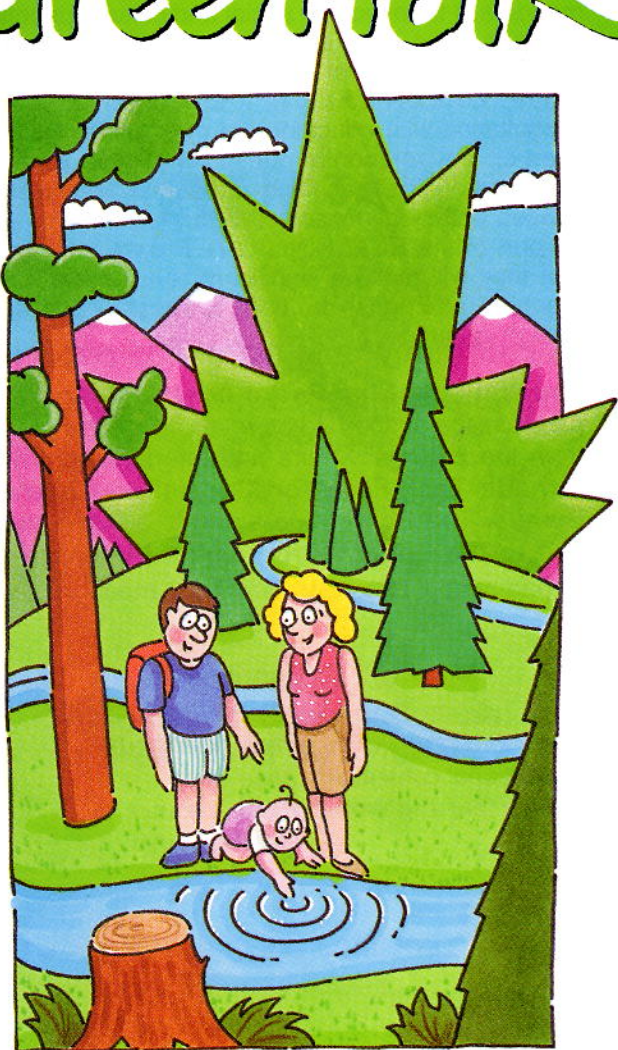


Green Talk



EIGHT ENVIRONMENTAL FILMS
TO SUPPORT THE TEACHING OF ENGLISH

Teacher's Guide

Founded in 1939 as a public producer, the National Film Board of Canada has completed many thousands of documentaries, dramas, animation films, and innovative works. Although its mandate is to reflect the social and cultural priorities of Canadians, in many ways the NFB has also become the image of Canada in all corners of the globe. GREEN TALK is a selection, made in consultation with educators, of eight of the Board's titles on environmental questions. These were all produced originally as films and are now released in a video anthology for effective and convenient use. As part of the REACHING OUT Project it is hoped that they will make a significant contribution to the teaching of English both as a second, and as a foreign language.

The National Film Board acknowledges with pleasure the support it has received for this project from the External Affairs and International Trade Canada Task Force on Central and Eastern Europe. The Board also extends a warm thank you to the English Programme Development Department of Language Training Canada.

Cover Design:	Paul Rosenbaum
Educational consultant:	Aline Blais
Researcher and Writer:	Patricia Martin
Editor:	Gordon Martin

ISBN 0-7722-0408-X

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Teacher's Guide

for

GREEN TALK

A video collection of environmental
films to support English-language
teaching and learning

Produced by the
National Film Board of Canada
REACHING OUT Project

With support from the
External Affairs
and
International Trade Canada Task Force
on Central and Eastern Europe

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"...we must provide our students with opportunities to use their knowledge of the target language, however scanty, from the very beginning of their study."

Julia M. Dobson in *Effective Techniques for English Conversation Groups*, Newbury House

INTRODUCING GREEN TALK

The colour green has taken on a new and universal meaning in recent years. It represents both individual and collective concern about the health of the environment. Green is rapidly becoming the first international symbol which evokes the same meaning in any culture or linguistic group. It is difficult to imagine a better theme for a group of videos designed to help students of English as another language, in their conversation classes.

From time-honoured classics such as the Oscar-nominee *BOOMSVILLE*, to *A TEST OF TIME*, a dramatic segment drawn from the ground-breaking interactive video project, *Perspectives in Science*, the eight productions included in the *GREEN TALK* package have been selected to stimulate students to talk and interact with their teachers and classmates.

While three of the eight titles have substantial dialogue or commentary in English, the other five have few or no spoken words. Thus the videocassette has potential for use with a wide range of ability levels, from beginners to the most advanced students. Transcripts of the texts are included to assist the teacher in selecting titles appropriate to the students, and as an aid in preparing lessons in grammar and structure. Since language is a "whole fabric", reading and writing projects have also been suggested along with the aural/oral activities which are the focus of the package.

As a teacher, you have already used newspapers, posters, pictures, and objects to teach vocabulary and to initiate discussion. *GREEN TALK* will give you added support and bring new voices and images into your classroom. Video has a number of advantages besides its convenience of

use. Its flexibility permits you to use it the way you want to. Instant replay of a sequence is easy. Your students will find it engaging to create new commentaries while the video is being played without its original sound. And if you dim the lights for viewing you may find that some of your more timid students feel at ease in speaking out.

THERE'S MORE TO DISCUSSION THAN TALKING!

It would be wonderful if discussion in a new language could happen as naturally and spontaneously as in the native tongue. But almost all of us suffer not only from the fear of failure or committing errors, but from the frustration of our thoughts racing ahead of our ability to express them in foreign words and structures. Consider yourself as a leader, sensitive to the nature of your students, rather than as a technician giving out correct information to be memorized.

Conversation means the opportunity to talk, to listen, and to interact. There is nothing more boring for both teacher and students than the classroom in which oral and aural activities are reduced to mechanical drills. Set up the classroom seats so that students can see each others' faces. U-shaped arrangements work well and allow for good video viewing. Although some activities are for the entire class or for individuals, work groups of 5 or 6 can be very effective for maximum participation.

Language is asking as well as answering. Encourage students to ask questions of each other. The topics of the *GREEN TALK* videos are of broad appeal and will sustain sincere interest thus avoiding the feeling of artificiality which sometimes pervades language classroom discussions. However, a lively atmosphere requires conscious effort.

TOWARDS A LIVELY LANGUAGE CLASSROOM

A few simple techniques may help you to get the best out of *GREEN TALK*. As we go about our daily activities we participate in discussion quite naturally. When it is transplanted to the language classroom, care is needed to

maintain the lively qualities which it possesses in everyday life.

