for the Spread of Cellphones - #1 Increasingly Lightweight

Q-a. Among all the cellphones being sold today, how much does the lightest one weigh?

A-a. Approx. 100 g (as of 2005)

Q-b. How much did the first cellphone in Japan weigh?

a. 1 kg
b. 2 kg
c. 2.5 kg
d. 3 kg

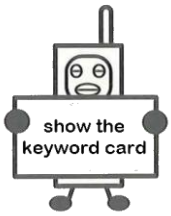
A-b. d. 3 kg

Commentary

The weight of cellphones tends to get lighter and lighter each year. The first cellphone that could be mobile came out in the 1980s. Service for the "mobile phone," as opposed to the car phone, began in 1987, and the phone weighed about 900 g. By 1991, it was as light as about 220 g. (Refer to product catalogs for the weight of the latest cellphones.)

Procedure

5. The facilitator shows the keyword card "Increasingly Lightweight" as one of the reasons for the spread of cellphones.



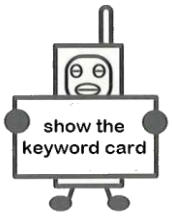
Question 4: Reasons for the Spread of Cellphones - #2 Increasingly Multifunctional

Q. What can you do with a cellphone?
* Provide as many answers as you can.

A. Phone, email, TV, camera, wallet, games, memo pad, calendar, lighting, reading, listening to music, calculator, alarm clock, Internet, etc.

Procedure

6. The facilitator shows the keyword card “Increasingly Multifunctional” as one of the reasons for the spread of cellphones.



Question 5: Reasons for the Spread of Cellphones - #3 Increasingly Low Prices

Q. Why are cellphones so cheap to buy, with some even free?
a. Because there is an extremely high number of users.
b. Because distributors get financial incentives from telecommunications companies to get new subscriptions.
c. Because components are manufactured and cellphones are put together in countries with low wages (throughout Asia, for example).

A. All of the above

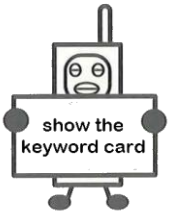
Commentary

a. Explained in Q1 and Q2.

b. A system whereby mobile phone companies (telecommunications carriers) pay distributors about 40,000 yen for each new mobile phone sold. Monthly payments for calls are set at relatively high prices so that if mobile phone companies secure a contract, they can fully recoup this within about two years. This system has made it easier for users to buy cellphones and contributed to their spread, but because over 75% of the population are now subscribers, deliberations are underway regarding whether to reduce the amount of the incentive paid to distributors or eliminate them altogether and instead, lower the cost of communication fees.
(Source: Nikkei Shimbun, March 14, 2007 Morning edition, Chikyu Kaimono Hakusho (White Paper on Shopping for the Planet), Commons)

c. In 1993, the semiconductor market of the Asia Pacific region, excluding Japan, accounted for 18% of the world market, but in 1998, the region eclipsed Japan and in 2000 it had a 25% share compared with 22% for Japan. Japanese companies are making more and more high tech components in other Asian countries. Labor costs abroad are as low as one-tenth to one-twentieth that of Japan’s, and the cost of investing in plants and equipment is also low, making reduced production costs and sudden bursts and halts in production possible.
(Reference: Denshi Kogyo Nenkan 2001 Nenban (2001 Yearbook on Electronic Industries), Dempa Shimbunsha, IT Osen (IT Pollution), Iwanami Shoten)

Procedure



The facilitator shows the keyword card “Increasingly Low Prices.” Explain the three factors behind the spread of cellphones: increasingly lightweight, increasingly multifunctional and increasingly low prices.

Question 6: Disposing of Cellphones

Q. Approximately how many cellphones are disposed of annually?

a. 15 million
b. 27 million
c. 32 million
d. 45 million

A. d. 45 million

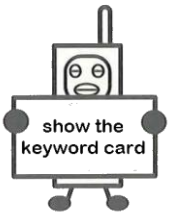
Commentary

The Telecommunications Carriers Association calculates the number of unwanted mobile phones and personal handy phones as the number resulting from subtracting the net increase in mobile phone/personal handy phone subscriptions from the number shipped from each manufacturer.

In 2005, disregarding stock, domestic consumption numbered 49,651,902 (51,104,902 produced+2,491,000 imported-3,944,000 exported), and new subscriptions numbered about 5,011,000, so we can estimate that 49,651,902-5,011,000=approximately 44,640,000 that are unwanted. This amounts to over 120,000 phones in a single day.
(Reference: 2006 White Paper on Information and Communications in Japan, Ministry of Internal Affairs and Communications; Communications and Information network Association of Japan website, http://www.ciaj.or.jp/)

Among unwanted cellphones, we can guess that there are some that are stored at home and others that are disposed of. According to the results of a survey on recycling cellphones and personal handy phones carried out by the Telecommunications Carriers Association and Communications and Information network Association of Japan, among people who cancelled subscriptions or bought new phones in 2005, 65.6% kept their phones, 24.6% returned them to the store, 4% gave them to someone else, and 5.3% disposed of them as regular or sorted garbage. Even if the owner keeps the old phone once he or she buys a new one to replace it with, it is possible that the old one will still eventually be disposed of.

Procedure



8. The facilitator shows the keyword card “Mass Production/Mass Disposal.”

9. Ask participants who have had more than one cellphone, “What did you do with your old cellphone?” and explain the collection rate and how the Mobile Recycle Network works.

Question 7: Recycling

Q. What is the rate of cellphones being recycled today?

a. 82%
b. 62%
c. 42%

A. d. 21%

Commentary

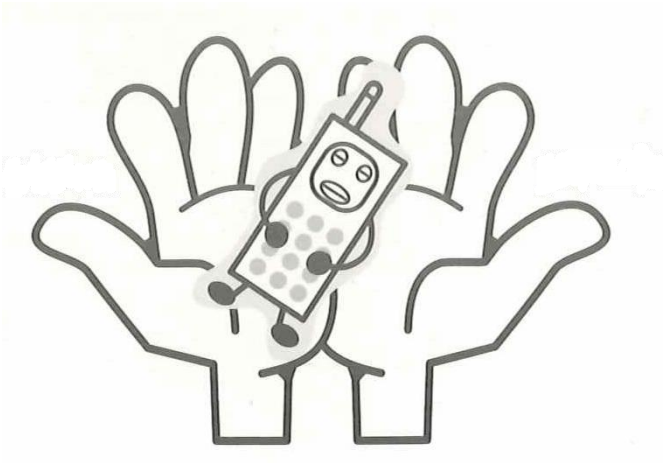
The collection rate of cellphones is one way to determine the percentage of unwanted cellphones being recycled. This is how the Telecommunications Carriers Association calculates this rate:
Number Collected ÷ (Number shipped from each manufacturer - net increase in mobile phone/personal handy phone subscriptions) = Collection Rate

In 2001, the number collected was approximately 13.1 million, but this went down to about 8.53 million in 2004 and about 7.44 million in 2005 (http://www.mobile-recycle.net/index.html). According to Asahi Shimbun (April 17, 2006 Morning edition), the collection rate decreased to 21% in 2004. Reasons for not recycling include: collecting cellphones, keeping them to back up data, fear of personal information in address books being leaked, and that it is bothersome to recycle.

The Mobile Recycle Network is a system whereby about 9,300 stores nationwide (as of end of March 2006) collect used cellphones, personal handy phones, batteries and charges at no cost, independently from telecommunications carriers or cellphone manufacturers.

Extension Activity

As a research activity, have the participants explore the quiz answers further.



I'm the product of the work of many different people, you see?

Column: Effect of Mobile Phone Electromagnetic Waves on the Human Body

Electromagnetic waves (including electric waves) are emitted by many household appliances, such as microwave ovens, IH stoves, electric carpets, hair dryers, electric shavers, vacuum cleaners and washing machines. Even outside the home, they are emitted by trains, IC card-enabled automatic ticket gates, anti-shoplifting gates and electric wave towers. It is not an exaggeration to say that we are surrounded by electromagnetic waves. Although few in number, there are some people who suffer from “electromagnetic hypersensitivity.”

Mobile phones also emit electromagnetic waves. Unlike other household appliances, they are used frequently and for long periods of time close to a person’s head. The negative effects of this on the body are thus a concern. This is the first case of humankind being constantly exposed to digital microwaves that are not found in nature.

There are mixed findings among researchers as to the negative effects of electromagnetic waves from mobile phones on the body. Some confirm that they exist and some deny it, or say that the effects can be ignored: The causal relationship is still not clear. It will be extremely difficult to clearly identify the risks of electromagnetic waves on the human body as long as the effects are not immediately apparent, various frequencies of electromagnetic waves are mixed together, and while it is difficult to get data that isolates the effects of the waves from other factors, such as other carcinogenic and chemical substances and radiation.

In Japan, the Ministry of Internal Affairs and Communications findings are that it “does not recognize that the use of mobile phones has an effect in the development of brain tumors.” On the one hand, in countries such as Sweden and the UK, there have been findings of higher rates of brain tumors among people who have used mobile phones for 10 years or more, located on the same side of the head as the “preferred side” for phone use. The World Health Organization is currently carrying out an epidemiological study. The Specific Absorption Rate (SAR), which shows the rate by which electromagnetic waves are absorbed, has been introduced to regulate electromagnetic waves from mobile phones, but there are variations in national standards: The Japanese regulations are looser than in other countries. The SAR depends on the type of mobile phone, and these rates are published in each phone’s specifications.

