

**THE UPSIDE OF DOWN: CATASTROPHE,
CREATIVITY AND THE RENEWAL OF CIVILIZATION**
by Thomas Homer Dixon

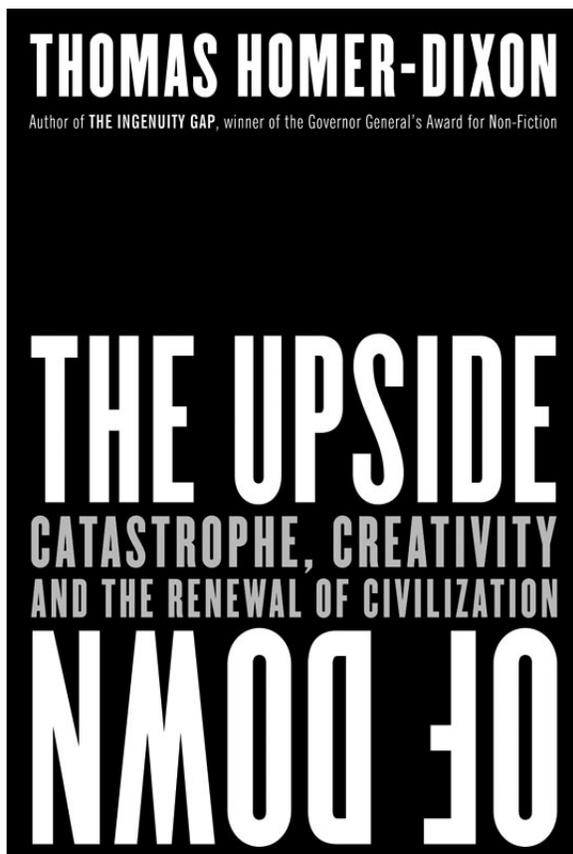
TEACHER'S GUIDE

Prepared by Joan Hewer

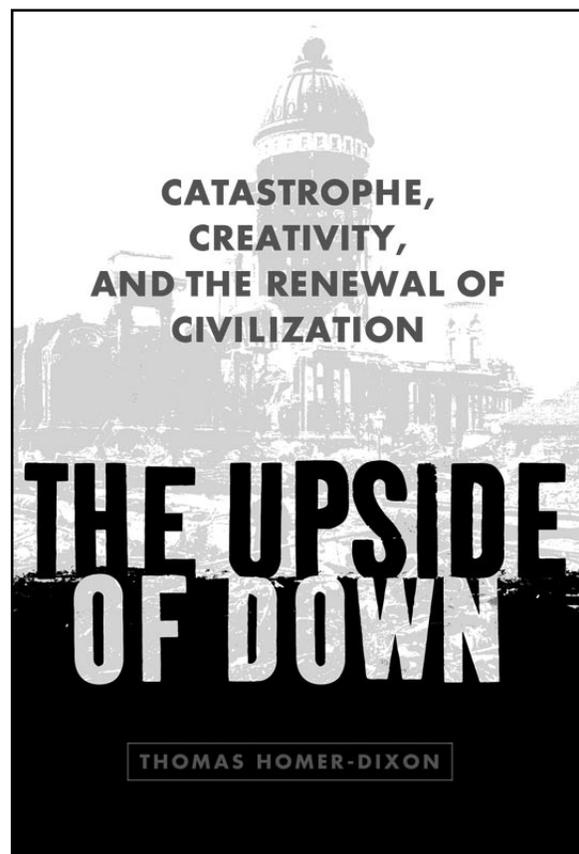
The international distribution of this book and its diverse range of topics make specific curriculum reference impossible. However, the material covered would be suitable for courses relating to global studies at a variety of grade levels and even first year university.

This guide contains ideas for teachers to use with individuals, groups, or classes. It covers pre-reading, ongoing, and wrap-up activities, as well as chapter-specific activities.

A list of useful web sites, journal and news sites, and reproducible outlines is available at www.theupsideofdown.com/studyguide



Canadian edition



U.S. edition

Pre-reading:

1. Go through the main chapter-by-chapter guide. Pull out a few of the most thought provoking quotations. List them on chart paper or the blackboard, and have the students choose one about which they have strong feelings or opinions. Have the students write a short response. Have these read in class and allow appropriate discussion. This will generate some pre-interest in the book and inspire reading.
2. Do the same with a few of the tougher questions found in the chapter-by-chapter guide. List them on the board or on paper. Have students write their answer to one or all of them. Have the responses read and discussed in class to generate pre-reading curiosity.
3. Discuss the meaning of the title of the book in class.
4. Read the prologue aloud in class. Allow for some discussion to follow. Ask students what they expect to get out of reading the book, or what questions they hope to have answered. Discuss the use of the different analogies and scenarios.