- Set up simple discussion situations at first. Let free conversation happen when the time is right.
- Even a graded group of students varies greatly in skills. Try to engage everyone by opening each class at a level in which all can participate. Come back to that level from time to time.
- Be a good listener, even to weak answers. This will encourage your students to do likewise.
- Sometimes a good leader remains quiet and lets the group talk.
- If a student tries to monopolize class or group discussion, respond firmly but with good humour.
- Small groups encourage shy people to speak out with confidence.
- Try not to interrupt the flow of conversation. Make notes of errors to correct later.
- Be prepared to introduce new ideas or change directions if discussion wanes or debate becomes too heated.
- Although the themes of GREEN TALK are universal, encourage students to draw on their own experiences and ideas to personalize discussion.
- Small parties, informal speakers and social events with English-only conversation on environmental matters give the social dimension so necessary to discussion.

Each video description includes a number of suggested activities. Many of these could be applied to other titles as well, and even to films, television programs, and videos which you bring into your classroom from other sources. Feel free to change and adapt suggestions in this Guide, and to create your own approaches. Above all, join in with your students to enjoy the stimulation which *GREEN TALK* can bring to your class.



1. BOOMSVILLE

(10 min. 12 sec.)

DESCRIPTION

North American-style urban growth is portrayed as a voracious monster in this ironic cartoon which traces the growth of a tiny settlement in the wilderness to a sprawling, car-clogged metropolis. An amusing approach to a serious problem, it will raise questions about technology, town planning, and alternative ways of life.

VIEWING

Although this video tells its story without words, the meaning of *boom* should be introduced before viewing. Relate it to *building boom*, *boom and bust*, and *baby boom*. Challenge your students to be able to explain the meaning of *Boomsville* after the viewing.

ACTIVITIES

- Discuss possible reasons for the title. *What is the film's message?* Differences of opinion are to be encouraged not only for their own value, but because they provide more opportunities for discussion and language use. If your students are reluctant to talk, ask questions about the video which require detailed answers, such as *What happened when...?*, *What do you think about...?*, and *Why did...happen?*
- Brainstorm for word lists based on film imagery and write them on the blackboard. Start with objects or nouns. Go on to appropriate adjectives, then verbs and adverbs. Combine the lists into suitably descriptive sentences in the present tense. Finally, change them to the simple past and future tenses. Alternatively, prepare lists under theme

headings such as *shelter*, *war*, *urban life*, and *suburbs*, and develop them into coherent sentences and paragraphs. Don't hesitate to replay the video for a second or third time.

- Imagine that you are making a film of the environmental history of the students' own town or region. Lay out a framework together including length (keep it short!), whether it should be humorous or sober, and the title. For beginners, build the script on the blackboard with the whole class. More advanced students will enjoy doing this in groups and presenting their finished work, complete with drawings if they wish, to their colleagues.
- Discuss with your students their opinions on controlling urban development, on preservation of old buildings, and on the future of the automobile. Hold a debate on the topic which most interests them (see *GENERAL ACTIVITIES*).



2. DEEP THREAT

(7 min. 12 sec.)

DESCRIPTION

A little humour goes a long way in making a serious statement! *DEEP THREAT* looks below the surface and explores humans' age-old relationship to the vast bodies of water which cover much of the earth. It discovers that the sea has its own laws and will hold accountable those who break them. Although the film is non-verbal, it will evoke plenty of discussion.

VIEWING

Introduce the video as a seven-minute symbolic history of human life on earth. Present the word and discuss the idea

of, *symbol*, and talk about the use of key symbols to emphasize and illustrate. One such symbol present everywhere today is the use of the colour green to represent environmental matters. Ask students to watch for and list symbols such as the *ball*, *treasure chest*, *sun*, *tree-eating machines*, and so on, as the video is played.

ACTIVITIES

- Ask students to retell the story in the simple past. This could be written or oral, and done as a class, in groups, or, individually.
- Write a few main headings inspired by the video, such as *Food Chain*, *Evolution*, *Pollution*, *Industrial Waste*, *Nature*, and *Environment*, on the blackboard. Discuss meanings. Compile a symbol list on the blackboard from the students' notes. View the video again if necessary. Have students use chalk lines to connect their symbols to the most appropriate main headings.
- "You've seen the film, now write the book." In the best Hollywood style, have your students adapt the film to "book" form. Really, a simple four-page booklet will do! Discuss ways to express visual and sound images in words and sentences. For beginners, set the task as a sequence of captioned posters.
- Introduce the idioms *pull the plug*, and *down the drain*. Get students to relate these to the symbolism at the end of the video. Discuss the effectiveness of such imagery.
- Write the quotation from the end of *DEEP THREAT* on the blackboard.

"The sea has its own laws and man is accountable."

Discuss its meaning (*accountable*: responsible or answerable). Consider the video's strengths and weaknesses in conveying this message. Talk about the use of the male gender, *man*, used in the broader sense to include men, women, and children.



3. THE QUIET RACKET

(7 min. 23 sec.)

DESCRIPTION

Escaping the noise of city life to find refuge in the tranquility of nature has been a pursuit of men and women since the Industrial Age began. In this humorous video without words, the refugee from urban confusion finds that the country has its own problems.

VIEWING

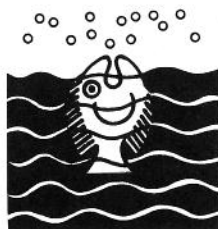
Introduce the film with sounds. Bang the floor. Whistle. Ring a bell. Scratch the blackboard with chalk. Ask students for the words to describe these sounds. With beginners, give them the new vocabulary. Elicit from each student their favourite sound and the one they dislike most. List these pairs on the blackboard. Introduce the word *racket* and the term *noise pollution*.

Challenge students to remember as many sounds from the video as possible, and ask them to be able to explain the title after viewing it.

ACTIVITIES

- After viewing, check the blackboard lists for those sounds which were in the film. Add others. Discuss what makes sounds pleasant or unpleasant.
- Ask students to write a brief definition of *noise pollution*. These can then be read aloud and discussed. Encourage disagreement, but always ask the objector to explain why he or she feels that way. Choose the definition which the majority of students feels is most appropriate.