Mobile phones are synonymous with convenience and affluence. Should we feel “secure” because the risks on the body cannot be specified? Or even if the risks cannot be technically identified, should we consider the possibility and take preventative measures, such as through regulations? We should think about what kind of society would be better for us.

(Reference: Shinobiyoru Denjiha Osen (Advancing Electromagnetic Wave Pollution), Commons; Shimin Kagaku No. 10 (Feb. 2006), Citizen’s Science Initiative Japan; 2006 White Paper on Information and Communications in Japan, Ministry of Internal Affairs and Communications)

Mobile Phone Quiz Worksheet

1. Where did the cellphone originate?
    a. Japan
    b. UK
    c. USA
    d. Sweden

2. What is the approximate number of cellphone subscribers today?
    a. 23 million
    b. 52 million
    c. 61 million
    d. 95 million

3a. Among all the cellphones being sold today, how much does the lightest one weigh?
Approx. ___ grams

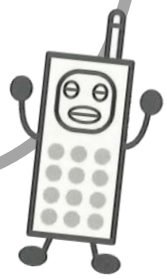
3b. How much did the first mobile cellphone weigh?
    a. 1 kg
    b. 2 kg
    c. 2.5 kg
    d. 3 kg

4. What can you do with a cellphone? (Provide as many answers as you can.)

5. Why are cellphones so cheap to buy, with some even free?
    a. Because there is an extremely high number of users.
    b. Because distributors get financial incentives from telecommunications companies to get new subscriptions.
    c. Because components are manufactured and cellphones are put together in countries with low wages, throughout Asia, for example.

6. Approximately how many cellphones are disposed of annually?
    a. 15 million
    b. 27 million
    c. 32 million
    d. 45 million

7 What is the rate of cellphones being recycled today?
    a. 82%
    b. 62%
    c. 42%
    d. 21%



Increasingly
Lightweight

Increasingly
Multifunctional

Increasingly
Low Prices

Mass Production
Mass Disposal

Activity III. Buyers and Sellers
Analyzing advertisements

What factors do you consider when buying a cellphone? Function? Design? Or, perhaps, price? What did you prioritize when you bought your current cellphone? Were you affected by advertisements? Let's think about how we are affected by advertisements when buying cellphones.

Procedure

1. Form groups of about 6 people. Come up with the three most important things considered when buying cellphones (e.g. price, function, design, popularity, manufacturer, services and special offers, weight, perks, mascot, etc.). (For people without cellphones, come up with factors they would consider if they were to buy one.) Think about how these factors are dealt with in the advertisements used in this activity.

2. Each person examines the advertisement, and then the group discusses their first impression of it.

3. Analyze the advertisement while filling in the Ad Analysis Worksheet (e.g. What is the concept? What is their selling point? Who are they targeting?).

4. Each group shares the results of their analysis and discussion.

5. Each person listens to the other groups' presentations, shares opinions and thinks about what things to consider when buying a cellphone.

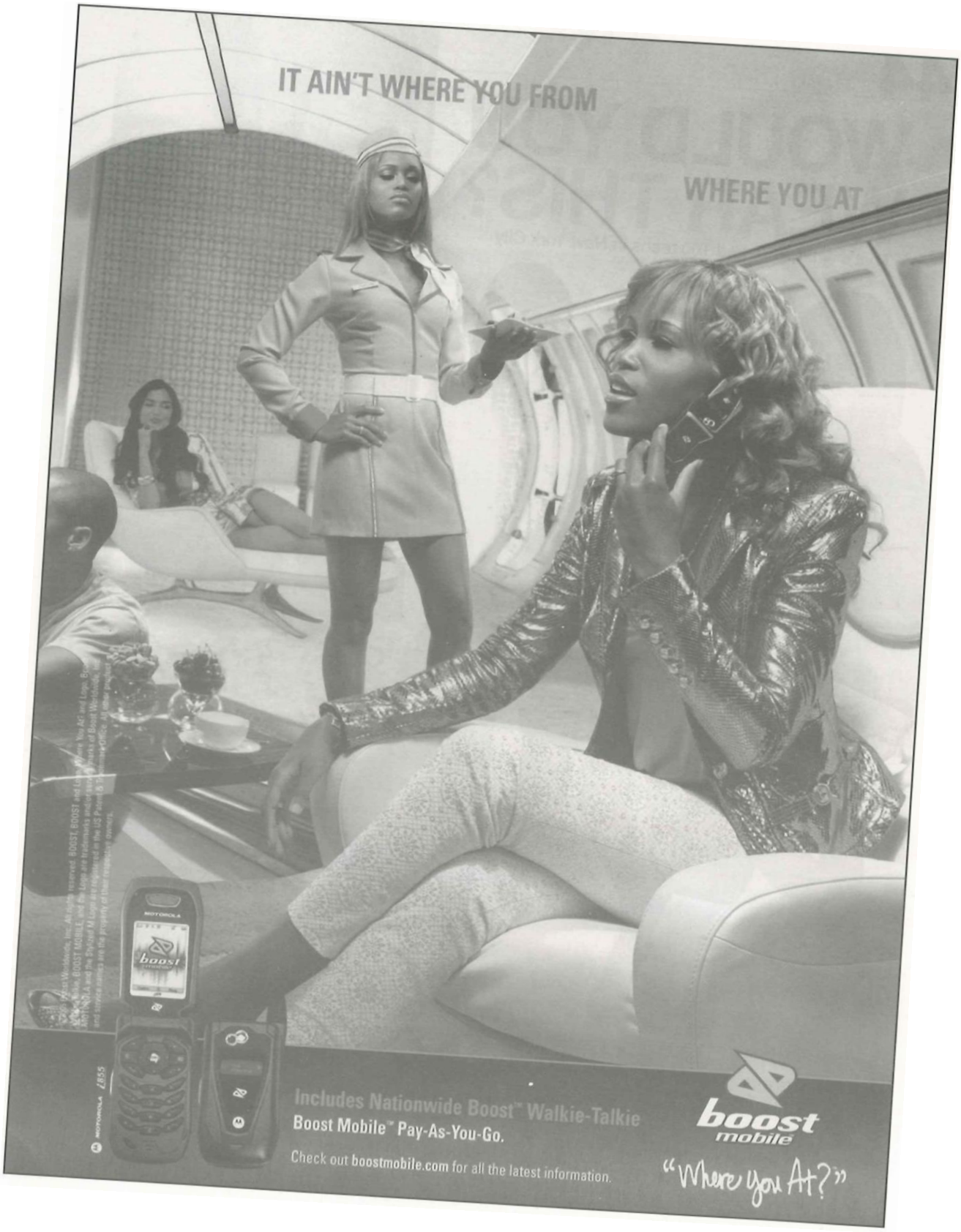
Goal
Analyze how we are affected by advertisements (media) when we buy cellphones and what things we consider in making our decision.

Time Required
45 - 60 minutes

What to prepare
Leaflet
(or pamphlet/clipping) advertising cellphones, which either the facilitator or each participant prepares,
Ad Analysis Worksheet
(p. 19)

Sample Questions to Start With
- Did the factors you considered when buying a cellphone and the message that the advertisement is trying to communicate overlap or not? Why?
- Were you able to glean from the advertisement what you wanted to know most about the cellphone being advertised?

Cellphone Ad (example)Source: New Internationalist, Sept. 2006, p. 6



Ad Analysis Worksheet

●What kinds of people or characters are shown in the ad (gender, age, style, etc.)?
●What kind of impression do you get from each?

Character (gender, age, style, etc.)	Impression (and why)

●What are the surroundings like? (e.g. a vibrant city, lots of nature)
●What kind of impression does it give to the reader? (e.g. calm, kind, cheerful)

●What kind of catch copy is being used?
●What impression do you get from seeing these words?

●Are certain advertising devices being used or emphasized?
●What kind of effect do you think they have?

●Who are the targets of the advertisement? (age, occupation, place, etc.) Why?

Extension Activity

- Try analyzing not just print media but television commercials also. Other than the points raised in the Ad Analysis Worksheet, you can analyze things such as the music, lines, message, number of scenes and the composition structure used.

- Participants can create their own advertisements and commercials to sell their own mobile phones and analyze each other's work.

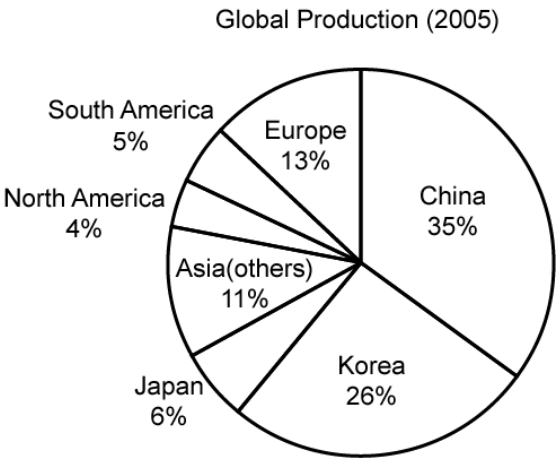
Comment from the CEO of the London advertising agency that created the advertisement on page 18:

This waitress is trying to show power relations by looking down on the woman using a mobile phone. The latter, however, without looking at the waitress, is exhibiting the attitude that all but says, "I know this place very well." This advertisement is trying to tell consumers: "If you have this mobile phone, no one will ever tell you what to do. You become the one in charge."

