BYTE K-12 Conference
Build Your Teaching Experience

Keynote

Nathan Ramage

9:00 a.m. - 9:45 a.m.

Nathan Ramage is a teaching principal at Thomas Greenway Middle School in Prairie Spirit School Division. He has a passion for bringing technology into his school and using it to create rich learning environments. Over the past five years, Thomas Greenway Middle school has been using technology with their Makerspace to create fun, creative learning spaces for students. These collaborative workspaces are found throughout the school, offering 40+ activities per week where students can make, learn and explore. Nathan will speak to the power of creating a rich learning environment in schools.

Session 1

10:00 a.m. - 11:00 am

NOTE: Repeat sessions are noted in the first occurence of a session.

Session: 1A, repeated in 3A

Title: Makerspace and G-suite

Presenter: Nathan Ramage

Discover how our Makerspace program has evolved over the last 3 years. We will be looking at how TGMS has incorporated technology such as G-suite to allow Makerspace to run efficiently. We will be looking at our past 3 years and how we have evolved into making students more accountable in their learning when engaging in Makerspace. By building career portfolios, students can now realize how some of the learning in Maker can be transferred into a possible future career. Accountability doesn't just stop with the students; the school team is always looking for ways to make this period more engaging for students.

Prerequisites: None

Audience: Early Years, Middle Years, Senior Years

Session: 1B + 2B (Double)

Title: Using Cloud Based Virtual Machines in Computer Science

Presenter: Joshua Baker

How to set up, set privileges and run Virtual Machines using Google Compute Engine cloud-based services. This allows the students to have their own computer environment with complete administrator privileges while not endangering the local school network. This level of access allows students to install libraries and other extensions as they develop their abilities in computer science. In this session: We will set up and run a VM through a secure shell to initialize a remote desktop environment. Then we will install

the necessary programs and make a couple of basic python programs using terminal and graphical outputs.

Prerequisites: Basic Computer Knowledge

Audience: Senior Years, Administration

Subject Area Focus: Computer Science

Session: 1C + 2C (Double), repeated in 3C + 4C (Double)

Title: HackEducation

Presenter: James Warren

Hacking Cyber Education: There is a silent war being waged with 1's and 0's in a world we can't see. Learn the vocabulary and industry terms associated with Cyber Security and Information Technologies through the game 'Hack!'. You will learn about the social nuances of digital threats, as well as being able to teach them to colleagues or students alike with or without the game. It is critical we educate ourselves, and our youth, about cybersecurity, intelligence and how to stay safe online.

Prerequisites: None

Audience: Middle Years, Senior Years, Administration

Subject Area Focus: Social Studies, Psychology, Computer science

Session: 1D, repeated in 4D

Title: Getting Started in 3D Modelling

Presenter: Barry Waldner

This session will focus on how to get started with building in 3D. We will focus one two pieces of software that are free to use. Participants will be shown how to use TinkerCAD and Onshape to build models that can be 3D printed.

Prerequisites: None. Other than using a computer with mouse.

Audience: Middle Years, Senior Years

Session: 1E, repeated in 3E

Title: Super Spicy Slides

Presenter: Dennis Wiebe

Spice up your Google Slide world. This hands on session will examine many ways to engage your students using Google Slides. Presentation of interactive slide shows and how to use Google Slides as a Publishing tool will be explored. Bring your Chromebook or Laptop with Chrome.

Prerequisites: Basic knowledge of Google Slides

Audience: K-12, Administration

Session: 1F + 2F (Double)

Title: Google Tools for Edu You Need to Know About

Presenter: Phil Taylor

Google education technology for the classroom provides teachers and students with tools for digital portfolios, online assessment, data visualization, word processing, peer-to-peer collaboration, and more. This BYOD hands-on session will explore some other less famous tools such as Google Keep, Expeditions, Google Science Journal, and more. You will also learn more about Google's CS First Program, Applied Digital Skills curriculum and other teacher resources.

Prerequisites: Comfort using modern web browsers tools.

Audience: K-12

Session: 1G + 2G (Double)

Title: Introduction to Minecraft Education Edition (Double with 2G)

Presenter: Devon Caldwell & Leah Obach

Explore the range of K-12 learning possibilities with Minecraft EDU! This powerful tool for game-based learning supports deep learning across subject areas and fosters communication, collaboration, and problem-solving skills among learners. In this hands-on session, Leah and Devon will guide you through the practice and pedagogy of this versatile tool, providing time for exploration, creation, and questions.   Please bring your own Windows device (with a mouse, if necessary)

Prerequisites: None

Audience: K-12

Session: 1H

Title: Feeding the World - Journey 2050

Presenter: Kent Lewarne

Feeding an ever growing population is of ongoing global concern. Explore the issues using gamification strategies. Journey 2050 is an online farming simulation where students meet three farm families - one from Kenya, one from India and one from Canada. Learn the principles of sustainable agriculture while have fun playing the game.