- Do role-playing (see GENERAL ACTIVITIES) with selected incidents from the video, such as the situation in which the motorcyclist hooks onto the motorist's bumper. One student takes the motorist's part, another plays the motorcyclist role. They relate the incident from their own perspectives at a party (this is a good way of getting class participation). They can dramatize with anger, humour, embarrassment, or any feeling they wish to express. Many variations of role-playing can be used after seeing *THE QUIET RACKET*.
- Replay selected sequences of the video and ask students to prepare short commentaries of the kind given by radio journalists who are describing an event they are witnessing. Give them time to polish these, then play the video scenes again as the students deliver their reports.
- Form a citizen's committee to investigate noise pollution. Role-play its investigation using the following or other situations.
 - A committee member interviews the motorcyclist on his experiences with noise pollution.
 - Another member visits people in the neighbourhood where the motorcyclist lives to ask their opinions. Those interviewed could include an elderly person, a couple with a baby, the driver of the garbage truck, the owner of a local shop, and a man who works nights.
 Extend the role-playing into the real-life situations found in students' own communities.



4. WATER, WATER, EVERYWHERE (4 min. 45 sec.)

DESCRIPTION

A sad short story, *WATER, WATER, EVERYWHERE* records the demise of a trout caught in a polluted stream. Its simple message is enough to awaken viewers' empathy to Nature's struggle for survival against the thoughtless acts of humans.

VIEWING

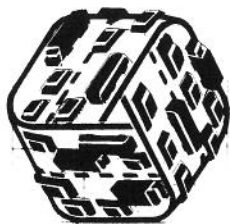
Introduce the video with a discussion of water pollution. Brainstorm for a list of ways in which streams and rivers get polluted, including *personal garbage disposal*, *industrial waste*, *domestic sewage*, *agricultural chemical pollution*, and *acid rainfall*. Ask students as they view this video to imagine how this particular stream became polluted.

ACTIVITIES

- Discuss students' opinions for the polluted waters in this video, and ask them why they came to their conclusions.
- Divide the class into groups. Have each write a short obituary for the fish, imagining the details of its life. Share the stories aloud with other groups. Classes with less-developed language skills could do this exercise as a group with the teacher building up the story on the blackboard.
- Extend vocabulary by building up a list of other creatures affected by pollution. Choose a name from the list and create its life story, which might just have a happy ending!
- Discuss local water pollution and what might be done to correct the situation. Depending on the students' level of skill, write class, group, or individual letters to communicate these opinions to the appropriate government authorities. Exchange letters within the class, and, with students playing the roles of bureaucrats or politicians, write replies.
- The title is taken from the English poet Coleridge's *The Rime of the Ancient Mariner*, in which the following lines are written.

*"Water, water, everywhere
Nor any drop to drink."*

Of course the water was undrinkable because it was salty from the sea! Discuss with your students the appropriateness of the title for this film.



5. WHAT ON EARTH!

(9 min. 35 sec.)

DESCRIPTION

News flash: the automobile has taken over! Human beings have joined the dinosaur! Where people once played and worked, cars, trucks, bulldozers, and other moving vehicles hold sway!

Naïve visitors from Mars to Earth might well be forgiven the conclusion that the swarms of automobiles they see are the real inhabitants of this strange planet. In this cartoon the importance of the car in industrialized societies, and how it begins to dictate ways of life, is dramatized in a humorous but telling manner.

VIEWING

Explain *satire* (humorous criticism) to your students and introduce *WHAT ON EARTH!* as an example of it. Challenge the students to discover the satirical elements during a first playing of the video. Discuss their interpretations, then show the video a second time asking the class to note all the reasons why the Martians mistook automobiles for Earthlings. Before this second screening you might wish to introduce essential vocabulary.

ACTIVITIES

- Ask students to describe the everyday lives of Earthlings as observed by the Martian scientists. Record their contributions on the blackboard as a narrative. Encourage use of time expressions such as *at night*, *every day*, *when*, *later*, *before*, and *after*. Have the description read aloud. Ask each student to say or write a single sentence explaining one reason why the Martians made such a big mistake.

- Ask students to describe the Earthling reproduction process as observed by the Martians. It might be useful to play the video again to help the class remember this sequence. Encourage the use of the passive voice, e.g. *old cars are smashed*, and the acquisition of descriptive verbs such as *pound, shape, drop, carry*, and so on.
- Discuss how one's perceptions are often different on the first visit to a new place. Ask students to pretend that they are first-time visitors to their own region. Working as a class, in groups, or individually, ask them to describe life in their community with this fresh vision. Focus on sights, sounds, and customs. Ask for the passive voice to be used.
- Divide the class into reporters (TV, radio, and newspaper) and travellers. The latter should be people who have actually travelled at least to an adjoining town! The reporters then interview the travellers about their experiences and impressions of life in the place they visited. This could be carried out in turn in front of other classmates, who would ask additional questions of their own.
- Similar activities based on imaginary places, or places which no one has visited but all would like to go to, could be conducted.

TEXT FOR WHAT ON EARTH!

Narrator:

Is there intelligent life in space? Last week we discovered that we were not alone. With this film, the door to the universe opens, for every Martian.

First films of our successful earth-shot, from the cameras on our orbiting space ship. Despite the poisonous, oxygen-laden atmosphere, signs of a civilization. And then the big news: there is life on earth!

Although no landing was attempted on this trip, it's obvious we've a lot to learn from the Earthling. Now, first close-up shots of that Earthling. Here, we see him at dinner. A carefully-regulated meal, after which he takes shelter for the night.

He needs his rest. As you will see, it's going to be a busy day.

For most Earthlings, it appears to be all play and no work. Anything that stands in the way of the smooth, fast life is not tolerated for long. Loud honking and squawking brings a worker on the double.

Each day, the Earthling proceeds to pre-arranged gathering places.

At first, our scientists were puzzled by this stately procession. The simple reason: they enjoy each other's company and have an almost compulsive desire to play elaborate games together.

Occasionally they stop to chat, but any lag in games and dancing brings a sharp response from briskly-efficient social directors, who never leave their posts.

Furious fun -- and exhaustion. There's a steady run on spas and medical centres.

Nor is the mind neglected. Education is everywhere.

He spends a lot of time browsing in curiously-designed libraries. Often connected to such libraries are audio-visual centres.

From every angle and by every means, the Earthling is being conditioned. What is he learning? What is his ultimate purpose?

It is here, in this retirement park, that the meaning of his joyous celebrations and feverish education becomes clear. The mature individual is now ready to make his essential contribution to his civilization.

He instructs a worker to prepare him for his last act.

He is now in proper shape to reproduce.

Earthlings have done away with the stresses and untidiness of sex. The reproductive process takes place in three or four huge breeding centres. Although this process is shrouded in secrecy, our scientists believe that it must go something like this:

A new-born Earthling, full-grown, ready for a place in society.