Column: Cellphone Production

As of 2005, China and Korea were competing for the top spot in the production of the world's mobile phones. Electronics Manufacturing Service (EMS) Companies commissioned by manufacturers in Japan, the USA and Europe are moving their production to China. In many cases, major components needed for final assembly in Chinese factories are imported from countries like Japan.

Most mobile phones sold in Japan, however, are developed and assembled completely in Japan. The production of electrical components for the phones is either carried out by companies within manufacturing enterprises in Japan, or factories in the Asian region are commissioned to make and assemble them, procuring them from outside the company.



In 2005, there were 762,860,000 mobile phones produced worldwide. Of these, 266,870,000 were in China, with 597,460,000 in all of Asia, surpassing three-quarters of the total number. Nokia (Finland), Motorola (USA) and Samsung Electronics (Korea) make up over 60% of this number. Japanese production numbered 95,810,000, or about 12%.
(Reference: 2006/07 Sekai Kokusei Zue (World National Statistics Illustrated), Yano Tsuneta Kinenkai; Ima ga Wakaru Jidai ga Wakaru Sekai Chizu 2007 Nenban (2007 World Map that shows us the world today), Seibido Shuppan)

Activity IV.
Raw materials around the world

Cellphones weigh around 100 grams, but they are not just phones: they have many other functions such as email and Internet, television, camera, radio, audio playing, clock and alarm. How many different components make up this little device?

Procedure

1. The facilitator shows the diagram while reviewing how many different parts make up a single cellphone, and what the parts are for.

2. Participants look at the diagram while coloring in the countries on the world map where the raw materials are procured, writing in the names of the materials and components and connecting them with a line to Japan.

3. Review what materials are coming from which countries and discuss.

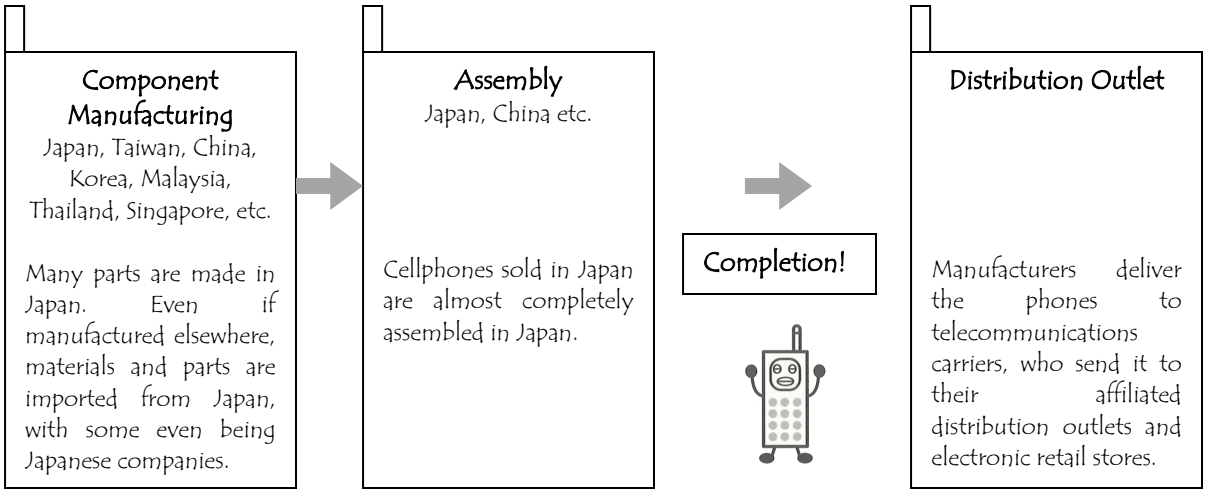
Sample Questions to Start With
- Are the countries exporting the raw materials and the countries where cellphones are used the same?
- Which countries produce a lot of raw materials?

Goal
Many different components are required to make a cellphone, and this activity will help participants understand where in the world the raw materials for these components originate.

Time Required
30 minutes or more

What to prepare
Internal Diagram of Cellphone (p.23),
world map (blank)

Timeline for Producing a Cellphone (Diagram)

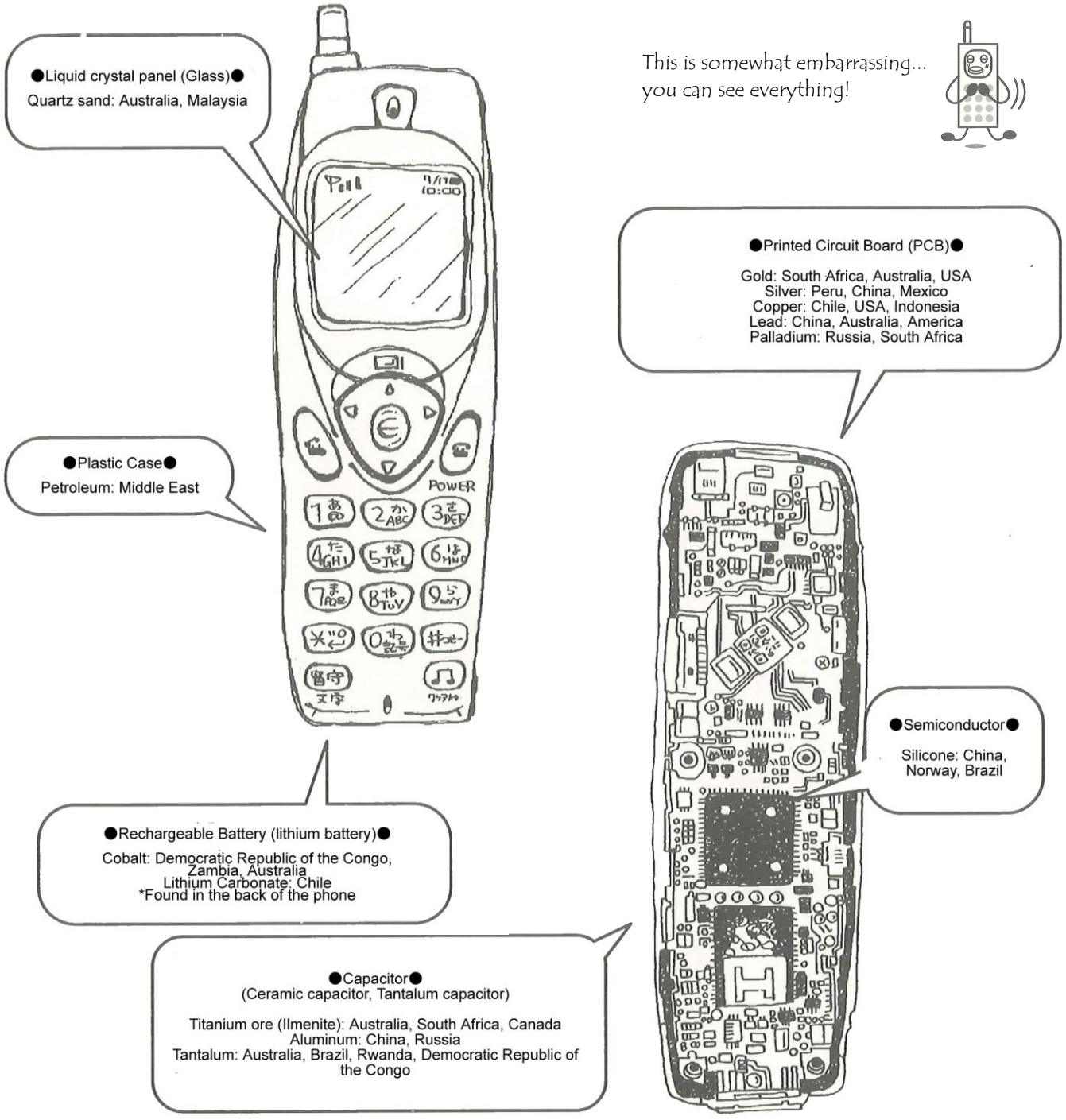


Reference: Chikyu Kaimono Hakusyo (White Paper on Shopping for the Planet), Commons IT Osen (IT Pollution), Iwanami Shoten.

Internal Diagram of Cellphone (raw materials and main sources)

If you open up the plastic case, you will find a green component called a Printed Circuit Board (PCB), as well as tiny electrical components packed in, such as semiconductors, capacitors, resistors, and inductors. There are about 700 in a single phone. (Source: Chikyu Kaimono Hakusyo (White Paper on Shopping for the Planet), Commons)

Source: Mineral Commodity Summaries 2006, USGS
Chikyu Kaimono Hakusyo (White Paper on Shopping for the Planet), Commons



Activity V. The scramble for raw materials

Packed into the little body of a cellphone are raw materials from all around the world. So who are the people who are responsible for making cellphones available to us through the raw materials that they produce, and what are their lives like?

Procedure

1. Do questions 6 and 7 of Activity II (Cellphone Quiz), in advance. Ask participants, “What did you do with your old cellphone?” and explain the collection rate and how the Mobile Recycle Network works.
*It would be good to also explain the state of affairs in and the conflict in the Democratic Republic of Congo.

2. Watch “Minami de Okiru Sensou” (War in the South) from the NHK educational program “Chikyu Deta Mappu Dai Hachikai Heiwa e no Chizu” (8th World Data Map: Map for Peace), which aired in August and September 2007 (approx. 10 minutes).

* As an alternative, you can also show part of the NHK special “Senjyo no IT business - Nerawareru Kisho Kinzoku Tantaru” (IT businesses on the battlefield: vying for the rare metal tantalum) (aired Sept. 22, 2001).
*Recording NHK programs for school class viewing is permitted.

