

LIBRARIES SUPPORT MAKERS & DIYers

Pierce County Library System

About Us

Pierce County Library System serves all of unincorporated Pierce County and the annexed cities and towns of:

- Bonney Lake
- Buckley
- DuPont
- Eatonville
- Edgewood
- Fife
- Gig Harbor
- Lakewood

2015 System Statistics:

- Checkouts – 6,722,843
- Online/downloads – 777,403
- Books, movies and other materials in the system – 1,552,409
- Physical materials – 1,071,458
- Library visits – 2,325,785
- Card holders – 313,949
- Open hours/week – 1,024.5
- Public computers – 455
- Employees (FTE) – 255

► Population of service area: 579,970

► Size: 1,773 square miles
 ■ Joint Base Lewis-McChord



Movements & Popular Culture

The rise of DIY Lifestyle and the Maker Movement.



Do You DIY?



...DIY champions the average individual seeking such knowledge and expertise. Central to the ethic is the empowerment of individuals and communities....wikipedia



Who are Makers?



"It doesn't matter what you make, and it doesn't matter why. The importance is that you are making something."

—Adam Savage

Roots



Makerspaces

- Also known as Hackerspaces
- Community & Collaboration
- Member Fees & Cost-Sharing
- Classes & Equipment
- In Schools & Libraries



Makerspace Equipment

Tacoma Fablab

PROTOTYPING

3D PRINTERS
LASER CUTTER / ENGRAVER
CAD / GRAPHICS WORKSTATIONS
CNC ROUTER 48"x96"
CNC PLASMA TABLE

ELECTRONICS

SOLDER STATION
OSCILLOSCOPE

WOODWORKING

CNC ROUTER 48"x96"
WOOD LATHE
TABLE SAW
BAND SAW
PLUNGE SAW
TABLE ROUTER

METALWORKING

CNC PLASMA TABLE
MIG WELDER
PLASMA CUTTER, HYPER THERM
DRILL PRESSES
SMALL MILL
SMALL LATHE
METAL BRAKE / SHEAR / ROLLER
SANDBLASTER

GRINDERS / CUT-OFF SAWS

WORK STATIONS / COLLABORATIVE SPACE
LARGE DISPLAY MONITOR FOR MEETINGS
27" CAD WORKSTATIONS
ADOBE SUITE
OPEN SOURCE DESIGN SOFTWARE



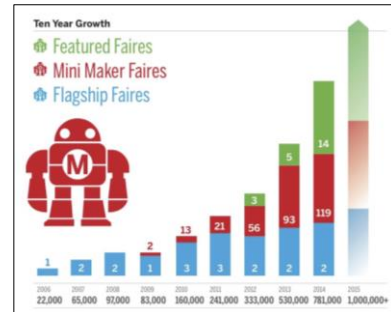
Maker Media

- Make Magazine
- Makezine.com
- Maker Faire
- Maker Shed
- Makerspace
- Maker Ed
- Maker Camp

Make:



Maker Faire



Maker Faire

Seattle Mini Maker Faire

DATES

September 17-18, 2016

LOCATION

EMP Museum
Seattle, WA



Demographics

Maker Faire Bay Area 2015

145,000+ Attendees

Survey sample of 568:

- 100% attended/graduated college or better; 84% graduated college and 41% have postgraduate degrees.
- Affluent: Median household income is \$124,500.
- Two-thirds 68% of attendees are white, 17% are Asian.



Demographics

New York Maker Faire 2015 90,000 Attendees

Survey sample of 974:

- ▣ Primarily male 62%
- ▣ Half 49% attended Maker Faire with children
- ▣ Virtually all 96% attended/graduated college or better; 86% graduated college and 42% have postgraduate degrees
- ▣ The vast majority of attendees are white 67% Asian and Hispanic/Latino's represent the next largest groups.



Privilege of Making

"...we must acknowledge the fact that the idea of "making" is a privileged idea"

-W. Atwood-Charles

"I'd like to see makerspaces reach new audiences — it's not just a 'guy thing' or a 'geek thing'. We need more women and people of diverse cultural and ethnic backgrounds to participate. We should not just be open and welcoming to new people but we should also export what goes on in a makerspace into other locations in the community such as libraries, schools and museums. We are all makers of spaces, and these spaces are makers of makers."

-Dougherty, *Makers of Spaces, Makers of Makers*, 2013

Initiatives



www.blackgirlscod.com



girlswhocode.com

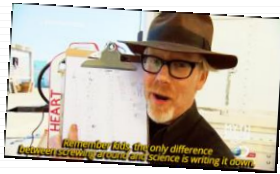
Why Should Libraries Care about DIY and Making?

