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## A Teacher's Guide



The Henry M. Jackson  
School of International Studies  
University of Washington



Newspapers In Education

**The Seattle Times**

Inspiring Students To Learn

# Exploring Asia: The Environment

Written by

Tamara Leonard, Celia Lowe, Darrin Magee, Keith Snodgrass and Brett Walton

Photography by

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## Teacher's Guide

Written by Patricia Burleson

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# About Exploring Asia: The Environment

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Exploring Asia: The Environment is a collaborative project between the Newspapers In Education (NIE) program of The Seattle Times and the University of Washington Henry M. Jackson School of International Studies Asia and Global Studies outreach centers. The project consists of a five-article series, a teaching guide and a pre-series workshop for middle school teachers. Designed with young readers in mind, each article in the online newspaper series entitled "Exploring Asia: The Environment," focuses on an environmental issue in one region of Asia. The teaching guide provides a lesson plan for each article that includes activities to do with students before, during and after reading the featured article. Together, the articles and accompanying lessons take students on an exploration of human impact on the environment in several Asian countries, asking students to look at the issues from multiple perspectives and investigate solutions currently under way to tough environmental problems.

## Author of the Teaching Guide

The author of the teaching guide to "Exploring Asia: The Environment" is Patricia Burleson. Ms. Burleson retired from the classroom after more than 30 years of teaching in Washington public schools and now works with several local organizations as an education consultant. She is the director of Japanese Connections, a grant-funded project that provides study tours to Japan for teachers and students from the Anacortes and Lopez Island School Districts. She is a long-time instructor of Asian studies seminars as part of the National Consortium for Teaching about Asia, based at the East Asia Resource Center in the University of Washington. Ms. Burleson authored the teaching guide Youth Culture in Asia (NIE 2007) and many articles on teaching about Asia in the journal Education about Asia. She is the 2003 recipient

of the Elgin Heinz Outstanding Teacher Award from the U.S.-Japan Foundation. The World Affairs Council named her World Educator the same year for her outstanding accomplishments in global education. Ms. Burleson currently resides on Lopez Island.

## Acknowledgments

"Exploring Asia: The Environment" was created by six outreach centers in The Henry M. Jackson School of International Studies, University of Washington:

The East Asia Center

The East Asia Resource Center

The Ellison Center of Russian, East European and Central Asian Studies

The Center for Global Studies

The South Asia Center

The Southeast Asian Center

The project lead is Allison Dvaladze of the Ellison Center of Russian, East European and Central Asian Studies.

The article authors are UW faculty, outreach staff and associated scholars: Tamara Leonard, Celia Lowe, Darrin Magee, Keith Snodgrass and Brett Walton.

# Lesson One: Human Impact on the Environment

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Photo by: Celia Lowe

*Pair with "Human Impact on the Environment" by Tamara Leonard. (This article appears in The Seattle Times on April 14, 2010.)*

## Introduction

Human impact on the environment is a global challenge. The series of articles in The Seattle Times supported by this teaching guide are not intended to portray the entire scope of the environmental issues in Asia, but rather to present snapshots of specific problems.

Environmental challenges are complex, and a variety of stakeholders are involved in each case. Humans did not set out to cause environmental damage intentionally, but rather intended to meet human needs. For example, to feed ourselves, we have harvested sea life, and the consequences of overharvesting have contributed to imbalances in marine habitats. We have diverted rivers to irrigate farmland, and the resulting lower water levels in rivers have affected life downstream. We have built industries to enhance our standard of living, and in the process have polluted our water and air. Because of these adverse consequences, we must now find ways to balance our needs and wants with their environmental impact.

For each of the case studies presented in the newspaper articles, students will be asked to think about what human needs were being met that led

to the environmental problem; how humans have been both the cause of environmental damage in Asia as well as the solution – as has been the case in the United States and globally; who the stakeholders are; and how solutions are possible at both local and global levels.

In this introductory lesson, students will conduct a general overview of the countries mentioned in the articles to put those countries in geographical context; start collecting technical vocabulary words unique to environmental studies; and recognize their own contributions to the human impact on the environment.

## Objectives

1. Students will locate the regions addressed in the articles on a world map and present basic country profiles for each region.
2. Students will contribute to a class list of relevant vocabulary terms essential to understanding environmental issues.
3. Students will recognize their own impact on the environment.
4. Students will recognize the existence of multiple stakeholders in each environmental challenge addressed in the articles, and recognize that all involved stakeholders have their own perspectives about the environmental problems and solutions.

## Focus Questions

- How do humans impact our environment?
- What are some of the consequences of the human impact on our environment? Are all of the consequences negative, or are there positive consequences?