3. Each participant writes about what they were most surprised to learn about, felt or thought about the TV program. Keywords are acceptable. Introduce these in each group, or to everyone.

Impressions from High School Students:
What I learned about and thought from watching the program

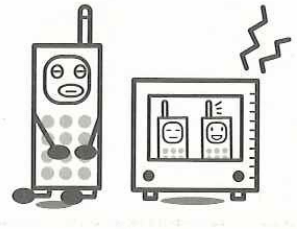
- I was sad to learn that people are risking their lives to mine tantalum while we spend our days happily using the things made with it.
- I thought it was so horrible that people suffering in war were mining tantalum without knowing that the money from it was being used for the war!
- It’s convenient to have a cellphone, but I learnt that because of it, wars happen and people are suffering. Then I wonder whether mobile phones are really so necessary.
- I think that we mustn’t just think of what is useful for ourselves.
- Tantalum is a useful and rare thing, but I wonder what would happen if it wasn’t needed to make cellphones? How would the people of the Congo make a living? Would the war end? I think it’s a very difficult issue. It’s strange to think that we always have this Tantalum with us.

Goal
Cellphones are objects of mass production and mass disposal, but what kinds of problems are they causing in the countries where the raw materials to make them are sourced? This activity will explore this structure and how these issues relate to us.

Time Required
50 minutes or more

What to prepare
A4-size sheet of paper and felt-tip pen (for each participant), videotape of NHK educational program “Chikyu Deta Mappu Dai Hachikai Heiwa e no Chizu” (8th World Data Map: Map for Peace).

Program Content



Comprised of about 700 electrical components, a single cellphone is a collection of raw materials from all over the world. Some regions provide a lot more than others, and metals that are low in quantity are referred to as “rare metals.” In the Democratic Republic of Congo (DRC), which continues to be afflicted by civil war, the rare metal Tantalum, an indispensable raw material for cellphone components, is an important financial resource for antigovernment forces and other groups. We explore the unexpected connection between our cellphones and the civil war in the DRC.

Commentary: Tantalum and Increasingly Light Cellphones

Good quality deposits of the rare metal Tantalum ore are abundant in the DRC, and it is believed that much of the world’s supplies can be found there. Tantalum capacitors made from this are placed next to the CPU of cellphones and other electrical instruments to control electric currents. About 20 of them are needed in a single cellphone, and 27 billion were produced in 2000.

With the same capability as a capacitor made of aluminum but at 1/60th the size, the tantalum capacitor is said to be the trump card in the growing miniaturization of electric instruments such as cellphones. Demand for tantalum rose with the spread of cellphones, but recently, because of its rarity and cost, efforts are being made into making capacitors from Niobium, also a rare metal.

Commentary: The State of the Democratic Republic of Congo (DRC)

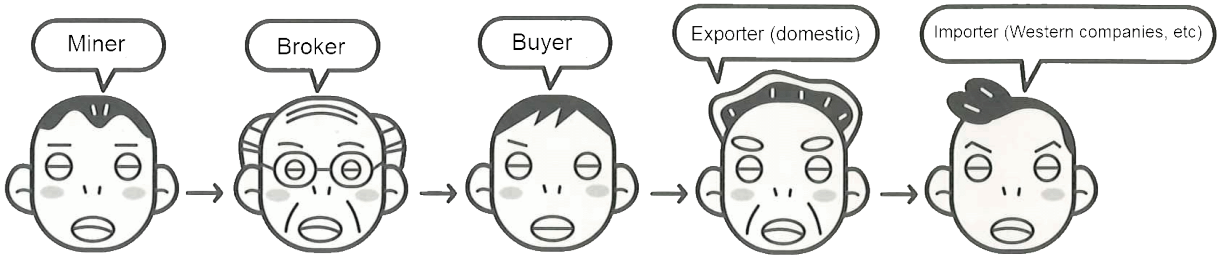
The DRC was in a state of civil war between 1998 and 2002 due to several armed insurgents groups involving neighboring countries. Because of this, it is said that three million people lost their lives out of a population of 50 million. A peace accord was later signed, but the state of conflict involving neighboring countries continues. In 2006, the first presidential election since the new constitution was promulgated was held.

- Population: 57.5 million (2005)
- Capital: Kinshasa
- Languages: French (official), Kikongo, Tshiluba, Lingala, Swahili
- Religion: Christian (85%) (mostly Catholic), Muslim (10%), Other traditional beliefs (5%)
- Major industries: Mining and manufacturing (copper, cobalt, industrial diamonds, petroleum), agriculture (palm oil, cotton, coffee)
- GNI: USD 6.916 billion (2005)
- GNI per capita: USD120 (2005)
- Economic growth rate: 6.6% (2005)
- Major Trade Items: Exports - diamonds, crude oil, cobalt, copper; Imports - consumer goods, capital goods raw materials

Source: Ministry of Foreign Affairs website: http://www.mofa.go.jp/mofaj/area/congomin/data.html

Commentary: The Brokering Process for Tantalum

The broker system is very advanced in the Tantalum business. It is said that by the time it is used in mobile phones, tantalum is of 1,000 times more value than that at the time it was extracted.

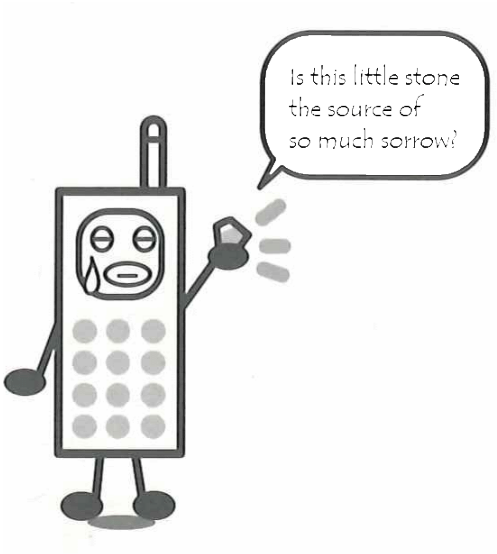


Commentary: Tantalum Ore and Armed Conflict

Tantalum ore can be cited as one cause for the prolongation of the conflict. The former Belgian colony of the DRC has abundant underground resources in gold, diamonds, and tantalum ore, which are also related to the conflict. Tantalum mines are controlled by armed insurgents such as the Congolese Rally for Democracy (RCD), and the huge profits from them are used to fund war supplies (countries such as the USA, Russia, and China hold a large share in the weapons trade).

There is also tantalum ore from Rwanda circulating the market, despite the fact Rwanda does not have such deposits. This suggests that the Rwandan army stationed in the DRC has links with armed insurgents.

In April 2001, a United Nations report pointed out that profits from mining tantalum ore were a source of funding for armed insurgents. Since around 2000, major manufacturers of electrical equipment around the world, mainly in Europe, had been involved in mineral dealings in this region, but after the report was released, European NGOs strongly lobbied manufacturers of electrical equipment using tantalum to stop using it if sourced in the DRC and neighboring countries.



Through these efforts, the issue was raised by some companies from the perspective of Corporate Social Responsibility, as discussed on page 38, with care being taken as to the origin of the underground resources used. They are not, however, obligated to prove the source of the materials to importers, and because of the complicated brokering process for tantalum, it is difficult to eradicate illegal production and bogus labeling of the source of the materials being.

Activity VI. Labor and environmental issues in production sites

It has become very common to be able to buy cellphones at cheap prices, such as for just one yen. But one reason behind these prices is the fact that the components are manufactured in Asian countries, making it possible to cut labor costs. But what effect does cellphone production have on Asian producers?

Procedure

1. Form groups of six. Do question 5 of Activity II (Cellphone Quiz), in advance.

2. Read and understand the Situation Card.

3. Form pairs within each group. Give each pair two Role Play Cards so that six cards are distributed in each group. In pairs, read and understand the cards.

4. In pairs, discuss what each person thinks about cellphones and write the answers on separate pieces of paper.

5. Showing this piece of paper from #4 above, share with the group what the person you are playing is asserting.

6. Discuss within each group what can be done to resolve these issues.

7. Have each group present their conclusions. The facilitator carefully takes up some of the opinions and viewpoints that come out of these presentations.

Goal
Apart from learning about what problems in producer countries lie behind increasingly cheap cellphones, we will look at the complexities of issues in a globalizing, contemporary society and come to notice our own contradictions.

Time Required
50 minutes or more

What to prepare
Worksheet
(p. 28, for each participant),
Role Play Cards
(p. 29, one set per group),
Reflection Sheet

8. If necessary, think at a deeper level by asking participants to think about other perspectives of the solutions they propose. In particular, encourage them to pick up on solutions that could be considered superficial and easy, and carefully consider the contradictions they represent.

E.g.

- Companies should make efforts on environmental issues.
- This costs money and would probably increase the price of cellphones. So do you still want this?
- The fact that Lin and her co-workers don't use the safety equipment is wrong.
- If you did a part-time job in manufacturing and, when paid by piece, saw that most people working at a quick pace around you were not wearing the gloves they have been given, would you wear them?
- The Thai government should enforce its environmental standards.
- But then Japanese companies might move their factories to countries with looser standards. Would that be okay for the Thai government and its people?

9. Share with each other what it was like to take on a particular role, what opinions from other roles you empathized with, and what you felt in general about the activity.