Prerequisites: None

Audience: Middle Years, Senior Years

Subject Area Focus: Science-Social Studies

Session: 1I + 2I (Double) and repeat in 3I + 4I (Double)

Title: Using Technology to Collaborate with Industry Experts - A Focus on Google Meet

Presenter: Joel Templeton, Technology Association of Manitoba

Can you think of a time where your lesson would have had more impact by having a guest in your class talking about their experience? Want to learn best practices around where and how to identify and reach out to industry experts to speak to your class? Want to learn to use video-conferencing tools like Google Meet to integrate remote professionals seamlessly into the classroom?

This session will cover core concepts around how to better engage with and include industry professionals in the classroom to help improve learning outcomes for students. Become comfortable using Google Meet for video-conferencing and calendar scheduling.

Prerequisites: None

Audience: Early Years, Middle Years, Senior Years, K-12, Administration

Session: 1J

Title: Our First Hour of Code

Presenter: Kirsten Thompson

This session will be a reflection on Mountain View School Division's experience hosting their first Hour of Code events during Computer Science Education Week in December. 20 individual sessions were held from K-12 across 5 different schools. Discussion will center on the benefits, logistical considerations, and notes for change.

Prerequisites: None

Audience: K-12, Administration

Session: 1K + 2K + 3K + 4K (ALL DAY SESSION)

Title: CNC for Educators

Presenter: Corey Forbes

Hands-on CNC programming and project-making. Participants will be exposed to the V-Carve Pro software used in creating .crv and .sbp files that allow them to create and cut their own projects. The hope is to have everyone leave with their very own project at the end of the day. No material or special equipment needed. Laptops/desktops are provided with the required software.

Important Note: Limit of 8 participants.

Prerequisites: No prior CNC experience required.

Audience: Middle Years, Senior Years

Subject Area Focus: Woodworking

Session: 1L

Title: Success with Online Learning

Presenter: Chris Fredrickson

What is a Learning Management System? What are Web-Based Courses? What is Blended Learning?

This session will help you create an engaging learning environment with online and blended learning using Manitoba's provincial Learning Management System.

Prerequisites: None

Audience: Early Years, Middle Years, Senior Years, K-12

Subject Area Focus: Online Learning

Session: 1M + 2M (Double) and repeat in 3M & 4M (Double)

Title: Offline and Online Coding Activities

Presenter: Matteo Di Muro

Offline and Online Coding: Grades 1 to 8

Coding and Computational Thinking skills support math skills in the classroom, but how are teachers to learn coding skills? The good news is there are lots of "offline" activities you can do that teach coding concepts. No computers are required for offline activities, and no knowledge of coding is necessary! Lesson plans and materials will be offered for a variety of offline coding activities. Hands on, we will try them out!

We will try some online activities in the last 45 minutes as well! No coding experience is required! Bring a computer that can connect to the internet.

Prerequisites: None

Audience: Early Years, Middle Years

Subject Area Focus: Coding, ICT (Information Communication Technology), Computational Thinking

Session: 1N and repeated in 4N

Title: Integrating Technology in the Classroom When the Technology Is Always Changing

Presenter: Brian Wyzlic

Technology can have immense benefits in the classroom. But how can teachers keep up with which technology to use and how to help students use it when the technology itself is changing from day to day? This session will look at how we as teachers can shift the way we think about technology in the classroom to better equip both ourselves and our students to adapt with the technology. This session will be appropriate for both Google Drive and Office 365 teachers.

Prerequisites: None

Audience: K - 12

Session: 1O

Title: Grassroots Robotics for Middle School

Presenter: Dan Muggridge

Start a robotics program with some basic knowledge, a few inexpensive tools, a lot of spare (reusable) parts, and a bunch of excited students. Students engage in project-based learning by selecting hands on projects and progress through several levels at their own pace. Every project provides opportunities to make mistakes, problem solve, collaborate, test and revise. Also, learn how we run our Robotics Club for grades 5 & 6 students!

Practical ideas, handouts and classroom routines which make it easy for anyone to teach your class!

Prerequisites: None

Audience: Middle Years

Session: 1P, repeated in 3P

Title: Creative Programming as a Bridge Between Theoretical and Practical Knowledge

Presenter: Guilherme Fernandes Vieira

Students can use Scratch to code their own interactive stories, animations, and games. In the process, they learn to think creatively, reason systematically, and work collaboratively — essential skills for everyone in today's society. Educators are integrating Scratch across many different subject areas and age groups.