# Lesson One: Human Impact on the Environment

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## Materials

- The Seattle Times article "Human Impact on the Environment" by Tamara Leonard
- World map
- Classroom access to information sources, such as Internet access, resource books and magazines about Indonesia, India, Uzbekistan, Kazakhstan and China
- A student-friendly list of relevant technical vocabulary terms, such as the one available online from Kids Footprint at: <http://kidsfootprint.org/>
- Chart paper and marker (optional: for class vocabulary list)

## Activities

### Before Reading

1. Activate prior knowledge: Locate the continent of Asia on the map. Ask students what they already know about environmental issues in Asia. Given the geographical location and features of the various countries in Asia, what kinds of environmental challenges might the region be facing? (For example, many islands may be affected by the consequences of rising sea levels.) Have the class record their predictions on a class chart or on their own paper, so that they can return to them later.
2. It will be important for students to have general background information about Asia before they read this series of articles. Students with little background knowledge about Asia are likely carrying stereotypes about the people of Asia rather than fact-based knowledge about Asian countries and their peoples.

A good source of reliable, basic data for the countries referenced in the articles can be found

on the Asia Society Web site, in the "Countries and History" section of the main menu, then under "Country Profiles" (<http://www.asiasociety.org/countries-history/country-profiles>).

Assign small groups of students to explore one of the countries (Indonesia, India, Uzbekistan, Kazakhstan and China) and make posters with an agreed-upon set of facts about each country. Students might use an image search engine (like Google Images) to find a variety of relevant images to help them visualize the countries. Provide a way for the groups of students to present their information to the whole class. *Note that this will be only a brief collection of facts, not an in-depth study.* Discuss: What information might be missing from this collection of data?

### During Reading

1. Some students may not be familiar with the technical vocabulary specific to the field of environmental studies. For the introduction of the article "Human Impact on the Environment," read the article aloud while students underline and then write down their own lists of technical vocabulary words.
2. Facilitate a discussion about the vocabulary words and their meanings, then have students read the article alone or in small groups. Ask them to make predictions about what they might learn in the rest of the articles in the series.

### After Reading

1. Have students contribute to a collective class list of words they underlined during the first reading. Continue to add to this vocabulary list as you go through the rest of the articles in the series.
2. Focus students' attention on the first paragraph of the article and ask them to think about how humans impact their environment. Present a

# Lesson One: Human Impact on the Environment

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list of five world changes: population and life expectancy, types of dwellings we build, the ways we travel, what we eat and how we dispose of garbage. Divide the students into five groups and assign one section of the list of world changes to each group. Using paragraphs 3, 4, and 5 of the article as examples, have the groups list ways they personally might be having an impact on the environment in the category their group has been assigned. Debrief this activity with a class discussion and/or group-created posters about the assigned topics.

3. Brainstorm who might be the possible stakeholders in each country and what their various perspectives about environmental issues could be. (For example, stakeholders might include farmers, business owners, children, government officials and tourists.)
4. Discuss the concept that humans did not set out to cause environmental damage intentionally, but rather intended to meet human needs.

## Assessment

Paragraph 2 of the article gives a brief overview of the issues that will be raised in the next articles. Have students form small groups to develop questions about the upcoming issues. For example: How might each of the issues mentioned affect the day-to-day life of people in that country? What is a ragpicker? Create a class list of students' questions and refer to them throughout the unit.

## Other Resources

The National Geographic Web site has an online learning unit, "Human Impact," that addresses floods and dams, ozone and pollution, deforestation and desertification, and overpopulation. The Web site has short videos, images and classroom application ideas:

<http://www.nationalgeographic.com/eye/impact.html>.

PBS has an interactive tool for further exploring human impacts on the environment: <http://www.pbs.org/teachers/connect/resources/4333/preview/>.

The U.S. Geological Survey (USGS) Web site further describes human impacts on the environment: <http://www.usgs.gov/science/science.php?term=548>.

If time permits, the PBS Frontline video "Asia and Africa: Living on the Edge" is available online. Also note that there are other useful resources on this Web page to accompany the story: <http://www.pbs.org/teachers/connect/resources/6390/preview/>.

The Try Science Web site hosts the PBS video "Journey to Planet Earth" that examines the "relationship between people and the world they inhabit." Their resource links lead to classroom application ideas and interactive pages for students: <http://www.tryscience.org/csp/cspabouttjpe.html>.

The World Wildlife Fund (WWF) Web site (<http://www.wwf.org/>) is a source for scientific information, statistics, and ways for students to get involved in the global effort to manage the human impact on planet earth.