Reference: IT Osen (IT Pollution), Iwanami Shoten

Variation to Activity: Role Playing

The above activity can be modified as a role-play from step 3 onwards. Do this in groups of seven with a designated communication facilitator.

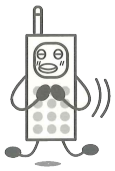
3. Give each person a Role Play Card. Each person reads and understands their role.
   *Roles: Maori (Factory worker for a Japanese company, female, 30), Kazuo Kageyama (Factory manager for a Japanese company, male, 43), Siriwan (Head of village located next to A City, male, 51), Chawat (Thai government official, male, 36), Lin (Former factory worker for a Japanese company, female, 30), Satomi Wakai (Mobile phone user in Japan, female, 19)
   *If a role is found to be difficult to understand, get together with others playing the same role and work together to understand it (e.g. by writing the gist of their assertion on a piece of paper).

4. The facilitator encourages participants to really get into their role in discussing this issue. In each group, with the facilitator leading, draw out ways to resolve the problem.

5. Have each group assess their results and present their findings.

6. In each group, discuss how to resolve the issue, regardless of role-playing.

7. and onward. The same as 7 and onward on page 25.



Points to Consider

As you discuss how to resolve the issue, focus on the situation of Lin, who is placed in a contradictory position where it is difficult for one to conclude which side to be on. The point of this activity is not to find a clear answer. What is important is the process whereby the participant comes to understand how complex the issue is, and with these contradictions and problems, think deeper about one's role in resolving the issue.

For example, rather than giving the opinion in the third person that companies should have better policies, think about the fact that to make such policies, companies need money, so cellphones could become more expensive as a result. Instead of thinking what would be ideal for others to do, go as far as asking how far you yourself can change.

You want a cheap cellphone, and you buy a cheap cellphone. You have learnt about the problem and want to do something about it. But you still can't stop hoping it will be cheap. You are attracted to fashionable things... On top of understanding how we are influenced one way or the other, let us think more deeply about how we can change and what we can do.

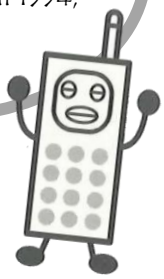
Summary

A is a city in Northern Thailand, about one hour away from the old capital of Chang Mai. There are many historical treasures here, such as the reclining Buddha in the golden temple Wat Phrathat Haripunchai, built in the 11th Century.

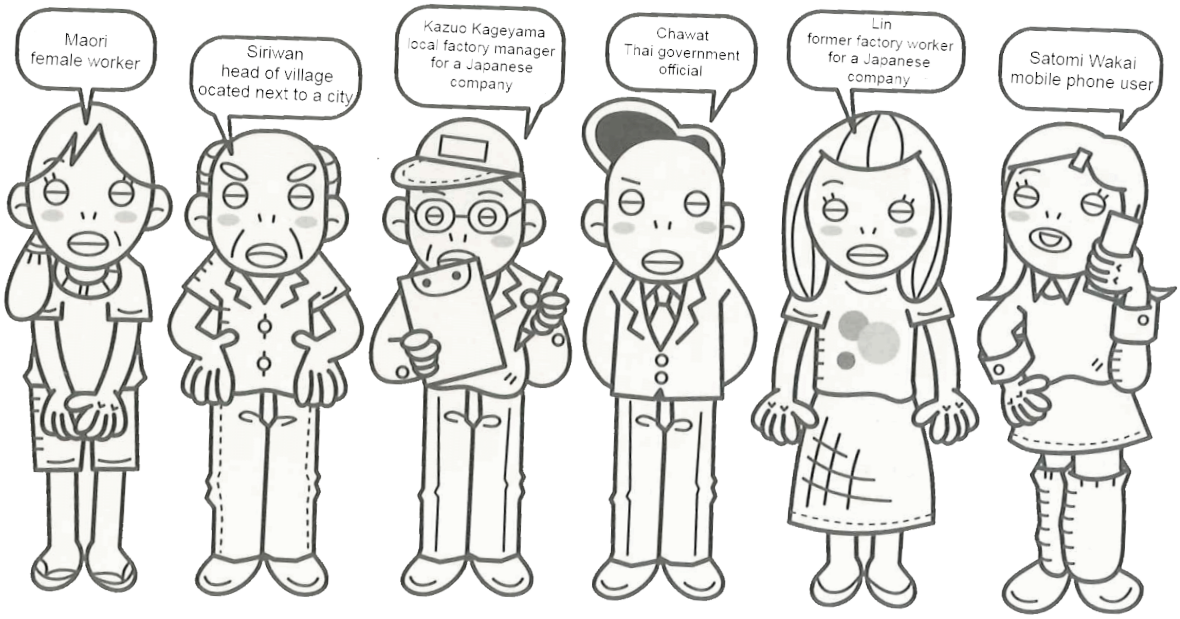
The government developed a farming area nearby in 1985 to create northern Thailand's industrial park. Today, many of the approximately 90 companies that occupy this space are Japanese. The majority of the 30 thousand workers here are young women from Thailand's northeastern and northern regions, who earn the monthly wage of 4,700 Baht (about 12,500 yen) in their first year of work. Most work in companies that manufacture electrical parts.

At A, a factory here that belongs to a Japanese company, aluminum oxide substrates are made, which are used to make ceramic capacitors, a part essential to the mobile phone. These are delivered to other Japanese companies. About 500 people are employed here.

Maori (30) works at A in the section of the factory that inspects the aluminum oxide. After working there almost four years, from 1993, she suffered health conditions such as headaches, paralysis, and swelling. She was hospitalized and had a take a leave of absence. Aluminum oxide is a cause of lung disorders such as Aluminum lung. She was diagnosed with chemical poisoning by a hospital in Chang Mai and applied for worker's compensation, but was unsuccessful. In April 1994, when she was fired, she took the matter to court.



A meeting has been organized so that related parties can come together to resolve this problem. These are the participants:



Maori
Factory worker for a Japanese company, female, 30

We worked 24-hour shifts at the factory. We were divided up into four groups, depending on how quickly we worked, and were paid accordingly, so it was pretty hard to have a day off, even if sick. I am quite sure that there were many people who got sick in the group that worked the fastest. I had a friend who was hospitalized for terrible headaches and spasms. She died in September 1993. There were other women working for Japanese companies in the same industrial park who have died. It has to be because of poisoning.

Siriwan
Head of village located next to A City, male, 51

I also want to say something about the factory. In recent years, fish in the rivers and trees in the swamp have been dying because of the wastewaters from the industrial park. Further, garbage from the factory is being disposed of carelessly, causing major problems, with many complaints about river pollution and the stench. There are many residents in the area with asthma and dermatitis. Since the industrial park was built, land prices in the village have fallen and the educational environment of children there is deteriorating. I want something done about this.

Kazuo Kageyama
Factory manager for a Japanese company, male, 43

We constantly strive to provide Japanese consumers with cheaper mobile phones. Regarding what you accuse us of, there is no clear connection between the work at the factory and the illnesses, so we do not have to do anything about it. The amount of aluminum we handle meet the set standards and the workers are provided with protective equipment. We are grateful that our workers don't take holidays and are very hard working. I can't tell you exactly how many hours each of them works, but they can earn wages to make up for the hard work they put into it, so I'm sure that they are happy, too. We are contributing not only to Japanese consumers, but also to the Thai economy and its workers.

Chawat
Thai government official, male, 36

Thailand's largest export industry is in IT, making up for about a quarter of its total income. Most are subcontracts from developed countries, with Japan comprising a particularly large number. These factories in Thailand are chosen because the wage levels are only one-tenth to one-twentieth that of Japan and because Thailand is safer than other countries in Southeast Asia. We understand that there have been complaints about our factories, but if compensation is paid for one case, it would open the floodgates for claims, and we would never be able to pay them. If a big issue is made of this and Japanese companies were to pick up and leave, a lot of people would lose their jobs. This would then affect the Thai economy in general. For the sake of the Thai people, we wish you to not make a big deal out of such small matters.

Lin
Former factory worker for a Japanese company, female, 30

Life had not changed much in our farming villages. Even if we wanted to have an abundant lifestyle like in the cities, there were not many jobs around, so working for a Japanese company was a valuable source of income. The work was certainly hard, but there was no other way as we needed the money. But I got headaches and felt dizzy when I worked those long hours, and sometimes got skin inflammations. We were provided with protective equipment, but they made our work slow, so most people didn't use them. Some even used drugs to stay awake. We all worked so hard. After leaving the factory, I opened a small store near the industrial park with some other people who had also worked there. I probably wouldn't have this job now had the factory not been there to provide me with work.

Satomi Wakai
Mobile phone user in Japan, female, 19

My mobile phone is a part of my life and something I just can't do without. I definitely need it to contact my friends and feel uneasy without it. This is my fourth one. Their functions just keep getting better and better so I often check commercials and catalogues for the newest models. I am glad that the phones themselves are available cheaply, making it easy to switch to the newest model. If it's cheaper to make them overseas, I want more and more to be made all over the world so I can buy them at even cheaper prices. That way, the companies make money, and I'm happy, too. The cheaper the better!

Activity VII. The recycling dilemma

What have we been doing with cellphones we no longer need? It is easy to think that if we just recycle them, it is good for the environment, but is recycling the only way to reduce our burden on the environment? Let's think about the Three R's (Reuse, Reduce, Recycle), as well as how we live with cellphones, as we consider various aspects of recycling.

Goal
We will look at the recycling dilemma and think of better ways to live with cellphones, so that we don't use the easy excuse that they can be recycled to keep on buying the latest models.

