

*Low-cost green computing for education*

# British Columbia school goes green

## Challenge

*Cost-effectively upgrade Lindsay Park Elementary School's computer lab while reducing the lab's carbon footprint.*

## Solution

*Install 24 NComputing virtual desktop solutions and 4 Energy Star® PCs in the lab to create 28 student stations, while planting 100 trees to serve as carbon offsets.*

## Impact

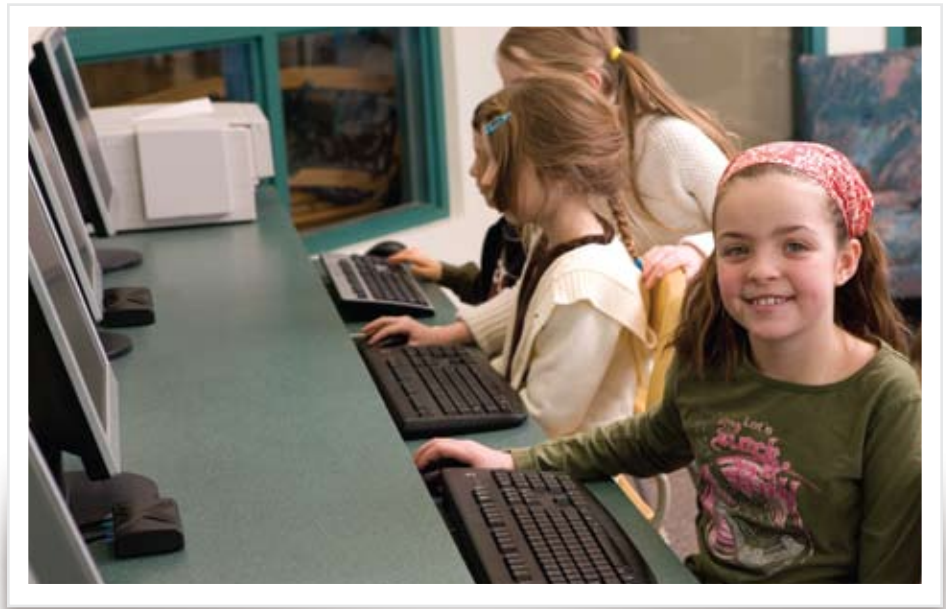
*Recognized as the first school in Canada with a carbon neutral computer lab. Noise and heat problems in the lab are eliminated. Equipment costs cut by 40%, while electricity use and emissions are reduced by 80%.*

## Partner

*BlueCurl, a Langley, British Columbia IT services provider, installed and supported the project.*

When British Columbia Premier Gordon Campbell launched his green initiative, a primary goal was the reduction of greenhouse gas emissions by 33% from current levels by 2020.

"This is about changing the way we think," said Premier Campbell, whose plan includes a greater focus on conservation, with seven to nine million tons per year in CO2 emission reductions from electric power generation. He asked that businesses and government do their part wherever possible. Lindsay Park Elementary School in Rocky Mountain School District #6 took that request to heart.



*Lindsay Park School's computer lab, the first in Canadian schools to achieve carbon-neutral status, is now quieter, cooler, and more conducive to learning.*

## Refurbished PCs don't help

Lindsay Park was already leading the way to a greener Canada with its recognition as an Earth Award School by the Seeds Foundation for completing more than 1,000 environmental projects. Looking ahead, Lindsay Park faced another challenge common to schools today—find an environmentally sound way to upgrade the hardware in its computer lab with both a limited budget and IT staff.

The school had tried refurbished computers, but found that they added just three years to the lab's life expectancy, were expensive to maintain, and continued to draw significant amounts of electricity. "The 28 fans from the lab's refurbished computers created a big noise problem, while the heat that both the PCs and monitors generated forced us to retrofit air conditioning into the room," said Dave Hlady, IT Specialist with Rocky Mountain School District #6. "There was no room on the desktops for the kid's books or notes, it was uncomfortable and loud, and maintaining the older computers was costly. Combined with our continued high energy costs, we knew we had to find a better way."

**“It took just four hours to set up the entire computer lab. And ongoing maintenance is easy because we only have to look after four machines in the lab, instead of twenty-eight.”**

DAVE HLADY  
IT SPECIALIST AT ROCKY MOUNTAIN  
SCHOOL DISTRICT #6

At that time BlueCurl—an IT services provider and NComputing partner—presented the district with a solution that would meet both the computing needs of the students and the school’s environmental objectives.

## Going green and saving green

According to Mr. Hlady, “The lab’s refurbished computers cost more than \$30,000. With 30 labs in our 20 schools, we knew we couldn’t afford to meet the future computing needs of our students, even without environmental considerations. NComputing and BlueCurl showed us that it was possible to cut our costs dramatically and achieve our environmental goals.”

“Initial costs for NComputing are about 40% less,” said BlueCurl CEO Chris Slattery. “But it really hinges on sustainability. When it’s time to replace, you don’t have to buy 28 new machines, just 4. It’s less to landfills, eliminating 85% of waste.”

Mr. Slattery also explained that today’s PCs are so powerful that the vast majority of applications use only a small fraction of the computer’s capacity. He demonstrated how NComputing’s virtualization software and hardware would enable the district to tap this unused capacity so that multiple users could simultaneously share it. Ultimately, BlueCurl showed how they could plant 100 trees as carbon offsets to make Lindsay Park the first school in Canada with a carbon neutral computer lab, while creating a blueprint for a green computing future in all of the district’s schools.

## A great lesson

“Setting up the new equipment turned out to be a huge time saver,” said Mr. Hlady. “It took just four hours to set up the entire computer lab. The old way would have taken us at least two days. And ongoing maintenance is easy because we only have to look after four machines in the lab, instead of twenty-eight. Best of all, it’s now a quiet place, with plenty of room for the kids’ books and papers on the desktop, and no need for us to run the air conditioning.”

BlueCurl estimates that the new computer lab uses 80% less electricity than a traditional lab, while reducing emissions by as much as 80%. “The kids had a great time planting the trees, while asking lots of questions about the new lab’s environmental impact, and how the tree plantings offset the lab’s carbon footprint,” said BlueCurl’s Greg Protti. “They were genuinely excited to learn that CO2 emissions were being reduced by as much as three and a half tons per year, and electricity use was cut by more than 5,000 kilowatt hours per year.”

With the lab complete and the carbon offsets from the newly planted trees in place, Lindsay Park School was recognized as the first school in Canada with a carbon-neutral computer lab. “We now plan to roll out this approach to another elementary school in the district, and eventually system-wide,” said Mr. Hlady.

