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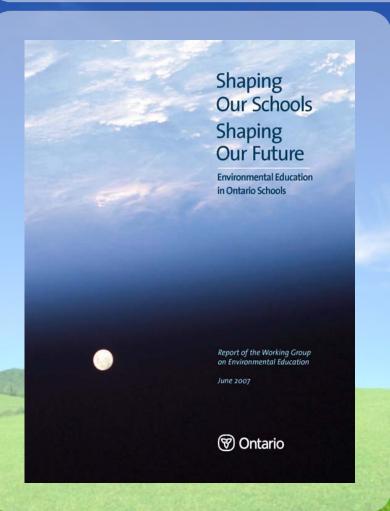
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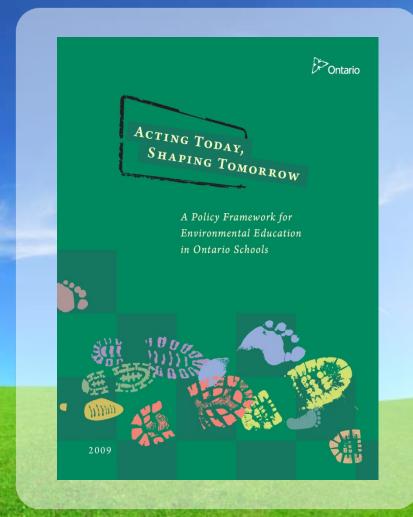
Outline

- Environmental Expectations
- Electronic Waste
- The Carbon Footprint of Computing
- Green Information Technology
- Corporate Responsibility
- Embedding Environmental Education



Ministry Documents





Ministry Documents

2008

Resource Guide

The Ontario Curriculum Grades 9-12

Environmental Education

Scope and Sequence of Expectations

Standards for Environmental Education in the Curriculum

The Standards for Environmental Education are statements that, taken together, describe the nature and scope of environmental education as it will be reflected throughout the revised curriculum. The standards will help curriculum writers devise and incorporate environmental education expectations and opportunities across the curriculum.

The statements are grouped around four themes — community, knowledge, perspecties, and octain— and we designed to prepare students to support environmental sustainability by bridging the gap between their awareness of issues and their ability to tale action. On the basis of these standards, environmental education in Ontario schools will provide opportunities for learners to



become environmentally literate, to apply their acquired knowle dge, perspectives, stells, and practices in real-world situations; and to become environmentally responsible citizens who are aware of the global implications of local action. The sandards are based on current research and a sound theoretical foundation and have been reviewed by elementary and secondary should educate the advanced and should be active and should

environmental educators, and other stakeholders across the province.

Students need the knowledge, perspectives. skills, and practices that will enable them to understand and deal with complex environmental issues today and in the future. For example, in addition to a sound knowledze base, students will need welldeveloped skills in problem solving inquiry. decision making, action planning, higher-level thinking systems thinking and critical Iteracy. They will need the ability to identify relevant issues and perspectives, carry out research, and communicate their ideas in meaningful ways. In short, they need to develop the environmental literacy skills that will enable them to become informed, engaged, and responsible global citizens.







reach every studen



ICS₂₀

C2.2

Identify measures that help reduce the negative effects of computers on the environment



ICS₂₀

C2.4

Describe, ..., how and where recycled electronic waste is processed, and identify local companies and institutions that offer such services.



Impacts of Electronic Waste



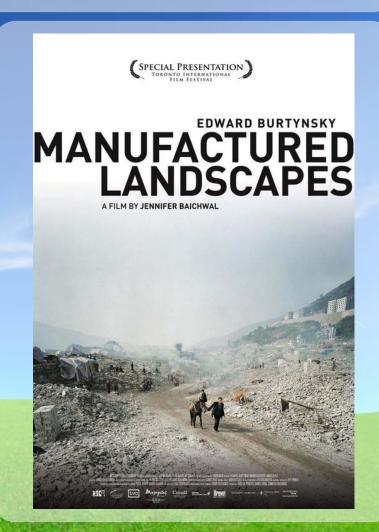
"E-waste is the term used to describe old, end-of-life or discarded appliances using electricity"

ewasteguide.info



Electronic Waste in China





Electronics Recycling



\$13.44 - Desktop computers

\$2.14 - Laptops

\$12.03 - Computer monitors

\$5.05 - Printers

\$0.32 - Per Peripheral

\$10.07 - Televisions

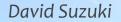


Electronics Recycling

Do What You Can



"Our personal consumer choices have ecological, social, and spiritual consequences. It is time to re-examine some of our deeply held notions that underlie our lifestyles."