The activities in this curricular resource are designed to support familiarity and increasing fluency with computational creativity and computational thinking, while building on students' creativity and personal interests.

You will discover how Scratch can be used as a curricular resource for ELA, Social Studies, Math and Science.

Prerequisites: Basic knowledge of Microsoft Office and Google Apps

Audience: Early Years, Middle Years, Senior Years, K-12

Subject Area Focus: ELA, Social Studies, Math and Science

Session: 1Q + 2Q (Double)

 Title: Drones in the Classroom

Presenter: Matthew Johnson

The Drones In The Classroom program enables teachers to use drone technology to reach curricular outcomes safely, meaningfully, and legally. Teachers gain an understanding of the various applications of drones for commercial industrial applications, and how much of an impact the technology has, and will continue to have on our society. Additionally, the program provides the knowledge requirements to pass the Transport Canada exams and flight review to become an "Advanced RPAS Pilot." This will allow the widest use of the technology. New regulations as of June 1st have made it much easier and more convenient for teachers to fly drones outside, and Drones In The Classroom will outline exactly how to do so.

Prerequisites: None

Audience: Middle Years, Senior Years

Session 2
11:10 a.m. - 12:10 p.m.

Session: 2A

Title: Design Sprints for Learning

Presenter: Rosalind Robb and David Wall

Design Sprints for Learning - how do they help you build rich learning experiences, develop critical competencies in problem solving and create learner leadership?

The Design Sprint is a globally recognized, easy, accessible, and agile learning model for educators and other professionals who mange complex problems on a daily basis. In the classroom the sprint inspires learner leadership, teacher mindset, student behaviour and school culture through an inclusive and interdisciplinary model.

Design sprints for learning are about how rich learning experiences and complex problem solving create opportunities for growth, inspire leadership competencies in your peers and students while maximizing your professional learning.

Prerequisites: None

Audience: Early Years, Middle Years, Senior Years, K-12, Administration

Session: 2D

Title: Level up! Gamify Your Class

Presenter: Chris Fredrickson

Want to engage your students? Add some excitement into your classes? Try gamification! In this session you will get a quick introduction to what gamification is and how you can use it. Look forward to a quick walkthrough of principles of game design and how to use it to increase engagement in your class. We will go over some tips and tricks to launch a gamified class online. You will walk away with plenty of resources and ideas to start your quest!

Prerequisites: None

Audience: Middle Years, Senior Years

Session: 2E, repeated in 4E

Title: Citizen Science - There's an App for That!

Presenter: Kent Lewarne

Opportunities abound for our students to participate in some amazing citizen science projects. Come and learn about a smattering of these projects and dabble with a powerful tool available in Manitoba to create your own citizen science projects.

Prerequisites: Comfortable downloading and using apps and using smartphone/tablet.

Audience: Middle Years, Senior Years

Subject Area Focus: Science

Session: 2H, repeated in 3H

Title: Lit Trips Using Google Earth

Presenter: Marla Medwid

From https://www.googlelittrips.org/

Lit Trips are downloadable files that mark the journeys of characters from famous literature on the surface of Google Earth. Along the way, placemarks with pop-up windows contain "just in time" resources including relevant media, thought-provoking discussion starters, and links to supplementary information about "real world" references in that portion of the story. Our focus is on creating engaging and relevant literary experiences for students.

Participants will follow a pre-made lit trip and explore how this would enhance their literacy program.

Prerequisites: None

Audience: K-12

Subject Area Focus: Rich Learning Experiences with English Language Arts

Session: 2J, repeated in 4J

Title: Social Media for Educators

Presenter: Kirsten Thompson

"The story of your school/classroom is being told; are you a part of the narrative?" Effective communication and transparency in education allows for the development of stronger school/stakeholder relationships, increases community engagement, and increases educational opportunities for students.

This session would be divided into informational and hands-on components which would share information on social media use in Canada, how to use accounts for school & classroom use, best practices, and provide opportunities for participants to explore platforms and set up accounts.

Prerequisites: None

Audience: K-12, Administration

Session: 2L, repeated in 3L

Title: Technology Career Options for Rural Manitoba Students - an Entrepreneurial Perspective

Presenter: Tracy Rimmer, Rimmer Technologies, Glenboro, MB

Tech and software development is a viable career option for rural students, and the younger they learn the basics, the better their chances for educational and career success. Tech and software development education is imperative at all grade levels, and isn't as difficult as you might think.