Ongoing projects:

(indicates suitable for partner or group work. One strategy is to have different groups handle different topics, then do presentations to the large group. This maximizes coverage of the material in less time)*

1. Have students keep a response journal as they read. It should include reactions, opinions, personal connections, reflections, etc. as they read each chapter.
2. Students could keep a list of the key words, new words, or subject specific words encountered in the book and create a glossary.
3. Students could keep a list of personal questions they have as they read. They could then do some research to find the answers, not ignoring the notes section at the back of the book, where more detail is given.
4. * The book uses the Roman Empire as a touchstone to relate to the situation our modern society now faces. Students could research and chart a comparison of the Roman Empire and the U. S. (or Western Society) today, under such headings as: architecture, infrastructure, bureaucracy, government, military, trade, economy, class structure, cities, taxes, energy sources and use, crime and law, internal/external affairs, enemies, accomplishments, indications of decline. Once the chart is complete, a summary report with possible conclusions should be written and perhaps presented to the whole group.
5. Students could keep a scrap book of newspaper/journal articles, internet information, etc. on one of the books main topics: oil crisis, global warming, greenhouse gas emission, population crisis, terrorism, wealth disparity, environmental crisis, social unrest in poorer countries, etc. The articles should reflect what is happening around the topic currently, and show both positive and negative sides where possible. After a given time, or set number of articles, or however it is decided that the project should draw to a close, a final report or summary is made, with conclusions drawn as to the state of this global situation, and to how well the information in the book holds up against the very latest reports.

Ongoing projects *continued...*

6. * Using as many of the quotations listed in the chapter-by-chapter guide, students locate suitable pictures, maps, graphs, diagrams, etc. and prepare a power-point type slide show to do a logical summary of the book. Other quotations may be found and used.
7. * Students choose one of the main topics of the book. After researching the topic and formulating personal opinions or slant, do one of the following to get their point across to the rest of the large group: (role playing may be involved)
 - radio broadcast; video documentary; interview an 'expert';
 - create a brochure or pamphlet to create public awareness;
 - create a poem, play or song to heighten awareness;
 - create a school bulletin board display to create awareness; or,
 - create a web page to educate and inform.
8. In several newspapers, news magazines, and journals, students should read letters to the editors. Then, using one of the key issues in the book, especially one that can be related to their own community, they research appropriate possible recipients for letters they will then write and possibly send, outlining their concerns and asking what is being done about the issues in the respective areas. Letters to the editor of appropriate journals and newspapers could also be written. These should include questions as well as opinion.
9. * A group of the students could create a web site designed to inform and create a dialogue on one of the key issues of the book. It should include links to relevant and valid sights, lists of action groups/ideas, etc. (Note: web design is a part of many curricula, but depending on the age of student, might need to be monitored closely and checked by knowledgeable adults).
10. Students could read several reviews of a variety of books to capture the style and techniques used. Then, they could write their own review of this book. They should avoid reading any reviews about it beforehand. Comparisons to actual reviews could be drawn and commented on.
11. Older students could be encouraged to join the author's Forum linked from the web site: www.theupsideofdown.com

Chapter-specific activities:

Again, these are just starting points. The varied topics of the chapters lend themselves to many specific activities. Some of the given web links have interactive components. The tools and general activities following this section could be incorporated into specific lessons/activities.

Chapter 1:

Students could choose one of the main problems facing the world today (or different groups could be assigned different problems), then after some research in journals, newspapers, internet, etc. do a report on what is being done to deal with it, and any roadblocks that seem to be getting in the way of solutions. A written or oral report including their prognosis could be the follow-up.

Chapter 2:

- a) Students give examples from the text and other sources to illustrate the 2 laws of thermodynamics.
- b) Students find in a variety of sources, and list some of our hidden energy uses. They then try to decipher what the author meant by energy 'consequences', and give some possible examples.

Chapter 3:

- a) Students should visit the world population clock site: (www.ibiblio.org/lunarbin/worldpop/index.html) and some of the population pyramid sites listed in the web site section of the guide. They make observations and comments in relation to the message of the book.
- b) Students choose 3 countries: 1 rich, 1 developing, 1 poor. They then visit the site: www.cia.gov/cia/publication/factbook/index.html find and chart each countries statistics under a variety of headings, including: birth rate, death rate, unemployment, % urban, % under age 15, literacy rate, and any other pertinent data. They then do an analysis of the results, compare to the situation in their own country, and relate to the message of the book.
- c) Students go to the list of countries ranked by the Human Development Index (available at www.theupsideofdown.com/studyguide)

They then color-code the top 1/3, middle 1/3 and bottom 1/3 and plot them on a world map using the designated colors to shade them in.

Analysis and comments on the findings could be reported considering such factors as climate, global position, etc.

- d) Students could do a mind web to show the ripple effects of large-scale immigration on a country, using such categories as wages, employment opportunities, cities, housing, standards, class structure, crime, etc.
- e) Students could research one of the world's 'megacities' mentioned in the book and prepare a report under such headings as energy use, air quality, waste management, housing, employment, infrastructure, crime, transportation, etc. They then relate findings to the message of the book.