Learn about the history of Earth Hour, a global movement to bring awareness to our use of energy: [www.earthhour.org](http://www.earthhour.org).

The United States Global Change Research Program provides a high-quality, 12-minute video describing climate change: <http://www.globalchange.gov/resources/educators/toolkit/video>.

The U.S. Environmental Protection Agency (EPA) offers classroom resources for teachers at <http://www.epa.gov/teachers/>.

# Lesson Two: Indonesia Set to Become Global Environmental Leader



Photo by: Celia Lowe

Pair with "Indonesia Set to Become Global Environmental Leader" by Celia Lowe. (This article appears in *The Seattle Times* on April 21, 2010.)

## Introduction

The article paired with this lesson references climate change conferences in which Indonesia has been actively involved, and suggests that Indonesia is poised to become an international leader in solving environmental problems. This nation, comprised of 17,508 islands, has much to protect in the form of natural land and marine habitats, and vibrant cultures. This lesson looks at environmental issues in Indonesia and examines various meetings and documents including: the Bali Road Map and United Nations (UN) Climate Change Conference in Bali, the Pittsburgh G-20 Summit and the UN Climate Change Conference in Copenhagen.

## Objectives

1. Students will use graphic organizers as a reading comprehension strategy.
2. After using research skills to gather information, students will use what they find to support their own opinions and ideas about the value of environmental conferences, or about environmental challenges and solutions in Indonesia, and then decide if they think Indonesia is likely to become a global environmental leader.

## Focus Questions

- What are the environmental challenges in Indonesia and what solutions are being recommended?
- What have the various international meetings contributed to the global effort to address climate change and pollution issues?
- Is Indonesia likely to become a global environmental leader?

## Materials

- The Seattle Times article "Indonesia Set to Become Global Environmental Leader" by Celia Lowe
- World map
- Internet access for further research
- 11" x 17" paper for drawing graphic organizers
- Class vocabulary list

## Activities

### Before Reading

1. Explain to students that the accompanying article about Indonesia addresses two topics: (a) Indonesia as a possible leader in global efforts to manage climate control (efforts include participating in summits and conferences and contributing to documents that set goals for reducing the impact of climate change), and (b) Indonesia's own environmental challenges.
2. Review the geographic location of Indonesia on the world map, noting the names of some of the islands or groups of islands that make up Indonesia. Ask students what they predict might be some of the environmental challenges in this region.



# Lesson Two: Indonesia Set to Become Global Environmental Leader

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## During Reading

1. Remind students to add words to the class vocabulary list.
2. Have students, in small groups, read the article and sort details into the two main topics, using a graphic organizer (such as a Web or T-chart).

## After Reading

1. While still in their small groups, have students develop questions from their reading. Have half of the groups create questions about the role Indonesia has taken in summit meetings, conferences and drafting goal-setting documents on climate change and pollution, and half focus on Indonesia's unique environmental challenges.
2. Debrief students' questions with the whole class. Encourage students to rephrase their questions to lead them to higher-order thinking questions.
3. Assign students to work in their small groups to research more about these two topics, find answers to their questions and present their findings to the class.

To understand the topic of Indonesia's role in summits, conferences and drafting goal-setting documents about climate change and pollution, students can research these topics: the September 2009 G-20 Summit in Pittsburgh, the 2007 UN Climate Change Conference in Bali and the Bali Road Map, the May 2009 World Ocean Conference, and the December 2009 UN Climate Change Conference in Copenhagen.

To understand Indonesia's current environmental issues, students can research these topics: the Coral Triangle, rising sea levels, extreme weather events caused by climate change, rapid deforestation of tropical forest lands and environmental consequences of illegal logging.

4. Connect to unit themes. As a class discuss: How have humans had an impact on the environment in Indonesia? What are the people of Indonesia doing to balance their needs and wants with their environmental impact? Who are the stakeholders and what are their perspectives?

## Assessment

1. After the class has listened to each group's research results, have students develop their own ideas about the issues and meetings, based on their findings. In a class discussion, ask them to cite specific examples from their research and express their opinions about decisions made at international meetings; suggest solutions to environmental problems in Indonesia; and talk about how currently proposed solutions may have unintended consequences.
2. Have the class create questions that reflect what students found in their research. Possible questions include: Is Indonesia likely to become a global environmental leader? Have the various international summits and conferences contributed to global solutions? Next, ask students to write an opinion essay that answers one of their questions, citing specific evidence from their research to support their opinions.

## Other Resources

Information for both topic questions can be found on the U.S. Department of State Web site in the "Environment" section of the "Background Notes: Indonesia" Web page: <http://www.state.gov/r/pa/ei/bgn/2748.htm>.

