Josh Burker

EXPERIENCE

Creative Technology Teacher *(August 2021 - present)*
Marymount School, New York City
- Teach three sections of Creative Technology, grades 6, 7 and 8.
- Collaborate with faculty to create cross-curricular, technology-rich projects.
- Manage the school's FabLab and its equipment.
- Seventh grade advisor.

Educational Technologist *(August 2016 - June 2021)*
The School at Columbia University, New York City
- Collaborate with core subject teachers in the Middle Division, grades 6 through 8, to create constructionist projects utilizing technology in empowering and creative hands-on projects.
- Participate in grade-level meetings, professional development, scheduling, and classroom support.
- Maintain a website and Google Classrooms for instructional material related to projects and documentation of students projects.
- Completed Columbia University mandated training for inclusive hiring, served on committees for hiring of science candidate and Technology Department Help Desk employee.

Faculty, Constructing Modern Knowledge *(July 2015 - present)*
Summer Institute, Manchester, New Hampshire
- Facilitate just-in-time learning on hands-on, constructionist projects involving programming, fabrication, debugging, and morale-boosting.

Coordinator of LEGO Grant Initiative *(December 2015 - September 2016)*
Horizons National, Connecticut
- Coordinate, present at, and evaluate the CT Regional Professional Development Session, April 2016.
- Support Horizons sites through the collection and dissemination of STEM and play-based resources and by assisting teachers/programs with their instructional design and practices.
- Coordinate a regional makers-faire/exhibition of student work, Sacred Heart University, July 2016. *(https://flic.kr/s/aHskAKDDAq)*
- Assist programs with utilizing LEGO volunteers.
- Assist in creation, collection, and analysis of surveys and evaluation measures to support the grant.
- Attend and present at the Horizons National Annual Conference, Atlanta, April 2016.

Curriculum Development *(October 2015 - November 2015)*
JoyLabz - http://labz.makeymakey.com
- Contractual curriculum development for Makey Makey hardware, Scratch, and Beetleblocks programming.

Facilitator, Turtle Blocks After School Club *(October 2015 - June 2016)*
The Bridge Academy, Bridgeport, Connecticut
- Established an after school programming club for middle school students using Turtle Blocks, a block-based Logo environment.
- Facilitated projects that emphasized crafting and progression of design from digital to 3D printed.
- Assisted student performance at school talent show with LogoTurtle robot.

Creator of Learning and Discovery Experiences *(August 2015 - September 2015)*
Westport Library, Westport, Connecticut
- Encourage and support patrons with using their creative ideas and technical skills to develop and share interdisciplinary projects.
- Teach staff and patrons new technologies.
- Create experiences connected to the Learning and Discovery Center and work personally and collaboratively with the L&D committee to create more learning opportunities for patrons and staff.
- Develop assessments for some of the activities to determine the success of the program and possible next steps for future programs.
- Work with staff in the Library to create new learning experiences that utilize technology and focus on creative problem solving and design thinking.

- Facilitate interactive hands-on experiences for people of all ages and abilities.
- Contribute towards a broader awareness of participatory learning experiences in the Library through social media, photos, technology, arts and crafts materials, presentations, etc.
- Work cross-functionally to support other departments, as needed.

Lower School Coordinator of Academic Technology *(September 2008 – May 2015)*
Greens Farms Academy, Westport, Connecticut
- Facilitate constructionist projects for pre-Kindergarten through fifth grade students that encourage creative uses of computers, open-ended, hands-on projects, and collaborative skills. Students develop skills in engineering, programming, circuitry, 3D modeling and 3D printing, art, musical instrument construction and music composition, and other skills that encourage them to create using technology.
- One-on-one instruction of faculty for technology skill development and technology integration in curriculum.
- Development of 3D printing curriculum, technical support for middle school and upper school art 3D printing projects. Technical support and consultation for independent study projects involving 3D printed robotics parts, wind turbine parts with high school students.
- Facilitate after school clubs for students in Kindergarten through third grade, including LEGO Club, LEGO WeDo Club, Stop-Motion Animation Club, and Maker Club.
- Documentation of curriculum and student projects through writing and photos on a public Wordpress blog.
- Configuration, imaging, and management of student Mac computers for use by K-12 students. Use of Workgroup Manager for configuration of user environment and Radmind for updates of school- owned computers in lower school. Advanced shell scripting experience.
- Configuration and management of OS X Server for file serving, web and wiki, image deployment, Open Directory, and Radmind.
- Work with a technology team help desk supporting K-12 students, faculty and staff.
- Setup and management of audio and visual equipment for assemblies and presentations.
- Troubleshooting and support of interactive white boards, projectors, and televisions in classrooms and public spaces.