Chapter-specific activities *continued...*

Chapter 4:

- a) Students do a time line of what a day in their lives would be with absolutely no form of energy or fuel. They comment in terms of the book's message.
- b) Students could do a time line of mankind's experience with oil, being very inclusive.
- c) After research into alternative sources of energy, students could do a report about our world "on beyond oil", describing how various facets of our lives would be different without oil, eg. housing, travel, work, etc.
- d) Students could compile data for a chart on the alternate energy sources listed in the book: wind, solar, ethanol, natural gas, coal, nuclear fission and fusion, hydrogen under the headings of source, efficiency, benefits and drawbacks. Comment in terms of the book's message.
- e) Students could prepare, conduct and report on an interview with someone in charge of a local factory or business to determine what their company is doing in terms of conservation and the environment.
- f) Students could prepare a survey to be conducted among friends, family, neighbors, etc. to determine the environmental or conservation habits of local citizens.

Chapter 5:

- a) Students read pages 102 -110 of the book. On a flowchart they compare the nature of earthquakes to one of the social crises mentioned in the book.
- b) Students could find examples in current events of positive and negative synergy, and report findings to the large group.
- c) Students could report on a time in their own lives when a crisis or event disrupted or simplified their lives. They then comment in terms of the situation for our society as outlined in the book.
- d) Students could do a brief report, after some research, on a system or society that broke down, such as the British Empire, Haiti, communism, an African nation, and relate the process to that outlined in the book.
- e) Using an airline map and related data, students could describe the positives and negatives of our world's connectivity and speed, then explain how this makes us vulnerable to some of the dangers outlined in the book.

Chapter 6:

- a) Students could choose 2 or 3 of the world's richest countries and 2 or 3 of the poorest, using the HDI site or CIA factbook, then using what they consider to be the 6 most important qualities of life, do a comparison chart. They analyze and report on the findings in reference to the message of the book.
- b) Students could find examples in the news or journals of the signs of stress and overload brewing in poorer countries, then do a report on the dangers we face if these situations are not rectified. Also, they could look for such signs in their own country and suggest what must be done to avoid similar situations.

Chapter-specific activities *continued...*

Chapter 7:

- a) Students could visit some of the climate sites listed in the web site section of this guide, then study the data on temperature change, rainfall, 'wild weather', etc. for 3 different areas such as North America, Europe and Africa. Analysis and comments in reference to the message could be reported to the group.
- b) Students could find examples of the latest reported effects of global warming and climate change around the globe, then comment on these in reference to the message in the book.
- c) Students could research the web on extinct or endangered species. They could then prepare a report on one species whose extinction, in their opinion, would have a devastating impact on our world.

OR... they could find an example of a keystone species and do a mind map showing the ripple effects of that species' disappearance.

Chapter 8:

- a) Students could do a report on the statement "money can't buy happiness", using personal experience, data from the news, or research. The report should take a stand one way or the other with supporting evidence.
(Note: Maclean's magazine did a feature article on the topic in the Feb. 13, 2006 issue. The link is available at www.theupsideofdown.com/studyguide)
- b) Students examine North American society in various sources and find examples of our rampant consumerism, growth imperative philosophy, widening gap between rich and poor, and the effects of these on people's lives. They then report the data and comment in terms of the book's message.

Chapter 9:

- a) Students decide which, in their opinion, is the greatest threat facing society.
They then research some of the causes, how it manifests itself, some of the effects, what solutions, if any, are being tried, roadblocks to solutions and possible other solutions. They report and comment in terms of the book.
Note: this could also be a good topic for a class or group debate.
- b) Students could explore Holling's panarchy theory in more detail, then use it to explain the situation of one of the world's troubled systems today. They could wrap up the report with their prognosis based on the book and the theory.

Chapter 10:

- a) Students could find examples in the news to support the premise of this chapter on the rise of civil violence.
- b) Students could research, discuss and/or debate the alternatives to growth. Another suitable and relevant topic is the justification of the resentment and hatred some countries feel toward Western Society.

Chapter-specific activities *continued...*

Chapter 11:

Students could research some of the global initiatives under way to help with some of the crises mentioned in the book. Comment on whether or not they will be timely or adequate.

They could also do some research on past and current 'champions of change', looking at the common qualities such people possess, some of their methods, etc., then decide what sorts of leaders we need today to ensure a better global future.

They could look at current world leaders and find any that come close.

Chapter 12:

Students could brainstorm as a class or large group to find examples of the different types of values: utilitarian, moral, existential. They could discuss and decide why they are not usually compatible and reference their decisions in terms of society's situation today.

Then in groups or pairs, they could try to design a set of values that would help make a 'new world' work. Could there be a set of 'global values'? Would it work? What would it have to take into consideration and what would the nature of such a code have to be?

Web resources:

Links to relevant websites, journals and articles can be found at www.theupsideofdown.com/studyguide

Additional materials:

Reproducible outlines, forms and hand-outs can be found at www.theupsideofdown.com/studyguide