An environmental analysis of Indonesia can be found on The World Bank Web site at <http://www.worldbank.org/>. From the main page, do a search for: "Indonesia Country Environmental Analysis."

# Lesson Two: Indonesia Set to Become Global Environmental Leader

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A summary and statistics about Indonesia's environmental challenges can be found here: <http://rainforests.mongabay.com/20indonesia.htm>.

The National Geographic Web site has a video clip about the Coral Triangle and a blog post about the Coral Triangle rescue plan: <http://news.nationalgeographic.com/news/2009/09/090901-coral-triangle-video-ap.html>, and <http://blogs.nationalgeographic.com/blogs/news/chiefeditor/2008/11/coral-triangle-rescue.html>.

A video about the success of a reforestation project in Borneo, Indonesia, "How to Regrow a Rainforest," is posted here: <http://www.youtube.com/watch?v=pyneMUd5Z04>.

The World Wildlife Fund (WWF) Web site has a summary of the environmental problems in Indonesia today: [http://www.panda.org/who\\_we\\_are/wwf\\_offices/indonesia/environmental\\_problems\\_indonesia/](http://www.panda.org/who_we_are/wwf_offices/indonesia/environmental_problems_indonesia/).

Also search the WWF Web site for specific information about the Coral Triangle, and read an article about the World Ocean Conference: <http://www.worldwildlife.org/climate/woc.html>.

The UN Environmental Program Web site also has information about the World Ocean Conference: <http://www.unep.org/>.

The official site for the UN Climate Change Conference in Bali, which produced the Bali Road Map, is here: [http://unfccc.int/meetings/cop\\_13/items/4049.php](http://unfccc.int/meetings/cop_13/items/4049.php).

Denmark, host country for the UN Climate Change Conference in Copenhagen, also hosts its Web site: <http://en.cop15.dk/>.

Information about the Pittsburgh G-20 Summit is available at the official site: <https://www.pittsburghg20.org/index.aspx>.

A variety of Web sites host copies of the speech given by Indonesian leader Susilo Bambang Yudhoyono at the Pittsburgh G-20 Summit. Find a copy of remarks at: <http://redd-indonesia.org/publikasi/detail/read/indonesia-presidents-speech-on-climate-change-at-2009-g-20-meeting-1/>.

# Lesson Three: The Shrinking of a Sea



Photo by: Damian Kostiuik

Pair with "The Shrinking of a Sea" by Brett Walton. (This article appears in *The Seattle Times* on April 28, 2010.)

## Introduction

The shrinking of the Aral Sea can be seen as a case study of the complex ways human actions impact environmental quality. This lesson will look at the surprising chain of environmental consequences that resulted from the decision to plant cotton crops. Students will discover that while we cannot completely reverse many of our environmental problems, we can make some amends that result in halting further destruction and perhaps achieving a partial recovery.

## Objectives

1. Students will use graphic organizers to demonstrate an understanding of the complexities of actions leading to and consequences of the shrinking of the Aral Sea.
2. After using research skills to gather information about the problem, students will use what they find to develop solutions they think will work.

## Focus Questions

- What makes the shrinking of the Aral Sea so complicated and complex?
- Are there ways to undo the damage that has been done? What is suggested in the article?

## Materials

- The Seattle Times article "The Shrinking of a Sea" by Brett Walton
- Resource books and magazines about the region of Uzbekistan and Kazakhstan
- Internet access for further research
- 11" x 17" paper for drawing graphic organizers
- Class vocabulary list

## Activities

### Before Reading

1. Review the articles used in the previous lessons and briefly list the kinds of human impacts on the environment already familiar to students.
2. Discuss the concept of a chain of events: how one action can lead directly to a consequence, or several consequences, all of which directly cause others.
3. Explain that the article "The Shrinking of a Sea" will help students understand the complexity of the chain of events and the environmental consequences that are affecting the Aral Sea.

### During Reading

1. Remind students to add words to the class vocabulary list.
2. Read the first paragraph of the article aloud. Have students read through the rest of the article in small groups or individually. As they read, they should underline or highlight key words that may be part of the chain of events described.

### After Reading

1. Connect to unit themes. As a class discuss: How have humans impacted the Aral Sea? What are the people of the region doing to balance their needs and wants with their environmental

# Lesson Three: The Shrinking of a Sea

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impact? Who are the stakeholders and what are their perspectives?

