Join us for a unique series designed to help integrate Maker, Tinker, and Learn through Play experiences. Explore the latest MakerEd products/concepts for classroom instruction or before/after school clubs. These sessions are designed to provide a team of three to five teachers with an interactive experience including time to explore, play, and create classroom applications. Each team will leave with shared ideas and lesson plans from the combined group.

STEAM Learning with littleBits - Inspire your students to create solutions to real-world problems and engage in powerful STEAM learning. Inside this workshop, you will work to explore how students Grades 3-8 can use color coded magnetic electronic components to discover the design process. Price includes one STEAM littleBits Kit. More info at:
http://tinyurl.com/NORT2HLittleBits

Augmented Reality Sandbox - Join us for our first ever *hands-IN* workshop where your team will build an Augmented Reality Sandbox! Dress STEAM appropriate and be prepared to cut wood, construct the sandbox, and of course, add the 250 pounds of sand necessary to make this a truly interactive experience. Unfamiliar with the AR Sandbox? Simply move the sand to represent various topography. The projector will generate a topographical map. When the sand is moved the map changes to match the new topography! You can also make it rain! Just hold your hand at "cloud" level and watch the magic happen. After constructing their own AR Sandboxes, teams will interact with the sand and explore classroom applications specific to their grade levels and content areas. Key concepts include topographical maps, watersheds, erosion, and hydrology. Each sandbox includes a cart that allows for transportation to different buildings. One member of the team will need to bring a truck or trailer to transport your 3'x5' a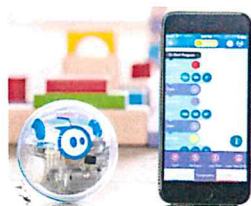ugmented reality sandbox back to your school. Learn more about augmented reality sandboxes at http://tinyurl.com/NORT2HSandbox

Minecraft / Piper Student Created Raspberry Pi Computer - The Piper Minecraft computer comes unassembled. Students assemble the Raspberry Pi computer giving them the opportunity to build, tinker, and explore in the physical space; becoming creators, rather than consumers of technology in a fun and engaging way! Once assembled, students continue to tweak their computer and discover how to play Minecraft in a guided format. During the afternoon, teachers will understand how Minecraft can gamify the classroom and give students an outlet to create and solve problems in an online world. We will focus on the basics on Minecraft. http://tinyurl.com/NORT2HPiper
OPTION 1, (FULL DAY) - **Piper & Minecraft Sessions**
OPTION 2, (AFTERNOON ONLY) - **Minecraft Session Only**

Coding with Sphero - Learn how you can use the Sphero robot to teach everything from math and science to programming and the arts! Through connected play and discovery, engage your students in various activities. Students will use the SPRK Lightning Lab app to program Sphero, learning visual block based principles of programming. Count on plenty of hands-on time for participants to interact with their robot, working through several activities that can be replicated with students. *NOTE - an IOS device (iPad, iPod,

or iPhone) is required to operate and program Sphero. This is not included in the workshop. **http://tinyurl.com/NORT2HSPRK**

Coding with Ozobot - Students using Ozobot learn sequential thinking, logical reasoning and coding concepts. See how students can begin to learn the fundamentals of coding using low-tech paper and markers to write code! Using OzoCodes sequences of colors, kids program Ozobot to perform different functions. Create your own student challenges. More info at: **http://tinyurl.com/NORT2HOzoBot**

WORKSHOP KITS & ADDITIONAL DETAILS
STEAM Learning with little Bits (Grades 3-8) - Includes the cost of one littleBits STEAM Student Set ($299) (1-4 students) and cost of workshop. Includes up to three teachers. Additional teachers are $79 each.
NORT2H Augmented Reality Sandbox (Grades 3-12) - Includes complete augmented reality sandbox plus cost of workshop for up to three teachers. Sandbox includes travel base wagon, wood for construction of sandbox, mounting brackets, projector, Xbox Kinect, desktop computer pre-loaded with Linux, and configured with open source software including AR Sandbox software. Additional teachers are $79 each.
Coding with Sphero (Grades 3-12) - Individual - includes one Sphero SPRK and one individual registration. **Team Kit -** Includes 12-pack Sphero SPRK education plus registration for up to three teachers. *iOS device NOT included. Each participant should bring an iOS device. Device should be preloaded with, or users should have permissions to install, the SPRK app.*
Minecraft / Piper Student Created Raspberry Pi Computer (Grades K-8) - Option one does NOT include any kits and is priced for workshop only. Option two includes one Piper Minecraft computer.
Coding with Ozobot (Grades 3-12) - Individual - includes one Ozobot 2.0 Bit Classroom Kit and one individual registration. **Team Kit -** Includes 18 Ozobots 2.0 Classroom Kits and registration for up to three teachers. Additional teachers are $79 each.

SCHEDULE

WORKSHOP	LOCATION		COST	
	Lorain ESC	**Cuyahoga ESC**	**Non Member**	**NORT2H Member**
STEAM Learning with littleBits	Nov 17, 2016 8:30 AM - 3:30 PM	Nov 22, 2016 8:30 AM - 3:30 PM	$536 (team of 3)	$299 (team of 3)
NORT2H AR Sandbox	Dec 13, 2016 8:30 AM - 3:30 PM	Dec 15, 2016 8:30 AM - 3:30 PM	$3,500 (team of 3)	$2,500 (team of 3)
Coding with Sphero	Jan 20, 2017 8:30 AM - 3:30 PM	Jan 27, 2017 8:30 AM - 3:30 PM	$208 (Individual) or $1,364.99 (12-Pack SPRK + team of 3)	$129 (Individual) or $1,199.00 (12-Pack SPRK + team of 3)
Minecraft/Piper Workshop FULL DAY	Feb 23, 2017 8:30 AM - 3:30 PM	Mar 3, 2017 8:30 AM - 3:30 PM	$536 (team of 3)	$299 (team of 3)
Minecraft Workshop ONLY	Feb 23, 2017 12:30 PM - 3:30 PM	Mar 3, 2017 12:30 PM - 3:30 PM	$237 (team of 3)	Free to NORT2H Members (team of 3)
Coding with Ozobot	Apr 12, 2017 8:30 AM - 3:30 PM	Apr 11, 2017 8:30 AM - 3:30 PM	$128 (Individual) or $1,437 (18-pack + team of 3)	$49 (individual) or $1,200 (18-pack + team of 3)