CONTOOCOOK VALLEY SCHOOL DISTRICT
Office of the Superintendent of Schools
106 Hancock Road, Peterborough, NH 03458-1197

EDUCATION COMMITTEE

April 17, 2017
SAU Boardroom
5:30 PM

Agenda

Committee Members:

Crista Salamy - Chair, Linda Quintanilha, Bernd Foecking, Janine Lesser, Pierce Rigrod

5:30   Approval of March 20, 2017 Minutes
Election of Committee Chair

5:35   Communication on Chromebooks and 1:1 Learning Environment
- Monadnock Ledger-Transcript article (see attached)

5:40   IKF – High School Graduation
- Ed 306.27(m) Required Subjects and Credits for High School Graduation (see attached)
- Follow-up discussion on exploring the possibility of .5 of the 1 required PE credit being fulfilled by participating in a school-sponsored sport

5:55   Summer Programming at the Middle School
- Focus of Summer Sessions (see attached brochure)

6:10   Strategic Plan Update
- Review of relevant components

6:30   Other

Next Meeting: Monday, May 22, 2017 @ 5:30 PM in the SAU Boardroom

The Chromebooks are coming

HELFRIED ZRZAVY
CONVAL VOICES

In 2009, Andrew Pass of the George Lucas Educational Foundation posed this provocative question: "How bizarre would it be if a school had a pencil lab? You know, a place where classes went to use pencils, instead of having pencils available in the classroom?"

Although intended to be tongue-in-cheek, the "pencil lab question" has become a trope among those who work in technology integration. Even though we learn regularly about the rapid-fire advances in portable devices, from smartphones and tablets to ever-cheaper laptops, and although many of us carry these devices with us all day for work and communication, the pencil lab question points to the persistently traditional ways in which computer resources are being viewed in schools.

In schools, computer labs remain a finite educational resource with a fixed geography, one whose use has to be scheduled, sometimes weeks in advance. At the end of the quarter, the semester, or the school year, demand for this scarce resource is high, and sometimes highly contested.

But what if there were a better way, a change in thinking? What if computers, the metaphorical pencils as tools for learning, could accompany students, would become readily available in classrooms and at home, and could be used for learning on demand?

Last year, the ConVal School Board approved the purchase of Chromebook laptop computers for 7th and 8th grade students at the middle schools of Great Brook and South Meadow, as well as for 9th and 10th grade students at ConVal Regional High School.

Starting with the 2017-2018 school year, the 1-to-1 computing environment will be gradually introduced, according to a measured, three-year implementation plan. In each of the two years after the initial rollout, students in additional grade levels will receive Chromebooks until, by the 2019-2020 school year, the process of creating a robust 1-to-1 laptop environment in grades 5 through 12 is complete.

The prime motivator for the adoption of the 1-to-1 program were Board members' concerns over digital equity. In addition, there were aspirational goals to provide more widespread access to digital resources and to create 21st century learning opportunities that will culminate in anywhere, anytime learning for students.

In the ConVal school district, as elsewhere, the digital divide is characterized by the substantive gap between demographics that have ready access to modern information and communications technologies and those who have only restricted access, or no access at all. This differential in technology access tends to contribute to inequities in educational opportunities which, in the long run, can result in uneven chances for employment and disparate options to participate in social and civic affairs.

ConVal's 1-to-1 initiative seeks to address these existing inequalities by levelling the playing field for all students, regardless of their geographic location or financial circumstances. Both the district's five-year strategic plan and its three-year technology plan affirm the principle that, when it comes to providing an education in the ConVal School District, "all means all. We must provide the opportunity for each and every student to reach his/her maximum potential."

By providing students with Chromebook laptops, to be used at school and at home, the Board seeks to ensure that students will have uniform, seamless access to a standard set of educational applications. For the past decade, ConVal has used Google Apps for Education, recently rebranded as G Suite for Education. This expanding suite of productivity
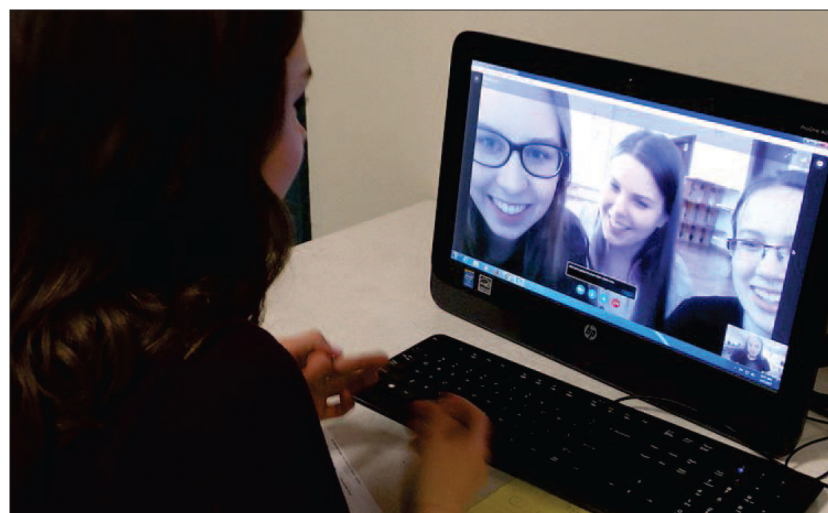
COURTESY PHOTO
Computers are as ubiquitous in the ConVal classroom as pencils.