2. Have students create a graphic organizer that visually explains the chain of events presented. The complexities of the Aral Sea issue will become visually clear, as each of several consequences leads to others.
3. National Geographic Xpeditions has a set of online lesson plans and activities to help students understand the science behind the problems of the shrinking Aral Sea.
  - a. "The Aral Sea Then and Now": Students add salt to a measure of water, and after the water evaporates they hypothesize about what might happen to animals, people and plants living near a shrinking sea. See: <http://www.nationalgeographic.com/xpeditions/lessons/14/g35/shrinking.html>.
  - b. "Who Pays the Price when a Sea Disappears?" To understand the effects on the lives of the people in the region, students research information about the issue, then prepare statements from the perspective of the people who are being affected by the changes. See <http://www.nationalgeographic.com/xpeditions/lessons/14/g68/disappear.html>.
  - c. "The Aral Sea: What's Happening to Whom?" For a deeper, more complex understanding of the human side of the issue, this lesson has students suggest solutions to the problems. See <http://www.nationalgeographic.com/xpeditions/lessons/14/g912/whom.html>.

## Assessment

Have students explore these and other Web sites and resources. Have small groups of students develop position statements about what they think needs to be done to address the shrinking of the Aral Sea, how they reached this conclusion, and what evidence can be used to support their opinions.

## Other Resources

For some quick images of this region over time, use an images search engine and search for the Aral Sea. Try Google Images: <http://images.google.com>.

For more information and a lesson plan about the Aral Sea, see the Outreach World Web site: [http://www.outreachworld.org/Files/u\\_texas/aral\\_sea.pdf](http://www.outreachworld.org/Files/u_texas/aral_sea.pdf).

The OrexCA.com travel Web site presents a lot of visual and historical information about the region: <http://www.orexca.com>. Go to the gallery section at <http://www.orexca.com/photogallery>, and keep clicking on images to go deeper into the collection. Note that these images are for the purpose of advertising travel to the region, and discuss how that purpose may influence the choice of images presented. More information about the Aral Sea can be found at [http://www.orexca.com/aral\\_sea.shtml](http://www.orexca.com/aral_sea.shtml).

NASA images of the Aral Sea show the dramatic changes: <http://landsat.gsfc.nasa.gov/images/archive/f0012.html>.

A similar problem is occurring at Mono Lake in California. The lake is shrinking, and the problem is being addressed by a group of concerned citizens in California: <http://www.monolake.org/>.

# Lesson Four: China's Water Blues



Photo by: Darrin Magee

Pair with "China's Water Blues" by Darrin Magee. (This article appears in *The Seattle Times* on May 5, 2010.)

## Introduction

With increasing media attention being focused on China in the past couple of years, students may be aware of air and water pollution problems in that country. Less well known and just as important is the concern about water scarcity in China. This lesson and the accompanying article examine the problem of water availability in some regions of the country, and how the Chinese people and government are preparing to manage their water needs. In this lesson, students will compare China's water diversion project to that of the shrinking of the Aral Sea studied in the previous lesson, as well as the water diversion of the Rio Grande in the Southwestern United States.

## Objectives

1. Students will examine the positive and negative consequences of three water diversion projects.
2. Students will compare and contrast the three projects from the point of view of people who will experience the consequences.

## Focus Questions

- Why do people make decisions to divert water from its original source?

- What are some positive and negative consequences of water diversion projects?
- What are the various viewpoints and opinions of people living in areas affected by these water diversion projects?

## Materials

- The Seattle Times article "China's Water Blues" by Darrin Magee
- Internet access for further research
- Class vocabulary list

## Activities

### Before Reading

1. Access students' prior knowledge by asking them what they know about the environmental problems that many people in China worry about. If students do not mention water scarcity, explain that water scarcity is a problem now and will be much worse in the near future.
2. Tell students that the article "China's Water Blues" will help them learn about what the Chinese people plan to do to remedy the water shortage in the northern regions of the country.

### During Reading

1. Remind students to add words to the class vocabulary list.
2. While this lesson focuses on the water diversion project, also stop to point out and emphasize the other major environmental issues mentioned in the article.

### After Reading

1. Watch a short video news report that looks at the massive water diversion project under way in China. Ask students to think about what they learned from their study of the Aral Sea water



# Lesson Four: China's Water Blues

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diversion project, and what they think could be the consequences of the water diversion project in China. See: <http://www.guardian.co.uk/world/2009/may/18/china-water-crisis>.

Information about the massive project in China that will divert water from the south to the drier northern regions can be found on this Web site: [http://www.water-technology.net/projects/south\\_north](http://www.water-technology.net/projects/south_north).

For a historical connection, have students research the Grand Canal project that was begun in 486 BCE, and added to in the seventh century CE. What were the consequences of this project? See: <http://library.thinkquest.org/20443/grandcanal.html>.