Time Required
60 minutes

What to prepare
Worksheet "The Life of My Cellphone" (p. 31, for each participant), Recycling Cards (p. 32, one set for each group)

Procedure

1. Form groups of about 6 people. Distribute the worksheet "The Life of My Cellphone" to each and have them write their cellphone history (when they first bought one, when they exchanged it for another, when they first paid more that 10,000 yen etc.). Have them write as much as possible, such as why they decided to buy a cellphone or exchange it for another.

2. When everyone has finished, share the worksheets with each other. The facilitator draws out recycling issues, such as whether or not participants recycled their no longer needed cellphones and why.

3. Do questions 6 and 7 of Activity II to learn that cellphones are objects of mass disposal and hardly ever recycled. Also explain the existence of the Mobile Recycle Network (p. 13).

4. Distribute one set of the Recycling Cards to each group. Have them read them over and learn about the recycling situation.

5. The facilitator announces, "A new model with amazing functions has just been released." The participants react by each thinking about whether to buy it and what to do with their current cellphone. Fill in the area to the right of the "Latest model out!" section of the worksheet. (Those without cellphones should imagine what they would do if they had one.)

6. After sharing the results within each group, present to everyone what kinds of things stood out.

7. The facilitator asks further questions to deepen understanding of the issue.
E.g.
- Why did you decide on such a future?
- What influence do you think it has when you purchase cellphones one after another?
- Why do you think you cannot continue using the same cellphone, even if you want to?
- Has the way you think about recycling changed?

Extension Activity

Compile opinions in each group and create a list of ways to deal with cellphones to present to each other.

Worksheet: The Life of My Cellphone

First Cellphone

Now

Future

Example: The Life of My Cellphone

First Cellphone

First Cellphone (7 years ago): I bought the same phone as my brother because it was cheaper to buy two of the same one. The shop was bit far but we went because it was known for its cheap prices.

Second (5 years ago): The battery broke so I couldn't recharge it anymore. It was cheaper to buy a new cellphone than a new battery.

Third (4 years ago): I bought a thin, light one. I send a lot of emails so I bought one that had easy-to-use mail functions and was cute.

Fourth (2 years ago): I wanted a cellphone I could listen to music with. The design was nice, but it was a little expensive. My monthly user costs rose to over 6,000 yen.

Fifth (1 year ago): I wanted to be able to listen to music easily so I bought one with a large memory capacity and long-lasting battery. For now, I have also kept my old phone, which I bought because of its nice design despite being expensive. My monthly

Latest model out!

Now

Future

A The average period of use of phone disposed of in the last year (2006) was two years and eight months, a little longer than the previous year's two years and six months.	**B** There is 200-300 grams of gold in about one ton worth of cellphones with their battery removed. This is far more than the 50 grams found in the world's highest quality deposit in Hishikari mine, Kagoshima prefecture.	**C** The main reason that people do not dispose of their cellphones and keep them is because they have a collection or they want to preserve certain memories (35%). Others mention they are worried about personal information being leaked (13%) or "just because" (22%), showing that the reasons are not necessarily constructive.
D There are companies in the West that sell to the general public not just recycled materials but also refurbished phones with the batteries and damaged parts replaced.	**E** Cellphones contain toxic substances such as arsenic and cadmium, and this requires appropriate methods for disposal. In some cases, there are no such waste disposal policies so that wastewaters leak out, and environmental damage and negative effects on the health of workers have been pointed out.	**F** Materials other than metal (plastic, glass etc.) are made into resinous materials, and used in daily items such as hangers, and plastic storage cases.
G Recognition of the Mobile Recycle Network is less than 50%. Publicity efforts are weak, and only 9.1% learned about the initiative through local authorities.	**H** Communication costs are high in Japan, with the cellphones themselves being sold cheaply. This is a cause for cellphones being used for short periods of time and then being exchanged for new models. Changing this structure is, however, under consideration.	**I** The market for used cellphones in developed countries is small, and most are exported to developing countries. In China, 10-15% of cellphones are second hand, and in Eastern Europe 10-25%.
J Cellphones are becoming increasingly multifunctional, with features such as mobile wallets and audio-playing devices. There are more and more cases of cellphones being kept for their other functions, even after new models are bought to replace them or subscriptions are ended.	**K** To collect used cellphones, telecommunications companies are beginning to take measures to improve recycling efforts by placing collection boxes in major electrical appliance stores and convenience stores.	**L** Around the time that the Mobile Recycle Network was established, the number of cellphones collected was over 13 million, but this has gone down year by year to 6.62 million in 2006. It is believed that this is because there are more people who keep their cellphones because they are increasingly multifunctional.

Activity VIII. This and That about Cellphones

So now we can see that a variety of problems come with the convenience of the cellphone. Let's review what we have learnt and think about how we should use cellphones in the future.

Goal
To review what we have learned so far by going over the various problems surrounding cellphones and who they affect, and gaining a structural grasp of how we are linked to both.

Time Required
45 minutes or more

What to prepare
post-its (over 20 for each participant),
craft paper (for each group),
felt-tip pen
(for each participant)

Procedure

1. Each participant writes, each on a separate post-it, what they have learned through these activities, what points they are interested in, and what they have questions about.

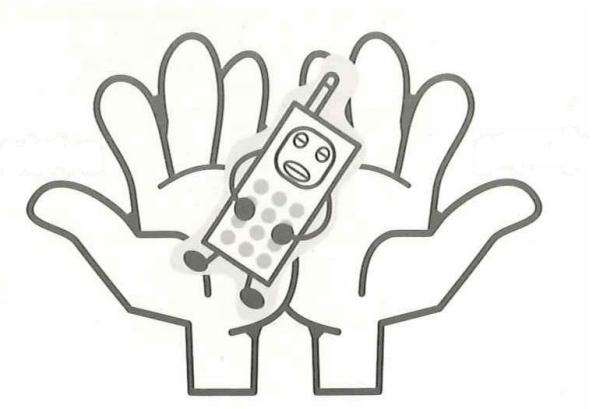
2. Each participant sticks their post-its with keywords on the craft paper. Divide them into those that are related to the producer abroad and those to do with us and stick similar themes next to each other.

3. Once everyone has stuck their post-its up, group similar keywords together and each group creates titles for these clusters. Link related items by drawing lines between them.

4. Present the posters to the group. Raise items that are of particular interest and consider individually, and in the group, what to think about them and how to make the situation better.

Extension Activity

Introduce President Kennedy's four basic consumer rights (p. 34) and discuss the issues raised by the participants and whether these rights are being fulfilled, as well as who they are/aren't being fulfilled for and what the consumer can do to resolve the issues.



Variation to Activity

If Activities I and VI of this booklet have already been completed, use the worksheets from these activities to think further about the issues.

1. Form groups.
2. Fold the craft paper in half, sideways, and write “Producer” at the top, “You and I” at the bottom, “Negative/Problem” on the left and “Positive” on the right.
3. Take the individual worksheets entitled “To me, a cellphone is _____” from Activity I, “Cellphones in our daily lives”, and paste at the bottom half of the craft paper (under “You and I”). Separate those with positive and negative connotations and put similar ones next to each other.
4. Take the individual worksheets about what each person thinks about cellphones from Activity VI, “Labor and environmental issues in production sites”, and paste them to the top half of the craft paper. Separate those with positive and negative connotations and put similar ones next to each other.
   *It is difficult to determine whether Lin falls under “negative” or “positive,” but this difficulty is a valuable point. The issues are not simple, and participants should be encouraged to observe how complex and contradictory they can be.
5. Present and discuss.

Column: Consumer rights and responsibilities

In 1962, former US President John F. Kennedy declared the four basic consumer rights in his Special Message to the Congress on Protecting the Consumer Interest:

- the right to safety
- the right to be informed
- the right to choose
- the right to be heard

This is said to be the beginning of consumer administration around the world.

Consumers International (CI, established in 1960) is an international organization for the consumer movement comprised of consumer groups from 110 countries around the world. The lives of consumers in developing countries are an important issue for the organization, which advocates the following consumer rights and responsibilities:

CI’s Eight Rights and Five Responsibilities
Rights: The satisfaction of basic needs, safety, information, choice, be heard, redress, education and a healthy environment.
Responsibilities: To have a critical consciousness, to make assertions and take action, to consider vulnerable groups in society, to consider the environment, and to join together.

URL: http://www.consumersinternational.org/

Activity IX. The perfect cellphone

Wouldn't it be great if there was a cellphone that made everybody happy? Let's think of the future and suggest ideas for the perfect cellphone.

Goal
By thinking about the "perfect cellphone," we can think about problems revolving around cellphones and share ideas on how to change the situation and have better relationships with our cellphones.

Time Required
30 minutes and more

What to prepare
What to prepare: A4-size sheet of paper, felt-tip pen (for each participant)

Procedure

1. Based on what we have studied so far, each participant writes what he or she considers to be the perfect cellphone.

2. After sharing the ideas within each group, present them to everyone.

3. The facilitator carefully raises for discussion points of interest from among all the presentations.

4. If there is a gap between what participants consider perfect and the reality for the consumer or producer (business), raise further questions as appropriate and add further explanation.

Example suggestions:

- Charge 100,000 yen per phone and use it to improve the labor environment in producer countries
  →Do you think cellphone users will accept this?
  → Will companies really be able to sell the phones?
- We don't need all those functions. It's more important that it be lightweight.
  → But isn't the rare metal tantalum necessary for making them lightweight?