tools — Gmail, Drive, Docs, Sheets, Slides, and others — was designed from the ground up for collaboration, a critical skill in both college and career settings.

In addition to the productivity apps, students will benefit from Google Classroom, a free, cloud-based learning management system which facilitates the digital delivery of educational content. In Google Classroom, teachers will have the ability to share assignments and instructions, post announcements and facilitate online discussions, thereby modeling proper online meeting skills. Classroom's stream, or main page, also provides a due date calendar with reminders. Furthermore, it gives students who are more reserved in person, or may need additional thinking time, a way to participate in asynchronous conversations, thus keeping class-related communications active without having to resort to outside social media sites like Facebook. Google Classroom also makes communications between teachers and parents easier through its opt-in Guardian Summaries feature.

The literature shows that collaboration and engagement are qualities consistently associated with 1-to-1 learning initiatives. By giving students some element of control over time, place, and pace on their path towards achieving competency, they

tend to become more responsible for their own learning. At the same time, since teachers know that students will have ready access to deeper learning content — either based on their own, curated resources or on the Internet — educators are free to design more rigorous, inquiry-based learning experiences, thereby improving problem-solving skills and student learning outcomes.

ConVal's decision to go 1-to-1 is in close alignment with current pedagogical thinking which, by now, is based on nearly two decades of solid educational research. As early as 2000, the U.S. Department of Education studied the multi-year impact of the 1-to-1 concept and concluded that participating students became more creative, more collaborative, and better writers.

In one of the most comprehensive research projects on 1-to-1 student computing to date, the 2012 "Project RED: Roadmap for Transformation" surveyed 997 schools across the country. The research measured 22 independent variables which were grouped into 11 education success measures. The key findings of the study were that the introduction of 1-to-1 computing improved instruction, had a positive impact on attendance, helped lower dropout rates, and showed benefits for school culture, including reductions in disciplinary actions.

Another study of pedagogical practices in 2013 showed that teachers in a 1-to-1 computing environment had greater implementation rates with regard to pedagogy that rests on students constructing their own knowledge, higher-order thinking skills, collaborative learning strategies, and differentiated instruction. Similarly, a December 2016 meta-analysis reviewed 65 journal articles and 31 doctoral dissertations, published from January 2001 to May 2015, to examine the effect of 1-to-1 laptop programs on teaching and learning in K–12 schools. This study found significantly positive average effect sizes in English, writing, mathematics, and science. So the advantages of a 1-to-1 student laptops and their benefits for learning have a proven track record.

But there is more. Studies of 1-to-1 environments have found that they also produce cost savings. The most obvious savings come from the ability to go paperless, saving printer, paper, copier and copier repair costs. At ConVal High School, additional savings will be realized by the retirement of general-usage computer labs when they have reached the end of their useful life. While specialized-use labs in areas such as engineering, computer science, graphics or photo and video production will be maintained, those labs which have provided access only to general use applications will be rendered unnecessary through the gradual transition to 1-to-1.

It will be exciting to see ConVal make the three-year journey from "pencil labs" to a more purposeful, fuller integration of appropriate technologies into its teaching and learning environments. For teachers, the journey has already begun, with professional development sessions dedicated to the rollout. Inevitably, there will be challenges, with unexpected problems and unforeseen opportunities. But the outcome, by 2020, will be a class of ConVal graduates better prepared for the college and career challenges of the 21st century.

Helfried Zrzavy is ConVal's Technology Integration Specialist.