2. Compare water diversion projects and consequences in China to those in the United States. There are many projects to research, including those of the Colorado River and the Rio Grande. Newspaper articles and short online videos are good sources. What are the reasons for water diversion in the U.S. examples? How do the reasons compare to those of China?
3. Connect to unit themes. As a class discuss: How have humans impacted the environment in China? What are the people of China doing to balance their needs and wants with their environmental impact? Who are the stakeholders, and what are their perspectives?

## Assessment

Discuss the similarities and differences between the water diversion projects in Central Asia (lesson three), China, and the United States. As a class, make a list of descriptions of the types of people affected in each of the three regions. For example: a farmer living upriver along the Colorado River, a boatbuilder in Uzbekistan and a hotel owner living in the path of the water diversion project soon to begin in China. Have students write in a

first-person point of view about a person whose life will be affected by one of the water projects. Read these essays aloud to the class, and discuss or debate the issue.

## Other Resources

The PBS Web site "China from the Inside" describes "China's Top Water Issues," including how these water issues can affect life downstream and in other countries: <http://www.pbs.org/kqed/chinainside/nature/waterissues.html>.

The "Media Report" section of the Web site for the Center for Legal Assistance to Pollution Victims (CLAPV, led by Chinese public interest lawyer Zhang Jingjing), notes several incidents of corporate pollution and outcomes of actions promoted by the center: <http://www.clapv.org>. (To view in English, click on the tab in the top, right-hand corner of the page.)

Zhang Jingjing is also known for her participation in a New York Times roundtable as an environmental expert: <http://china.blogs.nytimes.com/2007/08/29/thursdays-expert-zhang-jingjing/>.

An excellent video clip of Zhang Jingjing, "Young and Restless in China," can be viewed online at PBS Frontline: <http://www.pbs.org/wgbh/pages/frontline/youngchina/>.

The story of a man and his family who become "eco-refugees" when they are relocated by the Chinese government because of the water shortages and the encroaching desert is told here: <http://www.guardian.co.uk/world/2009/may/18/china-ecorefugees-farming>.

This Web site includes interactive sites for students, classroom lesson plans, and global facts about water pollution and availability: <http://www.thirteen.org/h2o/>.

# Lesson Five: Trash Pickers, Children and Health in India



Photo by: Keith Snodgrass

Pair with "Trash Pickers, Children and Health in India" by Keith Snodgrass. (This article appears in *The Seattle Times* on May 12, 2010.)

## Introduction

"Trash Pickers, Children and Health in India" presents an opportunity for students to grapple with the complications inherent in addressing social and environmental issues. Children who work as ragpickers in India are exposed to unhealthy working conditions and environmental contaminants, but they are helping to feed their families and/or themselves with the little they earn. If those children stopped sorting through trash to earn money and went to school instead, they and their families would suffer the loss of income. To further complicate the situation, because there aren't officially organized waste management and recycling programs in many parts of India, the ragpickers perform a service to society by sorting trash and recycling some of the materials.

## Objectives

1. Students will understand how modern conveniences, such as styrofoam containers, have led to an unhealthy waste management problem in India, and what solutions are possible.
2. Students will expand their awareness of the complications inherent in some environmental

solutions as they learn about the diversity of socioeconomic lifestyles in India.

## Focus Questions

- What are the challenges that India is facing in its efforts to provide a safe and healthy waste management solution?
- What might be the consequences when social service organizations provide the children ragpickers with the opportunity to find education and other work? How can solving one problem sometimes cause other problems?

## Materials

- The Seattle Times article "Trash Pickers, Children and Health in India" by Keith Snodgrass
- World Map
- Resource books and magazines about life in India
- Internet access for further research
- Class vocabulary list

## Activities

### Before Reading

1. Ask students what images come to mind when they think of India. Do students list diverse images? Or are the images mostly of crowded spaces and poverty?
2. Discuss the many stereotypical images we see of India's poverty, hunger and overpopulation. Ask students to consider what we are not seeing. Have students do some online and library research to collect a variety of images of India. Here are some Internet search terms to start with: daily life, schools, weddings, farming, hotels, city life, restaurants, corporations and real estate for sale in India. Display the images

# Lesson Five: Trash Pickers, Children and Health in India

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on the bulletin board or as a table display, use a document camera or post them on a Web site for a broader picture of the socioeconomic diversity in India.

## During Reading

1. Remind students to add words to the class vocabulary list.
2. Tell students that this article will help them to understand the complicated interconnections between the ragpickers, the services they provide and the human right to shelter, food, an adequate standard of living and medical care.