Points to consider

There are already some NGOs and companies who are involved in research or activities to improve the situation in the manner that some suggest in the activity above, such as cellphones made of biodegradable materials and structures whereby money from recycling is allocated for donations. By introducing such cases, we encourage going beyond just attacking the companies and instead think about various aspects of the issues and structures involved. We want the participant to become conscious that companies and consumers together comprise society, which must work towards resolving the issues as a single actor.

Extension Activity

Send cellphone companies your ideas through the suggestions section of their websites.

Activity X. What we can do

We have learnt that there are various problems around the world that are linked to cellphones. We are linked to cellphones not just as consumers that use them, but in many other ways, such as through how we, our family, relatives, relatives of friends etc. are linked to the stores that sell the phones, research and development of software, trading companies, manufacturers, and workers at telecommunications carriers. Let's think beyond what we can do as consumers to improve the situation, and consider what can be done from various perspectives.

Goal
Think about what we can do to work towards resolving problems related to cellphones while considering our activities and lifestyle.

Time Required
30 minutes and more

What to prepare
Ranking Cards (p. 37)

Procedure

1. Rank the different possibilities on page 37 under "I consider to be most important," "Possible to realize" and "Can be done right away."

2. Do it individually at first, and then introduce to the group or everyone. You can also do the activity as a group, and then have each group present to everyone.

3. You can discuss the points below.

Sample questions

- Why did you choose what you did to rank highest? Why did you choose what you did to rank lowest?
- Compare your ranking with others. Which choices made were similar or different and why?
- Different people can interpret some of the choices differently. Have you checked this point?
- Are there better options available other than those listed?

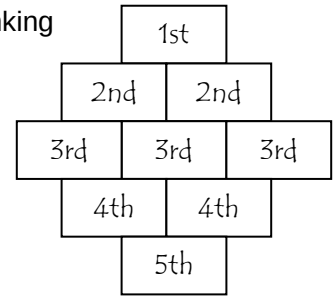
Points to consider

- There is no correct ranking. It would be best to explain at the beginning of the activity that participants should just create the order they feel is right.
- You do not need to use all the choices. You can use nine for the Diamond Ranking and six for the Pyramid Ranking.
- Participants can add to the options provided anything else they consider important or that they can do.
- You may change the options provided to match the participants' ages or interests, including things that involve research and learning, ways to support already existing efforts, and ways to spread ideas with and encourage others. This will lead to deeper discussion.

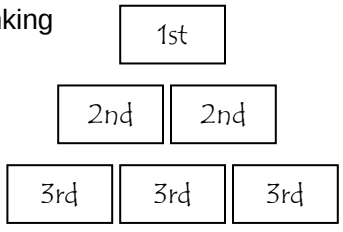
Ranking Cards

A Tell my family and friends what I have learned about cellphones.	**B** Gather my friends and hold a study session, and think about ways to resolve the issues.	**C** Avoid upgrading cellphone.	**D** Don't use a cellphone at all.
E Always keep in mind the people who work in the factories and extracting minerals as I go about my daily life.	**F** Travel abroad and see what the situation is like on the ground.	**G** Suggest to cellphone manufacturers and telecommunications carriers that they consider the workplace and environmental issues in making purchases.	**H** Send opinions to a newspaper.
I Join/support NGOs working on conflict resolution and human rights in Africa and Asia.	**J** Suggest to cellphone manufacturers and telecommunications carriers that cellphone prices be raised to cover the cost of upgrading work environment and taking measures to prevent pollution.	**K** Find out more about cellphones through the Internet and other materials.	**L** During elections, vote for candidates and parties that care about environmental conservation and human rights.
M Share what I have learned about cellphones through media such as my website.	**N** Bring my old cellphone(s) to collection spots for recycling.	**O** Suggest to cellphone companies to create plans that give discounts that encourage people to use the same phone longer.	**P** Write letters to lawmakers, or meet with them directly, encouraging them to resolve issues regarding cellphones.
Q Join boycotts and campaigns against cellphone companies that do not respect human rights and the environment.	**R** Ask cellphone manufacturers about the state of human rights and the environment in countries where they obtain raw materials.		

Diamond Ranking



Pyramid Ranking

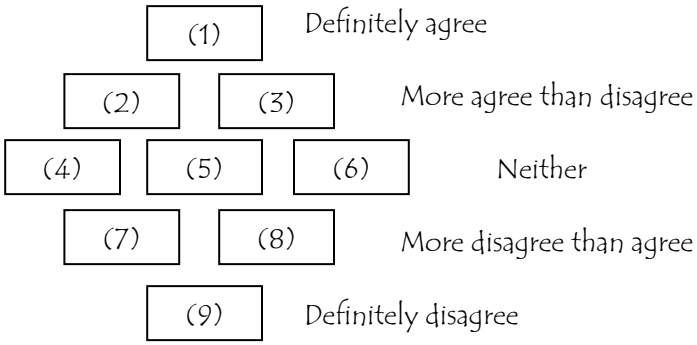


What we can do to improve the situation regarding cellphone problems

Below are nine things we can do to improve the situation of problems caused by cellphones. Each is based on a different grasp of the issues and point of view, but they are all actions that we can take to become involved.

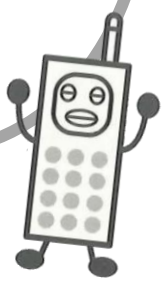
Select one that you definitely agree about, two that you more agree than disagree about, three that you feel neither about, two that you more disagree than agree about and one that you definitely disagree about and write the corresponding numbers in the circles labeled (1) to (9) below.

A. Tell my family and friends what I have learned about cellphones.
B. Gather my friends and hold a study session, and think about ways to resolve the issues.
C. Avoid upgrading cellphone.
D. Don't use a cellphone at all.
E. Always keep in mind the people who work in the factories and extracting minerals as I go about my daily life.
F. Travel abroad and see what the situation is like on the ground.
G. Suggest to cellphone manufacturers and telecommunications carriers that they consider the workplace and environmental issues in making purchases.
H. Send opinions to a newspaper.
I. Bring my old cellphone(s) to collection spots for recycling.



Why did you choose what you did for (1) as the action you agreed with the most?

Why did you choose what you did for (9) as the action you disagreed with the most?



Commentary: Efforts to Create Change

Some participants may feel that it is unrealistic to lobby companies or governments directly for change, as suggested in cards G, I, Q and R. However, these are actions that have already been taken by citizens in response to problems with Tantalum in the Democratic Republic of the Congo and unfair labor practices regarding child labor at garment factories in Asia. In addition, though not mentioned in the cards, various efforts are already being made to change the structures through which economic activities have given rise to problems. For example, in the case of the Roundtable on Sustainable Palm Oil (RSPO), growers, processors, retailers, consumer goods manufacturers, distributors and NGOs gathered in regard to problems with palm oil plantations and formulated production guidelines giving concern to social and environmental issues. There have also been efforts such as the various certification schemes mentioned below and corporate efforts, as well as trade regulations through taxes, like those seen in ideas such as carbon-emissions and Tobin taxes.

Nonetheless, there is, of course, no single, perfect solution, with varying results from the different efforts. The point here is not to come up with the "right answer," but to discuss what we can do to create a better society in the future in a multi-faceted, imaginative and realistic way.

Column: Mobile Phones and Corporate Social Responsibility (CSR)

Microsoft's 2004 Corporate Citizenship Report and Motorola's 2004 Annual Report both contain guidelines that specify they do not use Tantalum that is illegally extracted in the Democratic Republic of the Congo. Nowadays, some companies practice CSR not only in their business activities, but also require their suppliers to practice "CSR procurement."* As globalization has led to many business activities that extend beyond state borders, business management that includes environmental protection and human rights protections throughout the supply chain provide a tremendous opportunity to improve human rights and poverty situations that are structurally linked to our everyday activities, which until now have seemed so distant. For example, issues raised in the units "Activity V. The scramble for raw materials" and "Activity VI. Labor and environmental issues in production sites" could be resolved through corporate efforts.

It is, however, extremely difficult to completely control the complex pipeline for resources, and there are still cases of it being a source of funding for armed insurgents. In addition to the difficulty of ascertaining the source of the materials, it is probably not easy to balance these efforts with securing profit, even if various certification methods and standards are put in place** and companies actually respect the concept of "CSR Procurement."

The current reality is that the possibilities and problems are intermingled. For producers and consumers to resolve the problems they have from their different perspectives, they must think about how they relate to mobile phones without giving up.

* Similarly, some companies practice "Green Procurement" and the procurement of sustainable raw materials.
** As examples of efforts to ensure that businesses respect human rights and the environment as well as procurement standards, certification systems are in place such as ISO26000 (an international standard providing guidelines for social responsibility), promoted in a large part by the International 0rganization for Standardization (ISO) and SA8000 (an international standard for the protection of human rights), established and certified by the US NGO Social Accountability International (SAI).

Case Studies

Case Study 1: for Hight School students

- When: June to July 2005
- Where: Prefectural High School, Home Economics class (4-7 hours total)
- Participants: 40 second-year senior high school students
- Facilitator: Saori Yoshida (High school faculty)

Structure (4-7 hours total)

1. Cellphones in our daily lives (1-2 hours)
   - Activity I. Cellphones in our daily lives
   - Activity II. Cellphone quiz (questions 1-5)
   - Activity IV. Raw materials around the world

2. The scramble for raw materials (1 hour)
   - Activity II. Cellphone quiz (questions 6-7)
   - Activity V. The scramble for raw materials: Watch the NHK special “Senjyo no IT business - Nerawareru Kisho Kinzoku Tantaru” (IT businesses on the battlefield: vying for the rare metal tantalum) (aired Sept. 22, 2001) and discuss.