Ed 306.27(m) The 20 credits required for graduation shall be distributed as specified in Table 306-2:

Table 306-2 Required Subjects and Credits for High School Graduation

Required Subjects	Credit(s)
Arts education	1/2 credit
Information and communications technologies	1/2 credit or demonstrate proficiency
English	4 credits
Mathematics	3 credits, including algebra credit that can be earned through a sequential, integrated, or applied program
Physical sciences	1 credit
Biological sciences	1 credit
US and NH history	1 credit
US and NH government/civics	1/2 credit
Economics	1/2 credit
World history, global studies, or geography	1/2 credit
Health education	1/2 credit
Physical education	1 credit
Open electives	6 credits
Total	20 credits

Great Brook School at Crotched Mountain

Summer School at

SMS
108 Hancock Road
Peterborough, NH 03458
Principal Anne O'Bryant

GBS
16 School Street
Antrim, NH 03440
Principal Jim Elder

For information contact:

SMS - Stacy Whitaker
swhitaker@conval.edu
(603) 924-7105

GBS - Bambi Kierstead
bkierstead@conval.edu
(603) 588-6630

At both schools, the summer school will be held from 8am to 12 pm, three days a week.

SMS weeks
Bus transportation from GBS to SMS each day offered at 7:30 am leaving GBS and returning to GBS at 12:30 pm during the weeks of July.

GBS weeks
Bus transportation from SMS to GBS each day offered at 7:30 am leaving SMS and returning to SMS at 12:30 pm during the weeks of August.

July 11-13 and July 18-20
8 am to 12 pm

and

August 1-3 and August 8-10
8 am to 12 pm

South Meadow School

1. Open Library - AR Reading and IXL Math 8am to 12 pm - Students can drop into the Library for silent reading, practicing math on the IXL computer program and participate in the Accelerated Reading Program. Drop in - come and go throughout the morning for grades 5 -8.

2. STEAM Summer - (STEAM is a curriculum based on the idea of educating students in five specific disciplines -- science, technology, engineering, arts and mathematics) -- SMS will focus on an interdisciplinary theme about Energy.

- Science teacher/Math teacher - Types of energy, practical math applications, Tesla Generators - History of Tesla, inventions, patents, wireless electricity, Tesla coil - electromagnetic forces, electric forces, properties of physics
- ELA/Dance/Integrated ARTS Teacher - writing, reflecting, journal creating, movement, marketing, video creation and presentation.

Daily activities will include: What is Energy?

- Pass the Pulse and Energy Ice Breakers
- Types of Movement/Exercise: slow sustained energy vs. quick sharp motions: effort, improv, prompts: run, jump, skip, walk, hiking etc.
- Energy focus of the day - one aspect of science/ energy/physics
- Graphing of the data collected from test trails
- Science inquiry
- Nova
- Commercial/Advertisements for Generator: Posters, iMovie, Skits, Jingles, Slogans, Logos
- Writing: How energy works, what you see/ experience, reflections, summary of the day's work (successes and challenges)
- Highs/Lows - end of day team builders and reflections

Great Brook Session

1. Open Library - Students can select IXL math, begin a VLACS class, or engage in independent reading.

2. Course offerings include:

-Multi-Media Workshop
A student centered and project based unit that gives students an opportunity to utilize different media types, video, audio, animation, and text to create an engaging video. The technology used is called MovieMaker, a video tool that will be used to present their themed research and produce media. Students will learn how to make a video, create a story board, and use a variety of camera shots, sound effects, and editing effects, and editing techniques. These innovative projects will be seen during a viewing session complete with popcorn.

-Real Life Math
Real Life Math would involve applications of math concepts to the real world. These concepts will be taught and applied through both indoor and outdoor activities. Topics taught include: geometry on the coordinate plane, attributes of and relationships of geometric shapes, measurement, estimation, patterns, pre-algebra concepts.

-On the Move
This course is designed to combine personal fitness with life long physical activities. Each student will develop their own fitness program using different information and equipment. The main goal is to learn how to maintain a healthy lifestyle through activities such as: mountain biking, hiking , fishing etc.

-Creative Writing
Students will hone their narrative writing skills and learn about the publishing process by creating both individual and collaborative short stories that will be "published" in a keepsake volume created through Scholastic Publishing.

Brochure created by Mrs. Brezovec and Bella Schwabe

Contact

Student name: _____

Parent name: _____

Address _____

_____

Telephone: _____

GBS (please check)		
class	**Aug 1-3**	**Aug 8-10**
Multi-Media Workshop		
Real Life Math		
On the Move		
Creative Writing		

SMS (please check)		
class	**July 11-13**	**July 18-20**
Open Library		
STEAM		

Transportation				
	July 11-13	**July 18-20**	**Aug 1-3**	**Aug 8-10**
to GBS from SMS				
to SMS from GBS				
other transportation				