## After Reading

1. Have students work in small groups or with a partner to design their own graphic organizers to represent how the challenges presented in this article are interconnected. What happens to recycling if the ragpickers are taken out of their current lives and given education and other jobs? Or if they are protected from exposure to harmful chemicals in plastics? Or if private companies start collecting trash and recycling?
2. Have students gather more information by investigating other resources about the issues:

This very short video available on the Reuters Web site will help students visualize the children ragpickers in India: <http://www.reuters.com/news/video?videoid=98132>.

An Indian newspaper ran an article about the conflict caused when the municipal government approved private agencies to collect garbage, taking work away from the ragpickers: <http://news4u.co.in/?p=16109>.

3. Connect to unit themes. As a class discuss: How have humans impacted the environment in India?

What are the people of India doing to balance their needs and wants with their environmental impact? Who are the stakeholders, and what are their perspectives?

## **Assessment**

Have students research some of the solutions to the challenges presented in this article, then work in small groups to create their own ideas for solutions. Share sources in the Other Resources section below for places students can start their research.

## **Other Resources**

PBS Frontline's "India: A New Life. Getting kids off the street" includes great video clips and information: <http://www.pbs.org/teachers/connect/resources/5499/preview/>.

Pratham, the organization mentioned in the article "Trash Pickers, Children and Health in India," works to educate children who are not attending school, including ragpickers, all across India. Read the "Paper on Ragpickers" in the organization's publications section: [http://pratham.org/images/Paper\\_on\\_ragpickers.pdf](http://pratham.org/images/Paper_on_ragpickers.pdf).

Sunita Narain is the director of the Centre for Science and Environment, a public interest research and advocacy organization based in New Delhi, India. Click on "Environment Education" (found under "Education & Training" on the main menu of the Web site) to find information about what India is doing about its environmental challenges. See <http://www.cseindia.org>.

A video search on Google Videos or YouTube for the name Sunita Narain will bring up several interviews.

The Ecology Center's article "Plastics Task Force" is a source for basic recycling information: <http://www.ecologycenter.org/ptf/>.

# Lesson Five: Trash Pickers, Children and Health in India

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The Ecology Center's Berkeley Plastics Task Force also has some information about the ragpickers and recycling challenges in India:  
<http://www.ecologycenter.org/iptf/Ragpickers/indexragpicker.html>.

"Global Investigation of Child Labor: Case Studies from India, Uganda, and the United States" is a curriculum unit available for purchase from SPICE (Stanford Program on International and Cross-Cultural Education):  
<http://spice.stanford.edu/catalog/12022/>.

# Lesson Six: Concluding Activity

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*This is a post-series activity.*

## Introduction

Learning about environmental problems on the planet can leave students feeling overwhelmed and hopeless, so it is important to follow up with opportunities for action. In this final lesson, students will investigate ways they can get involved and make a difference in managing the environmental issues that concern them.

## Objectives

1. Students will find that there are many ways to affect environmental change and that each of us can pursue the ways that work best for us.
2. Each student will take some kind of action, based on personal and family beliefs and values.

## Focus Questions

1. What are some of the ways people around the world have expressed their concerns about climate change and other environmental problems? (e.g. taking personal action such as recycling, participating in ecotourism, donating money, working for an environmental action organization, writing to government representatives.)
2. What local or global environmental challenge is important to you? What are you willing and able to do to be part of the solution?

## Materials

- Resource books and magazines about environmental activist organizations
- Internet access for further research

## Activities

1. To give students some examples of ways people all over the world are getting involved with

activist organizations, share some of these Web sites with them:

- 2010 marks the 40th anniversary of Earth Day. There will be many opportunities for students to get involved in the recognition of this anniversary. For ideas, see the Earth Day Web site: <http://www.earthday.net/earthday2010>.
  - The International Ecotourism Society (TIES) promotes "responsible travel to natural areas that conserves the environment and improves the well-being of local people." The Web site provides information about what ecotourism is and how to be mindful of human impact on the environment when traveling: <http://www.ecotourism.org/>.
  - On the SnagFilms Web site, there is a video called "The Yunnan Great Rivers Expedition." This one-hour documentary follows a group of river rafters as they explore the upper Mekong, Salween and Yangtze rivers, in northwest Yunnan Province, China. The video asks if it is possible and appropriate to develop ecotourism in the region. If so, can it enhance efforts to protect the resources and environment of these great rivers regions? Along the way, the group takes note of how local peoples are acting to protect their resources while developing economic stability: <http://www.snagfilms.com/films/>.
2. Discuss: What is activism? (Definition from Merriam-Webster's Collegiate Dictionary 11th edition: "A doctrine or practice that emphasizes direct vigorous action esp. in support of or opposition to one side of a controversial issue." Definition from Wikipedia: "An intentional effort to bring about social, political, economic or environmental change.") Have the class create a collective definition. What are activist



