

YOUTH  
SERVICES  
SECTION

# Innovation of Making

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A decorative graphic featuring a light blue dashed line that curves across the page. Various colored circles and arcs are scattered around it: a large lime green circle at the top left, a teal circle with a white center at the top left, a small teal circle on the left, a large orange circle at the bottom left, a small pink circle on the left, a large yellow circle at the bottom left, a large cyan arc at the top center, a teal circle containing the quote opening quote, a large yellow circle at the top right, a small pink circle at the top right, and a large orange arc at the bottom right.

“

“A makerspace is a place where students can gather to create, invent, tinker, explore and discover using a variety of tools and materials.”

Diana Rendina, LMS





# But what is it?

Anything!


- ◎ From a repurposed bookcart filled with arts and crafts supplies to a table to a full blown fab lab with 3D printers, laser cutters, and handtools.
- ◎ No two makerspaces are the same or should be! They represent their tinkerers, creators, crafters...





# Why Makerspaces?

- ◎ Kids and Adults need challenge and “hard fun” that inspires them to dig deeper and construct big ideas.
- ◎ No rights answers, no single solutions



## *Personalized*

**A thematic approach to planning your makerspace ensures that you uncover themes that are unique, relevant, and meaningful to your school community.**

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## *Differentiated*

**Provide materials, activities and supplies that meet the needs of ALL students. Create a learning environment that nurtures a community of learners.**

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## *Deep*

**Be sure to provide opportunities  
for your students to take their  
learning deeper.**

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## *Empowering*

**The setup of your physical  
makerspace, along with the items  
in it, should invite ALL students in.**

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## *Equitable*

**Create an inclusive learning environment that encourages tinkering, play, and open-ended exploration for ALL.**

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## *Intentional*

**Have a vision for your makerspace.**

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*Inspiring*

**Create the conditions to inspire  
your students to WANT to make.**

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Laura Fleming. "Making GREAT Makerspaces: The 7 Attributes of a GREAT Makerspace - Worlds of Learning." *Worlds of Learning*. 12 Feb. 2017. Web. 25 Apr. 2017. <<http://worlds-of-learning.com/2017/02/12/making-great-makerspaces/>>

# Challenges

- ◎ Engineering Challenges
  - ◎ Catapult
  - ◎ Marshmallow Challenge
  - ◎ Tower Challenge
  - ◎ Bucket Tower
  - ◎ Cardboard Challenges
    - ◎ Help Harry
    - ◎ Mars Lander

# **The Catapult Challenge**

**Create a Catapult using only the following items and propel your paper ball the furthest.**



**50 Mini  
Marshmallows  
50 Toothpicks**

# Marshmallow Tower

## Rules

1. YOUR GROUP'S TOWER MUST BE AT LEAST ONE TOOTHPICK IN HEIGHT
2. YOUR TOWER MUST FIT ON THE PAPER TOWEL ON YOUR DESKS

You will get 1 minute for planning, and then you will have 10 minutes to build your tower. You are trying to build a structure that will hold weight...we're not competing for the highest tower 😊

# Green Screen Room

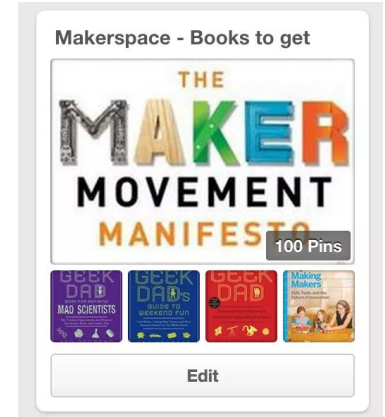
- ◎ Video Recording
- ◎ Video Editing
- ◎ Photo Editing
- ◎ Selfies
- ◎ Content Creation
- ◎ YouTube Channels
  - ◎ Vlogging





# The Books

- ◎ Inspire your patrons with books
  - ◎ [Pinterest Board of Books](#)
- ◎ Topics
  - ◎ Arduino
  - ◎ 3D printing
  - ◎ Origami
  - ◎ Duct tape crafts
  - ◎ LEGOs
- ◎ Great way to crowdsource your population





# Where do I start?

- ◎ Have a vision on what you want
  - ◎ Tell the people!
- ◎ Current items you may have forgotten about (Even at home)
  - ◎ Crafting supplies & Legos
- ◎ Hold a Supply Drive
  - ◎ Bin for donations
- ◎ Donorschoose.org
- ◎ Make Stuff! - Show the power!



# But Where?

- ◎ Use those old carrels for creation stations
- ◎ For the Duct Tape Craft Cubby/Cart
  - ◎ Spring loaded rod for tape, shower caddy for supplies
- ◎ [Instant Makerspace for \\$350 from Daring Librarian](#)

# Where are we going with this?

- © Gradually releasing responsibility of a structured making to learner independence





# What are your goals?

- ◎ Are you focused on getting students to exercise their creativity?
- ◎ To learn about electronics hands-on?
- ◎ To design and prototype their own creations?
- ◎ To practice engineering skills?



## What do you already have?

- ⦿ What tech do you already have?
- ⦿ What supplies do you already own?
- ⦿ Are there supplies at other libraries not being used?



## What physical space do you have?

- ◎ Looking at mobile makerkits
- ◎ Maker Club
- ◎ Maker Events
- ◎ Drop-in or extended projects?
  - This will change the space needed
  - Ex. Project in process - Storage

## Where will you get the supplies?

- ⦿ Donorschoose
- ⦿ Grants
- ⦿ Store Donations
  - ⦿ Take apart stations
- ⦿ Patron donations
  - ⦿ Legos



A decorative graphic featuring a large, light blue dashed circle that frames the central text. Various colored circles of different sizes are scattered around the page: a large lime green circle at the top left, a smaller green circle with a white center to its left, a blue circle below the green one, an orange circle at the bottom left, a pink circle to its right, a yellow circle at the bottom left, a large yellow circle at the top right, a pink circle above it, a large orange circle at the bottom right, a lime green circle with a white center below it, and a blue circle to its right.

# **Worksheet Time**

Fill out the worksheet with  
your answers.

A decorative graphic on the left side of the slide. It features a large lime green circle at the top, a smaller green circle with a white center to its left, and a blue circle below the green one. A dashed blue line curves from the blue circle down towards the bottom left. At the bottom left, there is an orange circle, a pink circle, and a yellow arc. On the right side, there is an orange arc, a lime green circle, and a cyan circle.

# Sharing

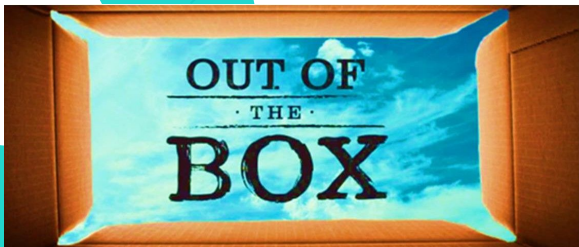


Share your goal with a  
partner

Add yours to our padlet (bulletin board)

[bit.ly/msyss2017](https://bit.ly/msyss2017)





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