It seems odd that such a highly-developed civilization has not yet

found a way to combat parasites. These pesky little creatures build huge hives, or nests, which often block or slow down the orderly progress of the Earthling. However, the Earthling seems to have the matter in hand. The eradication of these pesky little creatures is obviously a top-priority job for the working class.

And so, we look forward to our first Soft-Landing, and direct contact, with the fascinating Earthling.

Well done, scientists of Mars.



6. A TEST OF TIME

(10 min. 29 sec.)

DESCRIPTION

Young Steven has developed a mysterious rash. His mother, Margaret, is active on a citizen's committee which suspects that toxic waste from a private company dump is seeping into the town water supply. Her husband Eddie is a worker and union leader in that company. Should Eddie push for the company to clean up the waste? If he does, officials might decide to close the factory and move to a new location, leaving Eddie and his colleagues unemployed. At a union committee meeting Eddie has to cast the deciding vote.

VIEWING

This open-ended drama puts every viewer into Eddie's situation. Begin by discussing *toxic waste* as one form of pollution. It is a complicated problem because it can be expensive to solve, and companies today operate in a competitive global market, where extra costs for environmental concerns can put one at a disadvantage.

For the first viewing, write several simple questions such as the following on the blackboard, and introduce them to your class.

- Why is Margaret worried about Steven's health?
- What is the father's position in the union?
- Why is the citizen's committee concerned?
- Why is the union worried about pressuring the chemical company to clean up the toxic waste?

ACTIVITIES

- After the viewing discuss and record answers to the questions. Using a series of similar simple questions, lead the class through a review of the video, stressing comprehension. Encourage students to ask their own questions and their classmates to respond. Introduce vocabulary from the video as required. View the video again if necessary to ensure that all understand it very well.
- Divide the class into small groups and ask each to discuss the issue which Eddie faces and decide how he should vote. Play the video again if students want to see it and give the groups 10 -15 minutes to discuss and decide. Ask one person from each group to present the decision along with reasons. If interest is sustained and opinions are strong and different, suggest a formal debate at a later class (see *GENERAL ACTIVITIES*).
- Role-play situations such as the following, inspired by the drama.
 - Helen Shapiro interviews Margaret for her news program.
 - A union member who voted against the waste clean-up explains, (a) to his wife, (b) to a colleague, why he did.
 - The wife of a worker who supported the waste clean-up, (a) discusses it with a neighbour who may agree or disagree, (b) disagrees with her husband on his stand.
 - Helen Shapiro interviews a company representative on the company's position.
- Discuss local toxic waste problems. Don't forget domestic toxic waste. Choose one example and ask for an oral or written report or statement from groups or individuals, proposing a solution.

TEXT FOR A TEST OF TIME

Doctor: *There, there. It doesn't hurt. O.K. just hold still here. O.K. Almost finished Stephen. Good day.*

Stephen: *It's cold.*

Nurse: *Big breath.*

Nurse: *Yup, that's a nasty little rash you got there Stephen. I'll give you something for the itch. Just try not to scratch it, O.K.?*

Stephen: *O.K.*

Margaret: *You think it could be something he's eating?*

Nurse: *No, I think it's more likely it's something he picked from the other kids. Seems to be going around. I don't think there's anything to worry about, he's healthy enough otherwise.*

Margaret: *I'll see you in a sec, O.K.*

Stephen: *O.K.*

Margaret: *Umm, you know the SciChem Plant that my husband works at?*

Doctor: *Hum.*

Margaret: *Well, there's this Citizens' Committee and they're concerned about that dump site. Thank you. Umm..... the University has been in there and has been doing these tests and they say that the chemicals might be getting into the water anddo you think that that can cause the rash?*

Doctor: *Well if it was something like that, I'd expect other symptoms. Tell you what....if it hasn't cleared up in a couple of weeks, bring him in again and I'll take another look.*

Margaret: *Ya, O.K. Thanks.*

Doctor: *O.K. bye.*

Margaret: *Bye.*

Doctor: *Bye, bye.*

Margaret: *Stephen, ya O.K. Ya, 'till 6 o'clock, O.K. then in for dinner. And don't make me have to come and get you.*

Margaret: *Eddie! What're you doing?*

Eddie: *Shake and Bake.*

Margaret: *I was thawing that out for Chicken Marengo.*

Eddie: *Well we can have that tomorrow.*

Margaret: *I bought mushrooms and everything.*

Eddie: *I've got a Union Executive meeting at seven. I've got to get this show on the road. What did the doctor say about Stephen?*

Margaret: *Oh, nothing really. She said he's O.K.*

Eddie: *Oh that's good.*

Margaret: *Well, I don't know. There's something gotta be causing that rash! You don't break out for nothing!*

Eddie: *Did you tell her that?*

Margaret: *No.....but she checked him out and everything. What else can she do?*

Eddie: *Well, I'm sure it's nothin'. He's probably just allergic to school. I was.*

Margaret: *Ya, well he's not the only kid breakin' out. You know Wendy's boy, Martin?*

Eddie: *Hum.*

Margaret: *He's got it too. It bugs me. You know that Citizens' meeting last week?*

Eddie: *Hey, not that stuff again!*

Margaret: *Ah, Eddiie! Those rusty barrels have been sitting outside the factory for 20 years now and they're leaking poison chemicals.*

Eddie: *Well if they do leak, it's only in the ground behind the factory.*

Margaret: *That's not true. We get our water from wells and what they were tellin' us at the meeting was that these chemicals seep into the water table..... eventually we're drinkin' the stuff. Well, remember that Love Canal thing? Half the town had to move out.*

Eddie: *Damn, it's not going to fit. Do we have another tray?*

Margaret: *You're not listening to me.*

Eddie: *I am listening to you. You're looking at everything from one side, there are other things to consider.*

Margaret: *I'm not looking at everything from one side, like what other things? If that dump's makin' us sick, then somebody ought to do something about it, right? Right? Hey, I'm talkin' to you?*

Eddie: *You don't know it's makin' anyone sick. I work there, I'm not sick.*

Margaret: *Eddie, you're missin' the point. O.K. it might not seem dangerous to you, but kids get affected, different adults, right? And like the most important thing is the long term effects.*

Eddie: *You've blown this way out of proportion.*

Margaret: *You're just saying that 'cause you work there.*

Eddie: *Damn right, I work there and I want to keep it that way.*

Margaret: *Well, I think the government should investigate.*

Eddie: *Oh, ya great! And they'll close down the plant and half the town'll be out of work, the whole....what do we do then Margaret? Sell, sell flowers on the sidewalk for a living?*