- ▣ Relevancy
- ▣ Job Skills & Small Businesses
- ▣ Education
- ▣ Outreach
- ▣ Diverse Communities



Play, Make, and STEAM

Programing priorities for youth & families.



Science To Go & Block Play

Backpacks

Available at all Pinellas County Library locations



Backpacks are available for three age groups: pre-kindergarten (learning about 12-year-olds and 18-year-olds). Backpacks are loaned out and can be found and put on hold through the library catalog.

Each backpack includes:

- 2 books related to a specific STEAM topic
- A hands-on activity sheet for your topic

• A field notebook to record and share your insights

• A feedback card. Complete and return inside the backpack



Project BLOCKS



Research shows that young children develop an understanding of how things work by playing with blocks. These blocks allow children to explore and learn about the world around them. They can be used to build a variety of structures, from simple towers to complex castles. They can also be used to learn about the world around them. They can be used to learn about the world around them. They can be used to learn about the world around them.



These blocks are made of wood and are safe for children to play with. They can be used to build a variety of structures, from simple towers to complex castles. They can also be used to learn about the world around them. They can be used to learn about the world around them. They can be used to learn about the world around them.

Learn more about the library's Project BLOCKS program at www.pcclibrary.org/project-blocks

Block Play is the focus of Pinellas County Library's www.pcclibrary.org/project-blocks and www.pcclibrary.org/project-blocks

Minecraft (& STEAM)

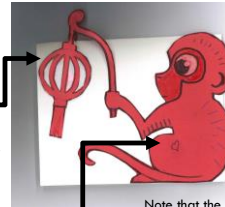


Paper Circuits

Outside

The lantern is positioned over the LED

This mark shows the best spot to press to close the circuit and make the lantern light up



Note that the battery is not covered with tape

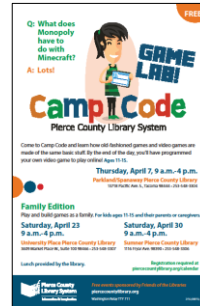
Inside



Coder Dojo



Camp Code



Hour of Code



Lego Mindstorms



Lakewood MakerFest

"Making it up as we go along..."



Community Collaboration

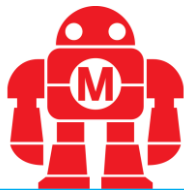
- [Pierce College Science Dome](#) at [Fort Steilacoom Campus](#)
- [Lakewood Computer Clubhouse](#)
- [Lakewood's Promise](#)
- [City of Lakewood](#)
- [Brown Paper Tickets](#)



Commercial or Indie?

Licensed Maker Faire

Independent Maker Event



Maker Faire



2013



Maker Fest

Saturday, August 24th
11:00AM—3:00PM

Pierce College Science Dome
 Pioneer Building
 4801 Pioneer SE Rd
 Lakewood, WA 98403

Calling all Makers!
 Lakewood is hosting its first ever Maker Festival.
 For more information and to register as an exhibitor
 go to lakewoodpromise.us/makerfest

The Lakewood Maker Fest seeks to engage, inspire,
 and enable young people to become Makers.

Community Partners & Sponsors:
 Lakewood's Promise, Pierce College, Lakewood Pierce County Library

2014



2nd ANNUAL

LAKEWOOD MakerFest

Celebrating all things made by you!

Register as a maker to showcase your DIY projects or come to be inspired.

- Fun for all ages
- Kids activities
- Maker presentations
- Visit the college's science dome

Pierce College Rainier Building
1401 Furthest Drive S.W. - Lakewood 98408

Saturday, Aug. 9
1-5 p.m. • FREE

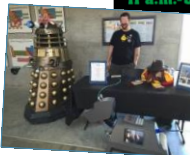
Bringing something? Register as a maker www.lakewoodmakerfest.org

(Sponsored by Pierce County Library System, City of Lakewood, Lakewood Computer Clubhouse and Pierce College)

2014



2015



3rd ANNUAL

LAKEWOOD MakerFest

Celebrating all things made by YOU!

Gather to explore the processes and products of maker culture

Activities and inspiration for all ages

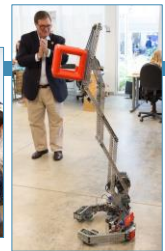
Saturday, May 2
11 a.m.-5 p.m.

FREE

lakewoodmakerfest.org

(Sponsored by Pierce County Library System, City of Lakewood, Lakewood Computer Clubhouse and Pierce College)

2015



2016



Saturday, May 21st, 2016

12pm-5pm - FREE

Pierce College - Fort Steilacoom

Rainier Building & Science Dome
9401 Farwest Drive SVV
Lakewood, WA 98498

Cost



- Venue
- Marketing/Printing
- Staff time
 - ▣ System committee of 5 librarians
 - ▣ Day of staff
- Honorariums
- Misc.
 - Snacks for Makers
 - Activity supplies

Returns

Attendance:

2015: 425
2014: 287
2013: 144

Exhibitors:

2015: 42
2014: 38
2013: 45

Why invest in MakerFest?