# Lesson Six: Concluding Activity

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- organizations? What are good examples of some activist organizations?
3. Discuss: What kinds of work do people do when they get involved with an activist organization? What kind of work can students your age do for an activist organization? What would you need to know about a group before you got involved with its cause?
  4. Have each student list the characteristics they personally would need to see in an activist group before they would consider volunteering to help. Discuss what they want to look for and how they would find it. (For example: a high percentage of funds go to the cause rather than administration; the agency and the student have similar values; the student knows of or about some of the people currently working for the agency and the area of their expertise.)
  5. Offer students the opportunity to research options for action in honor of Earth Day 2010 (see ideas in the Other Resources section). Students should talk to their parents and family about what they might support, and what they think students should be looking for in their research.
  6. Once students have chosen some kind of action, either through an established organization or on their own, they should write about what they chose to do. Have them describe how they chose this action or organization. How does this choice reflect what is important to them? What will they be able to do? In what way will students' chosen actions help balance human needs and wants with environmental impacts? Who are the stakeholders, and what are their perspectives?
  7. For an authentic learning experience, have students inform others. They could:
    - Create a bulletin board display to document their chosen activity using photos, flyers and printouts of Web pages.
    - Write to the local newspaper, as a class or individually, encouraging others to take similar action.
    - Write to their congressional representatives, the school board, the local mayor or city council.
    - Create a video about the importance of everyone working together to address global environmental challenges. Students might post their video on the school Web site, or submit it to an activist organization for posting.
  8. Discuss the concept of civic efficacy: the understanding that as a citizen, a person can make a difference and can affect change. Ask students to connect their work in this unit to the idea of civic efficacy. Students can write about what they felt they accomplished, and what they learned along the way.

## Other Resources

The Earth Charter Initiative Web site offers many opportunities to help make a difference. Find relevant videos by clicking the YouTube link on the lower left side of the home page: <http://www.earthcharterinaction.org/content>.

Find more ideas and opportunities here: Earth Hour, <http://www.earthhour.org/>, and Earth Day, <http://www.earthday.net/earthday2010>.

# Resources for Teaching about Asia

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## **Henry M. Jackson School of International Studies**

The outreach centers of the Jackson School of International Studies offer professional development programs for educators and lending libraries of curriculum materials and films. For current offerings and a list of materials available for loan, please contact the outreach centers or visit the centers' Web sites.

### **The Center for Global Studies**

Henry M. Jackson School of International Studies  
University of Washington  
Box 353650  
Seattle, WA 98195-3650  
Phone: 206/685-2707  
E-mail: [cgsuw@uw.edu](mailto:cgsuw@uw.edu)  
Web site: [jsis.washington.edu/isp](http://jsis.washington.edu/isp)

### **East Asia Center**

Henry M. Jackson School of International Studies  
University of Washington  
Box 353650  
Seattle, WA 98195-3650  
Phone: 206/543-6938  
E-mail: [eacenter@uw.edu](mailto:eacenter@uw.edu)  
Web site: [jsis.washington.edu/eacenter](http://jsis.washington.edu/eacenter)

### **East Asia Resource Center**

Henry M. Jackson School of International Studies  
University of Washington  
Box 353650  
Seattle, WA 98195-3650  
Phone: 206/543-1921  
E-mail: [earc@uw.edu](mailto:earc@uw.edu)  
Web site: [jsis.washington.edu/earc](http://jsis.washington.edu/earc)

## **The Ellison Center for Russian, East European and Central Asian Studies**

Henry M. Jackson School of International Studies  
University of Washington  
Box 353650  
Seattle, WA 98195-3650  
Phone: 206/543-4852  
E-mail: [reecas@uw.edu](mailto:reecas@uw.edu)  
Web site: [jsis.washington.edu/ellison](http://jsis.washington.edu/ellison)

### **South Asia Center**

Henry M. Jackson School of International Studies  
University of Washington  
Box 353650  
Seattle, WA 98195-3650  
Phone: 206/543-4800  
E-mail: [sascuw@uw.edu](mailto:sascuw@uw.edu)  
Web site: [jsis.washington.edu/soasia](http://jsis.washington.edu/soasia)

### **Southeast Asian Center**

Henry M. Jackson School of International Studies  
University of Washington  
Box 353650  
Seattle, WA 98195-3650  
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E-mail: [seac@uw.edu](mailto:seac@uw.edu)  
Web site: <http://jsis.washington.edu/seac/>