Margaret: *Oh, just forget it.*

Eddie: *Look, what do you want me to do? I've just been elected President of the Local.*

Margaret: *Exactly, and as President you can get your Union to back the Committee.*

Eddie: *I can't take a stand, that'll put everybody's job on the line. How will that look?*

Margaret: *It dosen't matter how it looks. You're in a position of responsibility, I mean your job is to protect those guys at the plant.*

Eddie: *Right , protect their jobs, protect their wages, protect their two weeks holidays and their pensions.*

Margaret: *Oh.*

Eddie: *Look, where are you goin'?*

Margaret: *I'm goin' to get Stephen.*

Reporter, Helen Shapiro: *A Citizens' Committee here in Waynesfield has commissioned tests which have revealed that major clean-up is necessary at the SciChem plant. Barrels have been stock-piled behind the plant some for as long as 20 years. Many have rusted and leaked toxic chemicals into the soil. A spokesperson for the Citizens' Committee said that chemicals such as pentachloraphenols have already found their way into nearby streams and ponds. There is fear that these pollutants might find their way into our drinking water. A representative for SciChem Industries was unavailaable for comment. However it is estimated that the clean-up costs could be in the millions. Rumours are that if SciChem is forced to do a major clean-up, they will close the plant and pull out. This is Helen Shapiro for the six o'clock report.*

Eddie: *Be back around ten. See ya Steve.*

Stephen: *Bye.*

Bill: *The company's been treatin' us good, I don't see how we can go against them.*

Nick: *I say we back the Committee even if we are fightin' SciChem.*

Eddie: *Look, just let me go over this statement from Phil Emery -- he's the new Union-Management Relations guy. Basically, it says that SciChem has been conscientious over the years, taking measures to ensure clean premises as well as efforts to up-date facilities. He also reminds us that SciChem settled with a favourable contract last year, and they're looking forward to*

upcoming negotiations in view of a stable profit margin for the plant.

Nick: *Well this is all very fine and well, Eddie, but what about the dump?*

Eddie: *Ya, I'm gettin' to that. He says however, and this is the main stickin' point, "in spite of the current state of affairs, SciChem cannot justify the costs of dealing with what it considers to be largely unfounded concerns. The Ministry has"*

Nick: *Oh ya, when were those tests done?*

Eddie: *Hold on, a minute.*

Nick: *What, 2 years, 5 years ago?*

Eddie: *SciChem says the Ministry has done tests and the plant does not pose any health threat to the community.*

Nick: *How can they say that? Have you seen the results from the University?*

Bill: *Give me a break Nick. They're just a bunch of hysterical do-gooders. They get a hold of some rusty old barrels and suddenly everyone's running around like chickens with their heads cut off. You'd think the world was coming to an end.*

Nick: *Oh I see, you just want to wait until our kids start dying of cancer is that it?*

Bill: *Hey, wait a minute!*

Eddie: *Hold it. Look we've got two choices. We can support the company, they're probably willing to do a certain amount of cleaning up....disposing of the barrels, removing the top soil, etc., that'll solve the problem for NOW, and probably keep the public happy. Or, two, we support the Citizen's Committee and demand a full clean-up; that means a..... reprocessing system, an incinerator, maybe even piping in fresh water for the town. We're talking big bucks here. That's great! But if SciChem can't afford it, they're gone, they're out of here.*

Nick: *Ha, that's ridiculous. They're blackmailing us.*

Bill: *You know what'll happen if they close this place down? 400*

guys'll be out of work. What's the multiplier effect? 4? 5? That's like 2,000 people. What's that going to do for the community, people leaving town to find work. I'm 48 years old, I'm never going to find another job. You think your families are going to remember you saved them for a few rusty old barrels when you can't even put bread on the table?

Nick: And you think your family is going to thank you when they start getting sick from drinking chlorophenols? It's our health we're talking about here, Bill. I mean SciChem is just fine. I think they're bluffing.

Bill: You're being naïve, Nick. It's happened before. They close down, take a loss and it's a fat tax write-off. The management gets transfers, you and me and all the other guys, we're out peddling our butts on the street.

Nick: I just.....I don't see how we can support a position that puts our families at risks.

Eddie: All right guys, I think we're talkin' in circles here.

Bill: Really?

Tony: Ya. I move that we take a vote on it.

Bill: I second that motion.

Eddie: O.K.? Alright then. Those in favour of supporting the Citizen's' Committee? Those against?

Tony: It looks like it's a tie, Ed. Guess it's up to you.



7. ACID RAIN: REQUIEM OR RECOVERY

(26 min. 50 sec.)

DESCRIPTION

Little has changed except the statistics since this film was released in 1981 to increase public awareness

about a growing and serious threat to North America's environment. The damage caused by acid rain to both cities and countryside is not the problem of one continent or country alone. Wind and rain know no national boundaries. A challenge to each individual as well as to nations.

VIEWING

Of course *requiem* will need to be explained (a religious service for the dead) when the video is introduced. But the complete title can be presented along with a short list of key words to be left as a challenge for students to discuss and define after the first viewing. Many viewings in whole or part can be planned to exploit the wealth of information, the detailed vocabulary, and the variety of language structures to be found in this video. To help you find sections easily for replaying, this video is marked with a special "time code" in the lower right-hand corner of each picture. It changes each minute.

ACTIVITIES

- Solicit single-sentence explanations of the title and decide on the most succinct, the most poetic, the simplest, and the most elaborate.
- Establish meanings for the list of key words based on the viewing experience. Check these against dictionary definitions.
- Prepare simple lists of the *causes* and the *effects* of acid rain. Replay the video. Invite students to call out either *cause* or *effect* when a cause or effect appears on the screen. Each time, stop the video and hold it in "Still" position if your player has one. Build up complete sentences using simple or conditional forms depending on students' abilities.
- Categorize the causes under such headings as *Manufacturing*, *Power*, and *Transportation*.
- Select a local example of acid rain damage, or create an imaginary one if your community is fortunate enough to be free of this problem. Divide your class into three

groups, one to consider effects; one, causes; and one to propose remedies. Encourage students to consider the complexities of the human and social aspects as well as economic factors. After 20-30 minutes of group discussion and preparation, ask for findings to be shared with the class. This activity can also be developed as an individual, group, or class writing project.