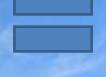


THE CARBON FOOTPRINT OF COMPUTING

0.3g CO₂



62 Trillion E-mails





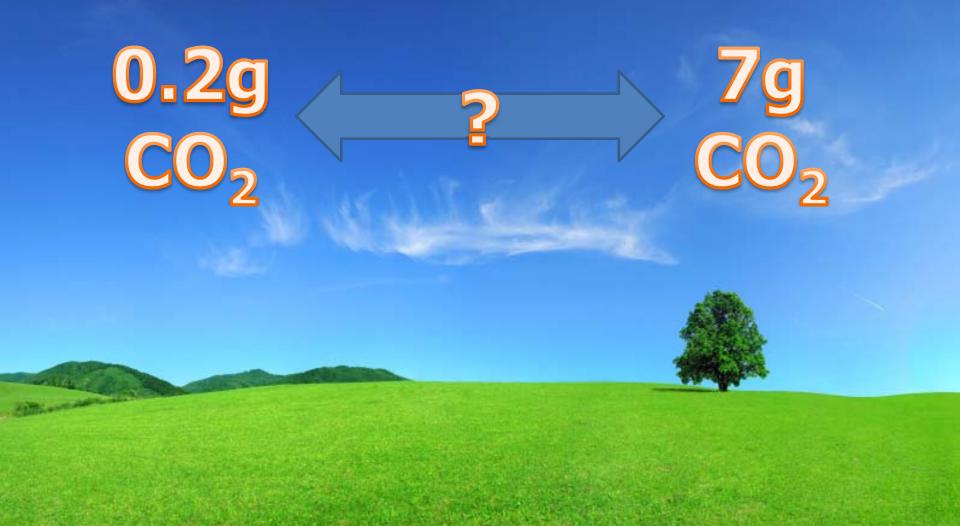








Carbon Dioxide / Google Search





Greening our Classrooms

 Take 5 minutes to discuss at your table ideas for greening your computer space



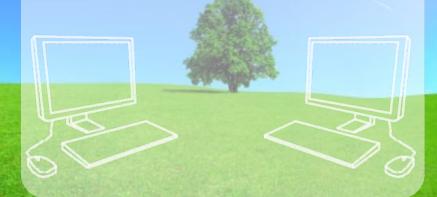
School Wide

Power Management

- 1. Monitors
- 2. Computers
- 3. Lights
- 4. Phantom Power

Printing

- 1. Online resources
- 2. Print less, photocopy more
- 3. EcoFont



School wide programs

Ontario ECOschools



"I encourage people to make environmentally conscious choices because we all have to solve this climate crisis."



Al Gore



Greenpeace Rankings '09

Toxic Chemicals
E-Waste
Energy Usage



Nokia Samsung Sony Ericsson LG Electronics Toshiba Motorola **Philips** Sharp Acer **Panasonic Apple** Sony Dell HP Microsoft Lenovo **Fujitsu Nintendo**

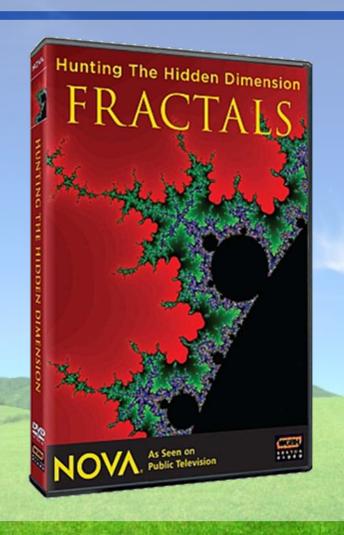
Wall - E







Fractals in Nature



Coastline Experiment





Wording

Charlie invested \$1000 dollars in stocks 10 years ago. He has been unlucky and his stocks have depreciated 1.3% per year. How much money does Charlie have left?



Re-Wording

Due to changes in weather patterns, an area of grassland has been experiencing soil erosion at a rate of 1.3% per year for the past 10 years. The soil used to be 1m thick.

How thick is the soil now?

Simulations & Programs

 Take 5 minutes to discuss at your table ways to embed environmental concepts into programs and simulations



Thank You

Resources:

wiki.acse.net

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