

## World of Opportunity

Today's public educators face a long list of challenges: ignite students' imaginations, empower them to achieve, prepare them for the future—and accomplish it all within tight budgets that often limit access to modern technology. However for two schools in Oregon, educators are meeting their objectives with ease. They have equipped nearly 1,500 students with Google Chromebooks, opening a world of opportunity—all while fitting within economic realities.



### Crook County, Oregon, At A Glance

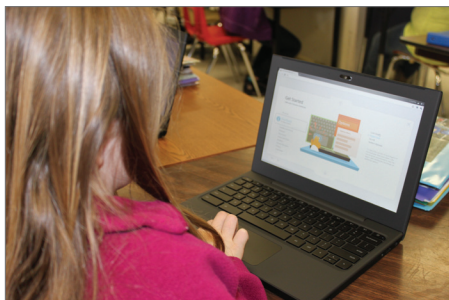
- Located in central Oregon
- Total enrollment of approx. 3100 students
- District includes elementary, middle and high schools

### Fast Facts about Astoria and Crook County Astoria, Oregon

Astoria is a nationally significant historic town at the western end of the Lewis & Clark Trail. Astoria and the surrounding area are the oldest American settlements west of the Rockies.

### Crook County, Oregon

The county's economy is driven by agriculture, construction, forest products, livestock, manufacturing, recreation, and tourism. In 2007 the county celebrated its 125th anniversary.



When students enter classrooms in Crook County Middle School or Astoria High School, they don't have to wait their turn for a computer locked in a cart or across campus in a lab. Instead, they have immediate access to all the resources of the Web. Students flip open the lid of a Chromebook and, in 8 seconds, are learning and engaged using web applications. According to Steve Nelson, Chief IT Strategist for the Oregon Department of Education, giving students access to Chromebooks has enhanced productivity and sparked young imaginations, while easing the strains on budget and IT resources.

"The Chromebooks and Google Apps are opening new and exciting ways for students to learn, preparing them for today's workforce or for higher education," says Nelson. "Through our relationship with Google, we're expanding opportunities for teaching and learning at low cost through cloud-based education on Chromebooks."

Adoption of Chromebooks and Google Apps is part of Oregon's decision to provide a central online teaching and learning infrastructure for schools across the state. ORVSD.org, a partnership with the Open Source Lab at Oregon State University, as well as public and private partnerships with companies like Google, are a big part of solving the education equation in Oregon. By working with Google, schools can efficiently equip more of their students with computers.

*"The Chromebook provides a sustainable technology and financial model for schools. The machines stand up to the tests of young students—you definitely get what you pay for with Chromebooks."*

*—Rachel Wentz-Chaney, Chief Information Officer for High Desert Education Service District*

### Hands-on Teaching and Learning

Chromebooks and the web have fundamentally changed student engagement. At Astoria High School, science students, like professional researchers, learn by experience. Chromebooks in hand, they methodically comb a 10-acre plot of wetlands, logging fish, plant life, and other species into an online spreadsheet in Google Docs. Then, working as a team, they create a website in Google Sites to compare their data and observations from one year to the next.

Chromebooks have changed education in other subject areas as well. Printed math textbooks are a thing of the past and, because the books are digital and posted online, teachers can customize them with specialized quizzes and other content. Student comprehension after lectures or reading assignments can be assessed using online surveys and web-based portfolios can be shared with potential employers or higher education admissions staffs.

According to Scott Holmstedt, Technical Director for Astoria School District, this is boosting productivity. "We conducted an informal survey among teachers and students," says Holmstedt. "Teachers said students complete more assignments

---

## 1:1 Computing

Many schools aspire to 1:1 education, where each student has access to a computer, as a way to ensure that students are equipped with the skills necessary for today's universities and workplaces. For many schools moving toward a 1:1 model, securing technology budget is just the beginning—the real challenge is deploying and managing hundreds or thousands of computers. Chromebooks, with their web-based Management Console and an operating system that takes care of itself and even gets better over time, are the best way to deploy more computers without increasing IT work exponentially.



Chromebooks

than they did prior to using the Chromebooks, and students told us the machines make learning more relevant.”

## The Web in Rural Oregon

Chromebooks are bringing about similar changes at Crook County Middle School in rural central Oregon. Physical education teachers and students, for instance, use forms in Google Docs to create online fitness journals. They also use Chromebooks to view online videos on diet, nutrition, exercise, and sports, with full access to the Web's vast library of information, despite the school's rural location.

“Chromebooks have been wonderful on the student achievement side,” says Rachel Wenten-Chaney, Chief Information Officer for High Desert Education Service District, a regional support system for central Oregon schools. “When you put a machine like the Chromebook in the hands of students this age, they go crazy—in a good way. Chromebooks have made a huge positive change in student-teacher engagement and learning.”

---

*“Through our relationship with Google, we're expanding opportunities for teaching and learning at low cost through cloud-based education on Chromebooks.”*

*—Steve Nelson, Chief IT Strategist, Oregon Department of Education*

---

## Easier on IT, Easier on Budgets

The Chromebooks have eased IT strains and reduced costs, too. Instead of spending entire summers imaging computers, IT administrators use Google's web-based Management Console to deploy web apps across all of their Chromebooks in minutes or whitelist and blacklist certain apps, extensions, and users. Updates occur automatically, and if something goes wrong, Chromebooks revert back to a trusted version of the operating system.

“With Chromebook, we don't spend a lot of time putting out fires, and there are no worries of spyware or viruses,” says Holmstedt. “In our district, we have two technical people responsible for 1,500 traditional computers. The Chromebook simplifies our lives so we can work with students and build curricula for teachers, instead of the day-to-day nag of fixing desktop issues.”

Similarly challenged with a small IT staff, at Crook County Middle School, the students themselves were involved in setting up the Chromebooks. “In just one class period, students had unboxed the Chromebooks, set up their wireless access, and were online learning about Lewis and Clark,” recalls Wenten-Chaney. “Plus, once they had worked on their own to provision the systems, students felt pride of ownership in the new machines.”

## Better Education with the Web

Although often a challenge to engage students, spur achievement, and prepare students to build successful careers, public educators in Oregon are giving students hands-on education that helps them succeed in the classroom and beyond—all in the context of limited funding and IT resources.

“The Chromebook provides a sustainable technology and financial model for our schools,” says Wenten-Chaney. “The machines stand up to the tests of young students. They are durable, yet incredibly flexible—you definitely get everything that you pay for with Chromebooks.”