- Select situations from the video and role-play interviews such as the tour guide from the Lincoln Memorial, a scientist in a fish laboratory, and a wildlife guide.

TEXT FOR ACID RAIN: REQUIEM OR RECOVERY

Narrator:

What is the connection between these images?

What is the link which makes them all part of the same story?

The connection is acid precipitation, commonly called acid rain. It is one of the ways in which we are quietly changing the face of the earth.

Earth has been described as a spaceship upon which we travel together. It is home. Earth did not come with a book of instructions. We are learning by trial and error. Acid rain is one of our miscalculations. It began when we discovered how to burn. We burn to produce. We burn to generate power. We burn to get where we want to go.

Energy consumption is a major base of our North American economy and lifestyle. We need it, we want it, we won't give it up.

The burning of oil and coal has placed us among the rich of the earth. But rising in the smoke of our industrial success are sulphur dioxide and the oxides of nitrogen -- the acid rainmakers.

Into the skies over North America, Canada and the United States pour sixty million tons of nitrogen oxides and sulphur dioxide every year.

We are using the sky as a garbage dump.

Rising into the clouds the particulates become part of the atmosphere. They may ride the skies for days, travelling hundreds, even thousands of miles. Because winds do not respect political borders, the pollutants cross state, provincial and international boundaries.

Some of the particulates sift to earth as dry fallout of deposition. Others react chemically with water vapour to form sulphuric and nitric acid. The acids are returned to earth in precipitation - dew, drizzle, sleet, snow and most commonly, rain.

When rain carries acids into a living environment the acids enter the life cycle. Every species reacts in its own way to a change in its habitat. When the change is big enough, some die.

We are bringing our paraphernalia into the wilderness to measure the impact of acid rain on our woods, waters, and wildlife.

The disappearance of life from certain rivers, lakes, and streams was the first signal we received that something was going wrong. The explanation came down to water, water collected from natural sources, which, when analyzed, was found to be abnormally high in acid content. To measure the acidity of a solution scientists use the pH -- or potential hydrogen -- scale. It requires graphic illustration.

The scale is numbered from 0 to 14. Distilled water has a pH of 7 and is neutral, neither acidic nor alkaline. Values higher than 7 are alkaline ; baking soda, pH 8.1, ammonia pH 11. Values lower than 7 are acidic; lemon juice has a pH of 2.2. The lower the pH of a solution the more acidic it is. Clean normal unpolluted rain has a pH of about 5.6. Precipitation with a pH lower than 5.6 is usually caused by man's contamination of the atmosphere. Vast areas of North America now receive rain with a pH level below 5.6. Those areas with a level of 4.6 or lower are of particular concern.

The most vulnerable areas of our continent are those where the soils are thin and the bedrock granitic in character. The soil and bedrock do not contain the elements to neutralize the action of the acids. Many river and lake systems in these sensitive areas are showing tell-tale signs of acid overload.

These symbols represent the greatest concentrations of nitrogen oxides, and these the major sources of sulphur dioxide emissions the two principal acid-causing pollutants.

The pollutants are carried by the prevailing surface winds which vary in direction in winter and summer. Unfortunately, the atmosphere releases some of the most acidic precipitation over some of the most sensitive geographic areas.

Acid rain is degrading our man-made environment. It affects limestone, sandstone, marble, even metals.

We build not only for function, but also to express our beliefs and ideals.

Bronze is no longer a byword for permanence.

We pay tribute to our statesmen and to ourselves.

But the rain is changing the face of our heritage.

"It's a serious environmental problem that is probably more serious because people don't see dramatic effects. And when it rains on the buildings, you don't see the whole surface of the building frothing and foaming. But the damage is being done and is being done slowly and insidiously, so that people are not immediately aware of it until, as has happened on the parliament buildings here, some large chunks of stone drop off and then all of a sudden everybody is wondering what the cause is. And now we know what the cause is."

"The ceiling up here is actually the cobblestone area out in front of the Memorial. These formations were formed by what is known as acid rain. We burn a lot of fossil fuels which emit things like sulphur dioxide -- things like that. And when it rains it combines with the water to form sulphuric acid, and as it rains the rain hits the marble and erodes the calcium out of the marble and it percolates down through".

A recent study by the Council for Environmental Quality has estimated the cost of damage due to corrosion of buildings and structures in the United States at two billion dollars per year. Damage in Canada is estimated at 350 to 560 million dollars annually.

In a unique experiment the tombstones of American servicemen have become part of the acid rain story. In Arlington and eleven other national cemeteries in the northeast, the far west, and Appalachia, the markers are being measured and compared. Because they vary in age and location, differences in loss of thickness, and of detail will help to define the extent and rates of damage to the environment we build for ourselves. In this unforeseen way the dead become silent partners in the preservation of our heritage.

The green leaf is the basic food source on earth. Experiments carried out by the Environmental Protection Agency at Corvallis, Oregon, are designed to discover the impact of the rain on the growth of food crops.

In one study, 28 major food crops were subjected to simulated acid rain. They represent 50 billion dollars annually to the U.S.

economy. Of the crops affected by the rain, 50% were stimulated and 50% were depressed -- reassuring if your livelihood depends on the 50% that flourished! Because agricultural soil is carefully managed we can probably remedy problems by adding to the earth what is lost through the actions of the acids. The fact remains that any interference in the growing cycle is a matter of concern to us all.

In the chemistry of life, a tree and a tomato plant have much in common. The biggest difference is time, a summer or a hundred years. Forests cover two and a quarter million square miles of North America. Forest industries are the largest single contributor to Canada's gross national product. They are vital to the economic health of many regions in the United States.

"The woods are lovely, dark and deep" -- preventers of erosion, preservers of watersheds and harbours of life. The impact of acid rain on our forests is insidious and difficult to detect in its early stages. But in the words of one forester, "it is not appropriate that a patient should die before being considered ill".

The rain appears to affect the chemistry of the leaves and the regeneration of the forest soils. It may leach important nutrients from the earth. It may increase the concentration of toxic minerals taken up by the root system.

What happens here is monitored and recorded - a forest in intensive care. What science discovers in these few acres in Quebec may be important to the future of our forest-based industries. Trees grow slowly in our temperate climate. Forest soils are often thin. There is no economically viable way to replenish the soil if vital nutrients are lost.

A hundred years from now is urgent in forestry. Water, cool and refreshing, a source of enjoyment and relaxation. According to many scientists, it is where life began.

Acid rain is threatening the life in hundreds of thousands of lakes in some of our most popular recreation areas. Ironically, as a lake acidifies, it appears to be in radiant health, until you look beneath the surface. This lake is clear, and blue, and acid. The fish are gone, and before them, the smaller plants and animals upon which they fed. It is a wet desert.