- ▣ Promotes collection and programming.
- ▣ Community Outreach
- ▣ STE(A)M focus goals
- ▣ Involved and support maker movement without having to build/invest in a library makerspace.

DIY and the New Digital Literacy

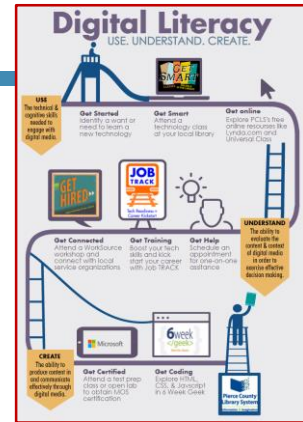
Programing priorities for Adult Learners.

Tech Resources for Makers & Doers

- Skill learning moving online
 - YouTube
 - Pinterest
- Library Learning Resources/Databases
 - Lynda.com
 - Universal Class
 - Microsoft IT Academy

All helping people use tools & create.

Designed by
Kendall
Brookhart,
Digital
Literacy
Coordinator,
PCLS



DIGITAL LITERACY for Makers/DIY'ers

- **USE** – Basics, Word, Excel, Apps, iPad, Blogging, Social Media
- **UNDERSTAND** – Collectibles, Genealogy, Travel Planning, Cloud Storage, Small Business Resources, Job Track classes
- **CREATE** – 3D Printing, Web Design, HTML/CSS, Knitting the Net, Advanced Word & Excel, 6 Week Geek

How to Know What People Want?

- Community Connects marketing segments
- Census data
- Program feedback forms
- Circulation stats
- Branch experience
- Intuition!

Marketing Methods

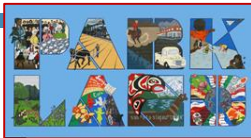
- In-house flyers
- Home page ads & calendar
- Social Media: Facebook, Twitter
- Local Newspapers
- DIY/gardening/crafting networks
- Guerilla marketing

Gardening/Food Security Projects

Supporting local community building

Neighborhood Partnerships

- Churches
- University
- Food banks
- WSU Ext Snap-Ed programs
- Local public schools
- Girl Scout troop



County-Wide Partnerships

- Partners in **Harvest Pierce County**
 - City – City of Tacoma, Metro Parks
 - WSU Extension – Master Gardeners
 - Pierce County – Conservation District, Public Works, Health Dept
 - Catholic Community Services
- Projects
 - Community Gardening
 - Gleaning – Farm & backyard
 - Veggie Co-op



Arts & Crafts

Some examples:

- Book Arts
- Upcycle/Recycle Arts
- Rag Rugs
- Photography
- Zentangle
- Knitting



Food Preparation/Preserving

- Fermentation
- Cake Decorating
- Canning
- Pantry planning & budgeting
- Nutrition authors



Other DIY Topics

- Beekeeping
- Backyard animals:
 - Chickens
 - Goats
- Home Solar
- Gardening
- Legal issues
 - Wills
 - Retirement
 - Power of Attorney



DIYfest

Homegrown success.



DIYfest - 2014

□ Complement to Makerspace event

□ 1st Year

- Authors 4
- Kitchen demos 6
- Exhibitors 18
- Attendance 500
- Craft corner – taught Rag Rugs
- Square Dancing

Author Presentations



Kitchen Demos



Exhibitors/Craft Corner



DIYfest - 2015

Larger space

- Author/presenters 4
- Kitchen Demos 5
- Exhibitors 32
- Attendance 1000
- Partnerships:
 - County agency – new location, larger facility
 - Barter Faire group
 - Asian Pacific Cultural Center

Larger County Facility



Increased Outreach Efforts

- New facility – more diverse, accessible area; widely used
- Sought out non-traditional exhibitors & kitchen demos
- Advertised at wide cross-section of events in community
- Selected ethnic food trucks for food service



New Exhibitors & Features

- **Exhibitors** – Ex: Tool library, Ham radio, Bike repair coop, Sewing machine repair, Berry Ink, Goodwill upcycling, Rabbits, Mushrooms
- **More programs for children** – Science to Go, Balloon figures guy, Presenter
- **Barter Faire** – County group explained & then had their monthly barter at the event
- **Music** – Ukelele club performing & teaching



Exhibitors



Exhibitors



Music



Programs for Children



Barter Faire



Conclusions & Next Steps

What will we make in the future?