3. Labor and environmental issues in production sites (1 hour)
   - Activity VI. Labor and environmental issues in production sites - Variation to Activity: Role Playing

4. As a consumer (1-3 hours)
   - Activity VIII. This and that about cellphones, What we can do (see note below)
   - Activity VIII. This and that about cellphones (Extension activity: Consumer rights and responsibilities)

Note on how to proceed with “What we can do”
Each group raises one issue that surfaced in Activity VIII and considers what we can do towards resolving it. Begin discussion at the individual level, then on to what can be done and what is needed at the school, community, country, and global levels. Present ideas.

	in 1 week	in 1 year	in 10 years	in 50 years
Me				
My family				
My School/office				
My Community				
My country				
The world				

Student opinions: "What we can do"

- There are all kinds of discount plans available for cellphones (e.g. family plans, etc.), but there should be one offering more discounts the longer that the phone is used.
- Price cellphones to take into account the cost of labor and environmental considerations.
- Use cellphones wisely. Recycle.

Student Impressions

I mostly have no idea where any of the things I use in daily life are made. I wonder if this is really okay. Probably not.

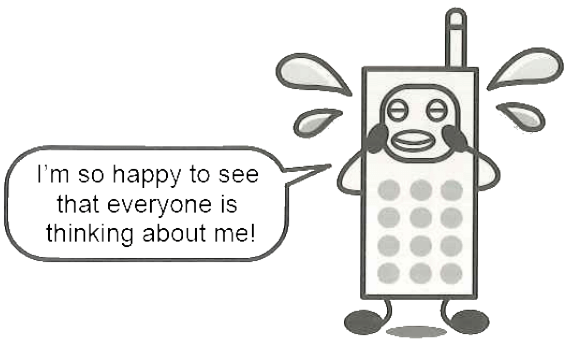
I feel that it's somewhat irresponsible. Wondering about what I can do about this, I feel that I should know where these things come from.

I didn't think I had anything to do with the issues because I really didn't have a clue about anything. It's important to think about what we can do to make things better, but first, I think that we have to help spread awareness of the issues.

Consumer ignorance is a reason why the recycling rate for mobile phones is not going up. It's not enough to just use them and think they are convenient.

I was really shocked to learn through this class about how my cellphone was made. What I think I can do now is fix my phone if it breaks and use it until it falls apart.

I was thinking of changing my cellphone recently,
but changed my mind.



Case Study 2: for general public

- When: March 25, 2007 (Sunday), 10:15-11:55
- Where: 2007 Festival for Educational Materials (a DEAR-sponsored workshop)
- Participants: 30 members of the general public
- Facilitator: Saori Yoshida (High school faculty)

Structure (1 hour and 40 minutes total)

1. Icebreakers/Cellphones in our daily lives (25 minutes)
    Activity I. Cellphones in our daily lives
    Activity II. Cellphone quiz

2. The scramble for raw materials (25 minutes)
    Photo Language (see note below)
    Activity V. The scramble for raw materials
    Watch the NHK educational program “Chikyu Deta Mappu Dai Hachikai Heiwa e no Chizu” (8th World Data Map: Map for Peace) (aired in September 2006) and discuss.

3. Labor and environmental issues in production sites (40 minutes)
    Activity VI. Labor and environmental issues in production sites

4. Review (10 minutes)
    Review method: Write down individually what you have learned and how you will act in the future regarding cellphones. Share with the group.

Note on how to proceed with “Photo Language”
Look at photos showing the situation in the Democratic Republic of the Congo and ask where it is, who the people in photos are and what they are doing. Imagine the people and the situation by looking carefully at photos.

Participant’s impressions

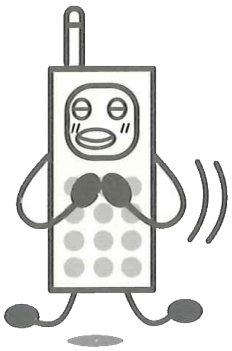
There are so many ways to explore things further through these materials. The themes of the environment, development, human rights and peace are all tied together by something very familiar in our daily lives, so I think you can even have an interesting class by picking just one of the four themes and focusing on it.

Through role-playing and discussing the different characters, I came to understand the advantages and disadvantages for each of them.

I was able to think about my place in the world because something I use is linked to global problems. This was good because I wasn't just learning about something but experiencing it as well.

I wondered about what an ideal cellphone would be. When I see and use this familiar gadget, I think about how to use it carefully so that it lasts a long time.

From the first icebreaker and self-introductions to the final summary, the 100-minute workshop was all connected and I was able to think about and learn many things.



Column: New Uses for the Mobile Phone: Nutritional advice

Mobile phones have been heavily criticized for their adverse effects, such as matchmaking sites and bad phone etiquette, but there is also new potential for how they can be used.

One example is "Nutrition Advice through Mobile Phones." One company has targeted youth in planning a new business to improve eating habits. Users record what they eat daily using mobile phones with cameras and send them to the company by email. A nutritionist then analyzes the food and gives advice on how to supplement the meal for a balanced diet.

In hospitals and other such facilities, too, there are more and more attempts to provide nutritional advice for patients staying at home using mobile phones. It has been difficult in the past to grasp the amount of food patients eat because the amount they record in their food diaries becomes subjective. By sending photos using mobile phones, patients can receive more precise advice and patients living far away can also benefit from services.

Reference: Nishinippon Shimbun, evening edition, May 13, 2006, among others

References/Bibliography/List of Organizations

Status of and statistics on production and use

- Doko kare doko e kenkyukai, Chikyu Kaimono Hakusho (White Paper on Shopping for the Planet), Commons, 2003.
- Tomoyuki Okada and Misa Matsuda (Eds), Keitaigaku Nyumon -Media Komyunikeshon kara Yomitoku Gendai Shakai (An Introduction to Cellphones: Analyzing contemporary society through media communications), Yuhikaku Publishing, 2002.
- Ministry of Internal Affairs and Communications, White Paper on Telecommunications,
- http://www.johotsusintokei.soumu.go.jp/whitepaper/ja/cover/index.htm
- Telecommunications Carriers Association, http://www.tca.or.jp/
- Japan Electronics and Information Technology Industries Association, http://www.jeita.or.jp/
- Yano Tsuneta Kinenkai, 2006/07 Sekai Kokusei Zue (World National Statistics Illustrated), 2006.
- Yasuo Masai, Ima ga Wakaru Jidai ga Wakaru Sekai Chizu 2007 Nenban (2007 World Map that shows us the world today) Seibido Shuppan, 2007.
- USGS, “Mineral Commodity Summaries 2006,” http://minerals.usgs.gov/minerals/pubs/mcs/

Recycling

- Mobile Recycle Network, http://www.mobile-recycle.net/
- Gekkan Oruta (Alternatives), June 2007, Feature: Mobile Phones, Pacific Asia Resource Center (PARC).
- Asahi Shimbun, April 17, 2006, “Keitai Risaikuru Teicho: Kaishuritsu wa niwari” (Poor cellphone recycling rates: Collection rate at 20%).
- Asahi Shimbun, November 1, 2006, “Fuyo na Keitai Denwa: Ajia kara kaishu shi, Nihon de risaikuru” (Used Mobile Phones: Collecting them throughout Asia and recycling them in Japan).

Tantalum and the Congo

- Katherine Ainger, “Africa Shigen Soudatsusen” (The Scramble for Africa), NI Japan No. 55, March 2004, Intilincs.
- Makoto Teranaka, “Tokushu: Kongo Minshu Kyowakoku no Jinken Shingai wo Tsunagu Mono” (Feature: What is Linked to Human Rights Violation in the DRC), DEAR News No.123, October 2006, DEAR.
- Mainichi Shimbun, “Konton no Nettai: Kongo tobu funso no saizensen” (Tropics in Chaos: The frontline of conflict in Eastern Congo), November 14-18, 2005.
- The Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth in the Democratic Republic of the Congo, “Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth in the Democratic Republic of the Congo,” (2001) http://www.un.org/News/dh/latest/drcongo.htm
- NHK, “Chikyu Detamappu” (World Data Map), http//www.nhk.or.jp/datamap/ja/frame.html
- Klaus Werner, Hans Weiss, Sekai Burando Kigyo Kokusho, (Black Book on Brand Companies), Akashi Shoten (2005).

Work safety in Thailand

- Fumikazu Yoshida, IT Osen (IT Pollution), Iwanami Shoten, 2001.

Electromagnetic waves

- Takenori Ueda, Shinobiyoru Denjiha Osen (Advancing Electromagnetic Wave Pollution), Commons, 2007.
- Akifumi Ueda, “Keitai Denwa no Denjiha Risk wo Do Toraeru Ka” (What to make of the risk of electromagnetic waves from mobile phones), Shimin Kagaku No. 10 (Feb. 2006), Citizen's Science Initiative Japan.

Corporate Efforts

- Microsoft Corporate Citizenship Report 2004: Microsoft’s CSR Activities,
- http://www.microsoft.com/japan/citizenship/report/default.mspx
- Motorola, 2004 Annual Report, http://www.mot.co.jp/about/ehs/reader.html
- Roundtable on Sustainable Palm Oil, http://www.rspo.org/


HELLO!
もしもし?