Metals -- aluminum, mercury and zinc -- leached by the rain from the surrounding watersheds are discharged into the lakes. Mercury in the tissues of fish can be toxic to birds, animals and

man, if they are a part of the regular diet. The source of life becomes a source of death.

Nine rivers in Nova Scotia no longer support healthy populations of Atlantic salmon. The brook trout are gone from 180 lakes in the Adirondacks. In 48,000 Ontario lakes, life is threatened. Salamanders are a dwindling species in the northeastern states. In parts of eastern North America, peepers, tiny woodland frogs, are disappearing. In acid waters the fathead minnow is an early casualty. Fish embryos die or are deformed.

The most sudden and intense acid doses come in the spring. As the snow melts, the pollutants locked in the snowpack are released. The meltwater becomes a toxic bath. This happens at the worst possible moment for fish and amphibians -- spawning time. In ponds and pools along the shore, the eggs and developing embryos are bathed in the acids. Whole generations are being lost.

Mysis Relicta, a tiny macroinvertebrate, is a survivor of the last Ice Age. It is one of the first to go as a lake acidifies. Mysis is a major food source for lake trout and freshwater salmon. Its disappearance from a lake is a serious break in the food chain.

As life emerges in the spring, scientists sample the benthos -- the tiny organisms which live in the muddy sediments along lake bottoms. The discovery of *pontaporrea* is good news. It too is a glacial relic and one of the first to succumb to the acids. When it goes, fish populations may decline, and following along the food chain, fish-eating birds and mammals may face local extinction.

Amphibians, frogs, toads, and salamanders are acid-sensitive especially in the embryonic stage. These salamander larva, hatched in nature, will never grow up. The microscope reveals deformities, twisted spines, symptoms of the effect of the rain. Amphibians are a high protein food source for wildlife. Some species live only in areas which are receiving regular episodes of acid rain.

Canada's experimental lakes area is one of the largest field laboratories in the world. Its lakes are typical of thousands in North America. Scientists have added sulphuric acid to lake 223 to examine the stages a lake goes through as it acidifies. Already much of the life has disappeared. Since these photographs were taken the entire crayfish population has failed. Crayfish are not only an important food for northern pike and smallmouth bass, they are part of many live-bait operations and in some areas, such as Louisiana, harvested for our own human diet.

Trout are extremely vulnerable to the effects of acidification. In this experiment, rainbow trout are exposed to various levels of aluminium, one of the metals found at greater-than-normal concentrations in acid-stressed lakes. In combination with low pH, aluminium is toxic to fish. It affects the respiratory system via the gills. The end result is cardio-vascular failure.

The work in the laboratory is the follow-up to what was first observed in some of North America's most beautiful wilderness...the Adirondacks, the first high land east of our industrial heart. The disappearance of life, where life once was, raised the question why? The answer, we now know, is acid rain. It is not a new discovery for those who live and work here.

"I think the time has come when they shouldn't be fighting and quarrelling over who's to blame, and get it out in the open -- admit it's there and do something about it."

"I think DDT and PCB's will be small potatoes compared to acid rain. People are being very short-sighted and stupid to think that it's going to go away, and the longer you wait, the more expensive it's going to be. It should be attacked immediately."

"People, even if they don't have contact with the out-of-doors, they'd like to think that there are places way back in the hills that are pristine...that are not affected by man's activities and so there is a certain amount of psychological, I guess, trauma associated with the problem."

Perhaps hidden in all of us, is a desire to know that places exist, not too far away, where nature is working in balance regardless of our comings and goings.

We are isolating an environmental threat, and beginning to describe it in minute detail. Many of the scientists who are documenting the impact of acid rain are not optimistic about the future. As in cancer research, we are witnessing changes in the natural processes of life which, if ignored, may lead to serious problems down the road. Unlike cancer, we know both the cause and the cure for acid rain. The technology exists to stop it.

This smelter at Sudbury, Ontario is the biggest single emitter of sulphur dioxide in North America. Under government control orders it has cut emissions by more than half. Further cuts are planned.

This American utility has installed scrubbers in three of its power plants keeping 88% of the sulphur from going up the stacks.

In Scandinavia and Japan, industry has followed strict emission control standards without detrimental economic effects.

Using the sky as a garbage dump has not worked out as planned. Far from the stacks our waste is quietly coming home. The evidence of the impact of acid rain is mounting. Only with public pressure in our boardrooms and legislatures will anything be done. No one consciously wants to destroy the environment, but we are. Because the damage is slow, and for most of us, not part of our daily lives, we do not realize what we are doing. If we allow it to continue, our loss, both economically and spiritually, will make the cost of the clean-up look like a bargain.

We have a choice, win now or lose later. Earth did not come with a book of instructions. We are writing them as we go. They will be read by future generations. Our chapter will include what we did about acid rain...requiem or recovery.



8. MOTHER EARTH

(10 min. 34 sec.)

DESCRIPTION

The metaphor of the earth as mother of humanity resonates back to earliest times. In this video without words, images from films made in the past half-century have been selected and edited to raise powerful questions about the nature of man and woman. The circle as a symbol of wholeness, nature, spirituality, and life, is associated with woman. Man is embodied in the rhythms of martial music and the phallic images of smokestacks and rifles. The rich tapestry of sound and picture and the filmmaker's evident intentions will rouse viewers to lengthy discussion and debate on the roles and relationships of the sexes, and how a nurturing attitude relates to the health of the environment.

VIEWING

The idea of *mother earth* has much in common with the notion of *spaceship earth* (see *ACID RAIN: REQUIEM OR RECOVERY*). They both deal with perceptions or attitudes

of men and women to one another and to Nature. During the first viewing ask students to write down as many words and phrases as the images bring to mind. These should include objects, actions and descriptions, as well as feelings.

ACTIVITIES

- At random, list all the students' words and phrases on the blackboard. Have the meanings shared with the whole class. Introduce the word *category*. Working in groups, ask students to sort words and phrases into categories. After the exercise, groups should share their results and their categories with each other. Discuss the differences which will appear and the reasons for them.
- Play the video again and ask each student to select the most appealing and the most disagreeable images. Compare with others and give reasons. Is there any degree of unanimity of choice? (Be sure that students understand that unanimity does not mean "truth"!)
- Ask students to write a single sentence stating what they believe the filmmaker set out to accomplish. Then, query them as to whether they think she achieved this goal. Insist on reasons, and share the thinking.



