Making a Makerspace at Valley Stream 30

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On K. Joo, Library Media Specialist, Forest Road School
Chris Nazario, Teacher, Forest Road School
Planning a Makerspace
## Maker Movement at VS30

<table>
<thead>
<tr>
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<th>2015-2016</th>
<th>2016-2017</th>
<th>2017-2018</th>
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<tbody>
<tr>
<td><strong>Cabinet-level discussions:</strong> how should we implement makerspaces?</td>
<td>Initial purchasing of makerspace hardware and software</td>
<td>Summer meetings to begin implementing the design</td>
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<td><strong>Tech Committee meetings featuring makerspace planning</strong></td>
<td>Provisioning of makerspace devices</td>
<td>Facilities team reconfigures PC lab</td>
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<td><strong>Preliminary purchasing meetings with Curriculum and Instruction</strong></td>
<td>Forest Road makerspace design completed over the summer</td>
<td>New hardware (capacitive touchscreen, iPads, AV carts) deployed</td>
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<td>Meetings with Facilities to discuss space conversion</td>
<td>Makerspace ribbon cut in September!</td>
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- Forest Road maker space design completed over the summer.
- Meetings with Facilities to discuss space conversion.
Preliminary stages

● We started by meeting with our librarians, led by On Joo, and discussing how makerspaces might look in our buildings.
● The topic was introduced at our weekly administrative Cabinet meeting, and was a topic of discussion for weeks.
● On was a great source of inspiration, as she began submitting grant proposals.
Technology Committee

- Our Tech Committee meets 4x per year. We discussed makerspaces and how teachers would use them.
- Teachers offered feedback on planned purchases, layout of space, etc.
- Our librarian at Shaw Avenue was on the Tech Committee, so there was direct feedback from our Library and Media team as we discussed our plans.
Building-level meetings

- Forest Road was the best school for our most ambitious makerspace because Erin, the principal, wanted to rethink their lab space.
- We met over the summer to consult with the Facilities team regarding feasibility and timelines.
- Once we had plans in place at each building, each principal took over the planning process.
Starting a Makerspace
## Maker Movement at Forest Road

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<td>The idea of MakerSpace was incubated.</td>
<td>Recess Crochet Class was started after receiving a donation of yarn and hooks.</td>
<td>Recess Coding Club, Recess Crochet club and Recess Makers Club are up and running.</td>
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<td>Arts and Craft materials were donated.</td>
<td>Recess Coding Class was initiated.</td>
<td>$2000 grant from Lowe’s Toolbox for Education received</td>
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<td>$500 from FR PTA received</td>
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<td>$350 from LISMA (Long Island School Media Association) received</td>
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<td>Students have access to STEAM projects and problem-based learning experience in their new MakerSpace.</td>
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Makers...

- Makers use materials and tools to create stuff.
- Makers like to share their ideas and projects with other makers.

Makerspaces...

- Where makers meet to share materials, tools, and ideas.
- A place to make mistakes and try new things.
Filling a Makerspace
Meeting Other Makers

- Talk to other makers and invite them to join you in your makerspace.
- Visit other makerspaces to help guide your planning.
- Begin advertising your plan/space in your school to generate interest.

*SLIME - Students of Long Island Maker/STEM Expo (2018), June 16, 2018 -
10 am to 3 pm at SUNY Stony Brook Student Activities Center
Coordination

- Organize maker supplies and label them in containers.
- Keep tools and supplies neat and clean.
- After using the space, put supplies back in their place.
- Everyone should help clean up.
CONGRATULATIONS

Forest Road School

16 Forest Road, Valley Stream, NY 11581

2017 Grant Winner

Lowe’s is proud to support your school’s project. Lowe’s Toolbox for Education awards you a grant of:

$2,000.00
What to Put in Your Makerspace

- Be sure to include safety items such as goggles, table coverings, work aprons, and gloves.
- Ask an adult when using glue guns, sharp objects, and other dangerous tools.
Coding and Crocheting in Action

Learn how to crochet a headband
Robotics

I make learning to code fun!
Dash Robot

- No assembly required
- The Blockly app uses the most kid-friendly block-based coding to introduce students to programming.
- Dash celebrates by dancing and flashing its lights every time the player completes a puzzle correctly.

https://www.makewonder.com/dash
https://www.makewonder.com/compatibility
Building/Engineering Tools
K’Nex Education
Magformers 30 Pcs $49.99  
http://www.magformers.com/standardhome.html/
Game Building
BLOXELS

BLOXELS 200 BLOCK SET
$ 15.95
Electric Circuits
Button Maker
3D Printer

A machine that lets you turn a digital model of something on a computer into a three-dimensional object that you can hold or use.

These printers can make all sorts of things, from toys to replicas of ancient artifacts to parts for space stations.
TinkerCAD

- A free web-based modeling software that enables students to create 3D printable models.
- The gallery of previously created images as starting points
- Students can start from scratch using the different shaped building blocks and grouping tools to create complex models.
- Compatible with all models of 3D printers and laser cutters, so students can immediately print or cut out their designs.
Using a Makerspace
How Forest Road uses our MakerSpace

- Integration across all curriculum areas
  - 3D Printing of Geometric Shapes
  - Green Screen to present the Black History Month research project and country studies
  - Button Making for the 100th day of School/International Week
  - Using Model Magic to create famous architectural structures from around the world
  - Pumpkin Decorating for Halloween
    - Literary Character Pumpkins
  - Lego STEM Challenge Cards
  - MakerSpace as a center
  - Provide student engagement and ownership for students with special needs
1st Grader’s Introduction to 3D Printing

- Ask- Why do we need to use the 3D Printer?
  - Bought flowers at the Plant Sale

- Imagine- Collaborated and discussed with members of their group ideas of what to put our flowers in.

- Plan- Sketched their ideas on paper.

- Create- Worked together to create their ideas from paper in Tinkercad using different geometric shapes.

- Improve- Analyzed what went wrong and discussed ways to improve for the next time.
How We Introduced our MakerSpace to the Community

★ Asking for donations of no-tech materials
★ Asking for Parent Volunteers
★ Ribbon Cutting Ceremony
★ P.T.A. Meetings
★ Parent Universities
★ Library Website
★ District Website and Newsletters