Prerequisites: None

Audience: Early Years, Middle Years, Senior Years, K-12, Administration

Subject Area Focus: Technology Education, Career Development

Session: N2, repeated in N3

Title: Google Certification for Students Using Applied Digital Skills

Presenter: Sarah Ketsman

Google provides a free curriculum and training for teachers and students on practical digital skills. The online training provides lessons on the essentials such as Gmail, Google Drive, Google Calendar, etc. Students can progress at their own pace and can use the training to prepare for Google Certification. In this session, participants will look at the Applied Digital Skills curriculum, how it gets implemented at the classroom and school level, as well as the process and benefits of certification for both teachers and students.

Prerequisites: You will need a Google Account to access the tools needed to participate in the lessons.

Audience: Middle Years, Senior Years

Session: 2O, repeated in 3O

Title: Getting Creative with iMovie and Clips

Presenter: Jonathan Waite

Learn how to use iMovie and Clips on an iPad or iPhone to get students thinking and creating across all subject areas! Participants should bring their iPads or iPads with iMovie installed.

Prerequisites: Basic knowledge of iOS/iPadOS devices

Audience: K-12

Session: 2P, repeated in 4P

Title: Coding in the Classroom

Presenter: Amberley Davidson

The focus of this session will be how to implement a coding course in your classroom or school when you as the teacher don't have much (or any) coding experience. We will look at a variety of resources and online curriculums that are designed to be used by teachers and students with a wide range of skill levels. I will demonstrate some of my students' work and show you how my school has successfully implemented an engaging high school coding course.

Prerequisites: None

Audience: Middle Years, Senior Years

Session: 3B + 4B (Double)

Title: Introduction to Google Read and Write

Presenter: Alexis Einarson

Learn a few tips and tricks to using Google Read and Write and how to implement them in the classroom with students with reading and writing difficulties as well as how to use with your entire student population.

Prerequisites: Knowledge of Google

Audience: Middle Years, Senior Years, Resource/ Educational assistants

Session: 3D + 4L

Title: Computational Thinking and Coding with Indoor Drones

Presenter: Royce Hollier

We're all well aware of the fact that we need to infuse computational thinking (CT) into the lives of ourselves and our students. Using drones can be a way to support CT, address curricular outcomes and familiarize students with a cool tool that many of them will use for careers and pleasure in ways that we can't presently imagine. We will use Parrot Mambo drones and work with FreeFlight, Tynker, Workbench and dabble in Apple Swift Playground.

Prerequisites: None

Audience: Middle Years, Senior Years

Session: 3F

Title: Curating Learning Using Wakelet

Presenter: Phil Taylor

Curation is absolutely necessary in the information age! As Gayle Allen says in her book, The New Pillars of Modern Teaching, "We're assembling resources in a way that represents the ongoing story of our learning. We are the curators." In this hands-on BYOD session, you will learn how to curate learning for your classroom. Wakelet, an online tool, has a number of features to help you and your students create visually appealing collections of resources such as websites, videos, Twitter chats, and much more.

Prerequisites: Comfort using web-based tools. Please bring a device.

Audience: K-12

Session: 3G

Title: Class Management Using Edsby

Presenter: Shanon Wieler and Laurie Turnbull

Edsby provides many levels of communication between teacher, students and parents and includes features like Attendance, Gradebook, Calendar and Announcements. Pembina Trails School Division in South Winnipeg began a pilot of Edsby in spring 2019 and we are now in the midst of deploying this solution Division wide. We'll present our experience up to and including deployment as well as an overview of how a teacher can benefit from Edsby's numerous features.

Prerequisites: None

Audience: K-12, Administration

Session: 3J

Title: Gettin' Googley

Presenter: Trevor Poole & Darren Kuropatwa

Learn how to tap into Google's free online toolset and knock down the walls of any classroom, engage students and make connections in new and exciting ways. During this workshop teachers will learn tips, tricks, and hacks that can immediately be used in the classroom. With these and other open-ended tools, the options are endless. This session is focused on all educators in all subject areas. Participants should bring their own laptop.

Prerequisites: General knowledge of G Suite for Education

Audience: Early Years, Middle Years, Senior Years, K-12, Administration, Post-Secondary

Session: 3Q

Title: Mystery Acid X-5

Presenter: Kent Lewarne

Vernier pH probes are an incredible tool for our chemistry teachers. Using the Labquest 2 tablets and the pH sensor, teachers will learn a teaching sequence for using titrations to identify the unknown acid called "X-5". This session is targeting Grade 12 Chemistry and involves volumetric titrations. The session is limited to 6-12 participants only.