Technology Specialist *(September 2003-June 2008)*
Lakeridge Elementary School, Mercer Island, WA
- Established Lakeridge Technology Club for students in grades 3-5. Created and delivered curriculum that taught creative use of technology. Facilitated projects including digital photography; a virtual reality walk-through of the school; stop- motion animation; and podcasting. Special emphasis placed on inclusion of girls and students on the Autism Spectrum.
- Management of student, faculty and staff Macintosh computers. Use of Radmind for automating workstation updates, ensuring file system integrity. Use of Workgroup Manager for centralized management of user environment.
- Management of OS X Server for file storage and network application support. Management of nightly server backup of student and faculty data. Support for PC clients using Mac OS X Server for file storage.
- Produced extensive print and online documentation for faculty and students. Provided training on applications, hardware, and procedures for faculty.

Systems Engineer *(January 2001-August 2003)*
Strategic Business Resources, Inc., Renton, WA
- Initial setup and subsequent management, troubleshooting, and support of Macintosh environments ranging from single workstations to multi-department, server-supported installations.

Technology Specialist *(August 1998-December 2000)*
Islander Middle School, Mercer Island, WA
- Management of Macintosh environment, including faculty and student computers, two computer labs, ASIP 6.3.1 server, HTTP proxy server, and FoolProof server.
- Head of Multimedia Club. Planned curriculum for sixth to eighth grade students to acquaint them with a variety of computer applications. Maintained a wiki for project descriptions, bug tracking.
- Participated in district Technology Planning Team, August 1999-December 2000. Created online case studies of technology use at IMS to help the wider community to understand technology goals of the district.
- Development of online documentation for systems and applications.

EDUCATION

- M.A. Educational Technology, Pepperdine University, Malibu, California, 2007
- Technical Writing: Bellevue Community College, 2006
- UNIX/Linux System Administration Certification, University of Washington Extension, 2005
- B.A. English, Education minor, Colby College, Waterville, Maine, 1995. Phi Beta Kappa, Colby College Beta Chapter, 1995. Graduated Magna Cum Laude.
- Secondary teaching certification in English, State of Maine, 1995

PUBLICATIONS

- The Invent to Learn Guide to More Fun, January 2018. http://cmkpress.com/fun/
- The Invent to Learn Guide to Fun, May 2015. http://cmkpress.com/fun/
- How to Make Cardboard Automata, May 2015. http://makezine.com/projects/make-cardboard-automata/
- From Digital Design to Clay Tiles. http://learn.printrbot.com/project/clay-tiles/
- LEGO Phonograph, July 2013. http://makezine.com/projects/make-35/lego-phonograph/

PRESENTATIONS AND WORKSHOPS

- RemixED Camp, keynote and workshops, Montréal, Canada, November 2019.
- Scratch Makey Minigames Arcade Cabinet workshop, Scratch Day NYC, Teacher's College, NYC, January 2019.
- Initiation into the Cult of Logo, NYAIS STEAM Camp, Carey Convention Center, NY, August 2018
- Free Your Mind and Your Class Will Follow Keynote, Pine Crest Innovation Institute, Fort Lauderdale, FL, June 2017.
- Low Floor, High Ceiling Tools for Exploring Possibilities Workshop with Colleen Graves, Pine Crest Innovation Institute, Fort Lauderdale, FL, June 2017.
- Bits to Atoms: Logo and Fabrication, Construct3D, Duke University, May 2017
- Constructionist Projects Workshop, Lower Canada College, March 2017.
- Creative Technologies Symposium, Teacher's College, Columbia University, NYC, May 2016: Making Meaning of Angles and Degrees: Art and Programming the LogoTurtle.
- Horizons National Conference and Meeting, April 2016: STEM/Project-Based Learning & Using Play in Instruction.
- World Maker Faire NYC, September 2015: Dreamachine exhibit and "Making Hard Fun at Home" presentation.
- Maker-In-Residence, Westport Library MakerSpace, June 2014: MaKey MaKey Musical Instruments.
- World Maker Faire NYC, September 2014: MakerEd Panel Discussion facilitated by AnnMarie Thomas.
- FETC 2009: LEGO, Stop-Motion Film, and Autism. Collaborate, Create, Have Fun!
- Innovative Learning Conference 2008, San Jose, CA: Scratch Your Students' Programming Itch!

CITATIONS

- Eric Rosenbaum, Explorations in Musical Tinkering http://web.media.mit.edu/~ericr/papers/rosenbaum-musical-tinkering-dissertation.pdf
- Invent to Learn: Making, Tinkering, and Engineering in the Classroom, Stager & Martinez, 2013 & 2019