GENERAL ACTIVITIES

DEBATES

Environmental issues provide plenty of opportunity for debate. Few issues can be seen strictly in terms of black and white. Choose controversial topics but avoid heated arguments. Rather than assign students to sides, they should be allowed to support the side with which they agree. It's better for learning English!

Teams of two to four work best. There must be sufficient preparation time. Notes are fine but don't let students read their arguments. Normally, one member will open the debate with a summary of her or his group's views. Set a time limit for each speaker. Three minutes should do. Teams take turns making presentations.

To get maximum involvement, after the sides have each presented their case, invite audience questioning. It should be specifically directed to one team or the other. The teacher may wish to ask questions as well. End the debate before the subject is exhausted, or shows signs of becoming too passionate.

TWENTY QUESTIONS

There's a dictionary full of vocabulary suggested by the *GREEN TALK* videos. Tap into it to play a variety of this old parlour game. Many versions are possible. Here is one.

One student acts as quizmaster. She or he chooses a word based on the video just seen, or shown previously, and the questions begin. The answer must be given as YES, or NO. *Is it a noun? Is it living? Is it a form of transportation?* And so on, until the answer is found or all the questions are used up. The more skilled the students the more general will be the categories they choose at the outset. Encourage students to ask questions which will contain information which furthers their search for the word, rather than just guessing the answer randomly. Such queries as *Is it bigger than a cat?* and *Does it fly?* help to include or rule out whole categories of choice.

TRUE OR FALSE

Following any video the class is divided into two teams which stand in parallel lines facing the teacher, who begins by making a statement based on the video and which can be answered TRUE or FALSE. The first pair in the rows gets a chance to respond. The first one with the correct answer scores a point, after which the two drop back to the end of the lines. The game ends when everyone has had a turn, or, when a certain score has been reached, or, at the end of a predetermined length of time.

Statements can be as simple or as complex as your class requires. For example, after *WHAT ON EARTH!* is viewed, the assertions could range from "*The Martians landed on Earth*" to "*The Martians believed that the Earthlings had dispensed with the need for sex for reproduction.*"

TELEPHONE

Several students wait outside the classroom while a classmate describes a scene from one of the videos to those remaining in the room. When they re-enter, one of the students who heard the story whispers it to one of the group who in turn whispers it to a colleague and so on, until all those excluded from the room have heard it. The last listener repeats it aloud to the class. The results are often hilarious and the listening and speaking exercises are useful.

INTERVIEWS

Most of the *GREEN TALK* videos lend themselves to mock interviews. The approaches are endless. Here are several.

A) One student prepares a list of questions for someone or some object in one of the videos. A second student playing the part of the interviewee is given a short time to prepare answers, after which a radio or TV-type news show is staged.

B) Repeat "A" but conduct it as a public radio discussion instead. Use minor characters as well as chief participants. For instance an underwater plant from *WATER, WATER EVERYWHERE*, or a tombstone from *ACID RAIN*. Dream up interviewees who might have been part of the scene. For example, an insect in the grass when the motorcyclist from *THE QUIET RACKET* rides into the park, or the man in the moon looking down our planet in *MOTHER EARTH*.

C) Select a sequence in one of the videos to be written up as a news item. Have one student be the newspaper reporter. Others would be the ones to be interviewed. Give

the imagination free rein. Invent witnesses, animate or inanimate. In *WATER, WATER EVERYWHERE*, for instance, talk to the old gas can lying on the bottom, and frogs and other aquatic life who witness and/or experience what is happening.

D) Hold a news conference in connection with some event in the videos. Have several students act as reporters from newspapers, radio and television. Have others play the parts of those to be interviewed. Here again have fun with it.

Some preparation time is necessary to get the most out of these activities, particularly on the part of interviewers. Those being interviewed could either know the questions beforehand and be prepared, or they could improvise the answers without any preparation. In the latter case the interview could be rather surprising. Or a combination could be used, some questions known beforehand, others asked on the spot. Above all have some fun with it.

ROLE-PLAYING

This is drama with a definite purpose. Students are assigned or choose specific parts to play in a predetermined situation suggested by a video. Examples might include playing the parts of sea creatures discussing pollution of their environment (*DEEP THREAT*), a conversation between a mountain goat and a friend about their disappearing habitat (*BOOMSVILLE*), or, two or three Martian scientists comparing their observations of life on Earth. (*WHAT ON EARTH!*).

BRAINSTORMING

This technique is an excellent way of encouraging a group to speak freely. It can be very useful for vocabulary building. Its secret lies in accepting any answer in the first round. When inviting students to suggest words and phrases which come to their minds after seeing *MOTHER EARTH*, you should write everything on the blackboard. Later, the words can be evaluated for their appropriateness, combined into like groups, and compared or contrasted.

FOR FURTHER INFORMATION AND PURCHASES

International

International Marketing, D-12
National Film Board of Canada
Box 6100, Station A
Montréal, Québec,
Canada H3C 3H5

Telephone (1) (514) 283-9447
Fax (1) (514) 496-1895

Canada

Customer Services, D-10
National Film Board of Canada
Box 6100, Station A
Montréal, Québec
H3C 3H5

Telephone (514) 283-9403
Fax (514) 283-7564

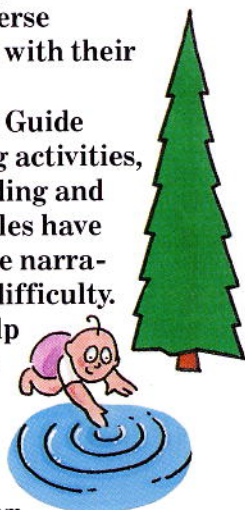
Printed in Canada

Green Talk

GREEN TALK is useful to anyone teaching conversation as a basic skill to students learning English as another language.

In every region of the world, environmental questions are the subject of much debate and discussion. This video anthology of 8 "green" shorts from the National Film Board of Canada includes such stimulating films as the Oscar-nominee, *What on Earth*, and *A Test of Time* from the highly-acclaimed interactive *Perspectives in Science* series. Their universal appeal will encourage students with very diverse backgrounds to talk and interact with their teachers and classmates.

An accompanying Teacher's Guide focuses on listening and speaking activities, and includes suggestions for reading and writing exercises. Some of the titles have no commentary while others have narration or dialogue which varies in difficulty. Information in the Guide will help teachers to decide which titles to use, and how to use them.



Produced with support from
External Affairs and International Trade Canada
Task Force on Central and Eastern Europe



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