Prerequisites: Familiar with Chemistry 40S

Audience: Senior Years, Chemistry 40S

Subject Area Focus: Chemistry 40S

Session: 3R + 4R (Double)*

Title: Hutterian Distance Learning with Google for Education

Presenter: James Wollman

Whistling Wind School is located on MillsHof Colony at Glenboro, MB in the Prairie Spirit School Division.

This modern, purpose-built school provides on-site instruction for its K-12 students as well as a technology-driven distance delivery system for its high school students.

Instruction for its high school program uses Google for Education hardware and software, including Chromebooks, Google Hangouts Meet, G Suite for Education and other hardware and software.

Whistling Wind School has purposely designed learning classrooms for this distance education delivery system and participants will be able to examine both the receiving and delivery infrastructure and methods for this distance learning program.

As part of this session, participants will be provided transportation to Whistling Wind School where they will start with a brief tour of the school.   Participants will be shown how both tradition and technology can be brought together to deliver education in a contemporary environment for today's Hutterian students.

*Offsite. Participants will depart by bus at 1:10 p.m. and return at 3:15 p.m.

Prerequisites: Chromebook, GSuite knowledge beneficial

Audience: Senior Years, Distance education coordinators or teachers

Session 4

2:25 p.m. - 3:25 p.m.

Session: 4A

Title: Five Secret Ways to Immunize Your Students Against FAKE NEWS, Alternative Facts, and Click Bait!

Presenter: Rosalind Robb and David Wall

Do you want to help your students develop a resistance to fake news that boosts their ability to think critically about what they see, read, and hear in the news media and in

social media? Uncover how the drama and believability of fake news is constructed to earn money and generate power and influence for its creators. During this session you will have the opportunity to activate your awareness of the difference between fact and fabrication encountered on the Internet, and acquire teaching strategies that infuse critical thinking and the Ethics and Responsibility descriptors of LwICT in your curriculum from K-12. Bring your own laptop, tablet, or smartphone.

Prerequisites: None

Audience: K - 12

Session: 4F

Title: Introduction to Plickers

Presenter: Kaitlyn Cochrane

Plickers is a free online interactive assessment tool. Students have paper cards each with individual codes which are scanned by a teacher device instantly recording student answers. This program can be used in any subject or with any grade. The teacher is able to generate their own set of questions applicable to what students are learning. The session will further explain what Plickers is, how to use it and how to view data from student responses. It is recommended that teachers bring a device to create their own accounts.

Prerequisites: None

Audience: K - 12

Session: 4H

Title: Office to G Suite

Presenter: Troy Sigvaldason

Using Office & Google together is a very feasible task and I'll show you how! Google Drive supports viewing and editing Word files natively now, so your favorite template from Word 2003 will work without having to convert it to a Google Doc!! That being said, I'll show you how to do some conversions, how to backup your data to the cloud and fall down any rabbit hole anyone in attendance wants to lead me down.

Prerequisites: Microsoft Office / G Suite for Education

Audience: Early Years, Middle Years, Senior Years, K-12, Administration

Parking

Parking will be at Glenboro School and surrounding areas. Parking is free everywhere but please follow any street sign restrictions.

Check-In (8:00 - 9:00 am)

Bring your ticket with you to the registration table and check-in to the conference, receive an information package, and other swag. Your sessions and room numbers will be on your ticket or information package, and maps will be available to help you find your way. There will also be a number of student ambassadors around the school you can call on at any time for help. Participants must check-in for admittance and only participants who have checked-in will be eligible for the door prizes.

In the Registration Area

Bring your travel mug with you and grab a coffee while you get ready for the keynote. Recycle your old tech at the tech recycle table where will accept used toner or cell phones. An "Ask the Tech" table will also be set up for the day so you can have all your tech questions heard.

Keynote Address

The keynote address will be in the gym. Organizing information will be provided before and after the keynote.

Morning Sessions

Proceed to your first session after the keynote address. There will be a short break between Session 1 and Session 2.

Lunch

Lunch will be provided in the Gym.

Afternoon Sessions

Proceed to Session 3 after lunch. There is a short break between Session 3 & 4.

For participants in session Q3 + Q4, please listen to announcements regarding the bus transportation that will take you to your session.

After your Last Session

Enjoy the rest of your day and be sure to fill out the Feedback Survey.

Complete the Feedback Survey

We want to know what you think! Please complete the survey (with contact information) to be entered into another prize draw. There will be an email sent to you at the end of the day with a link to the survey.

Thank you! And we hope you have a fabulous Byte 2020!