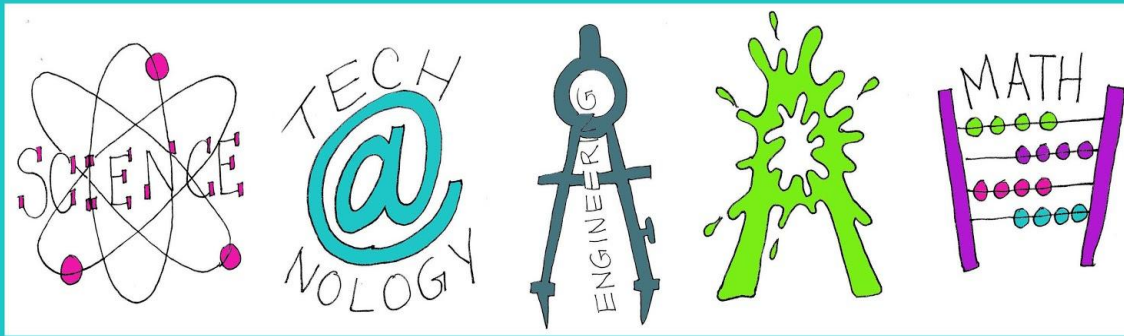
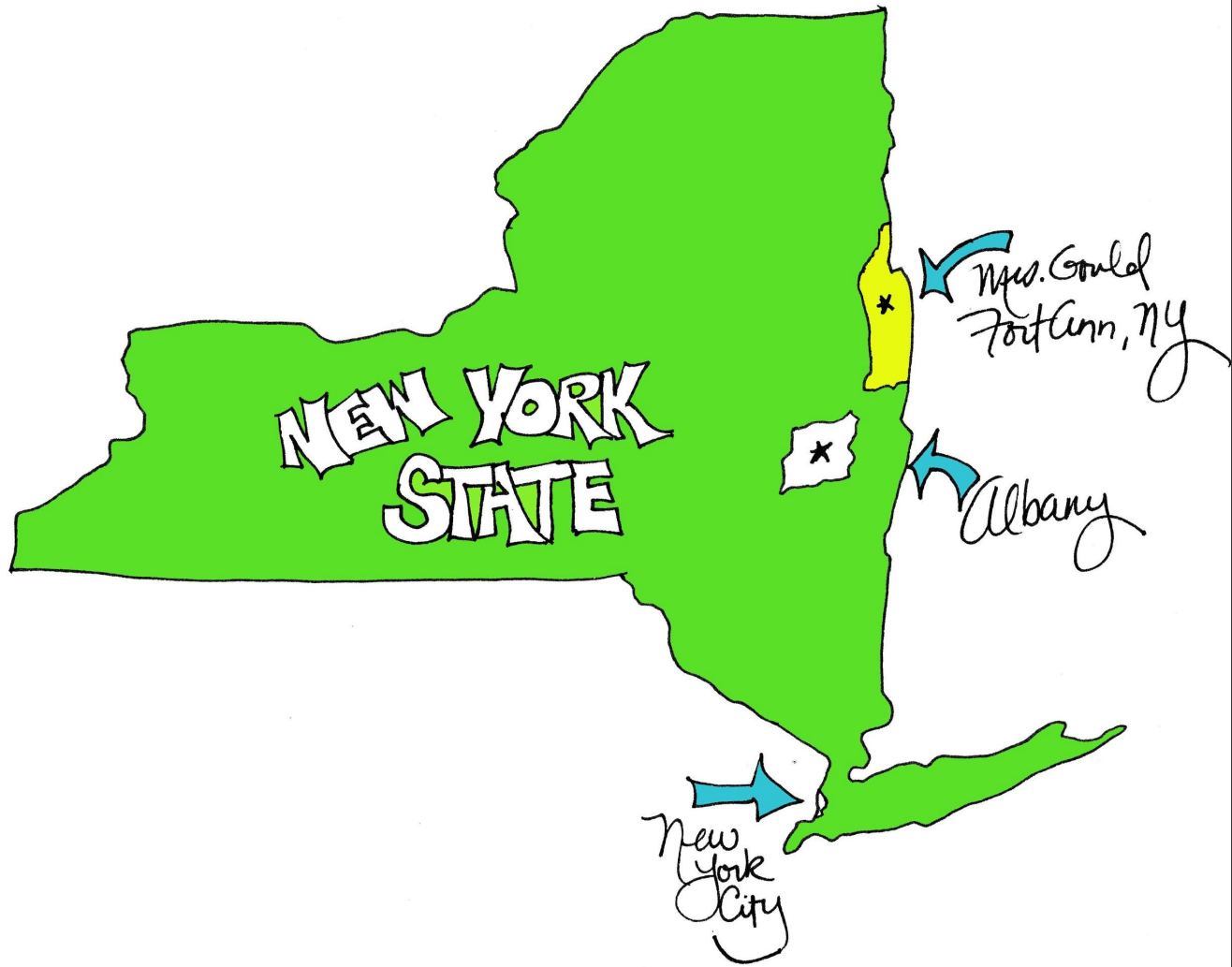


AFFORDABLE ART BOTS



Leslie Gould

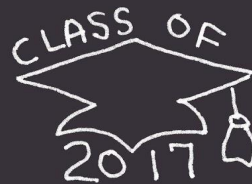
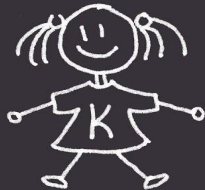
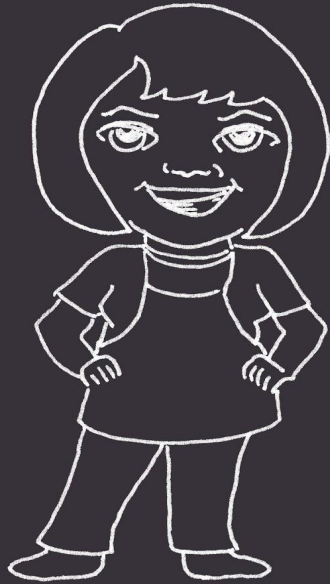
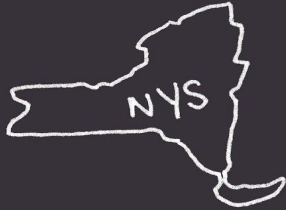
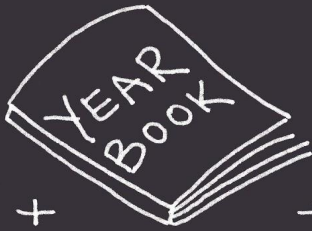


NEW YORK STATE

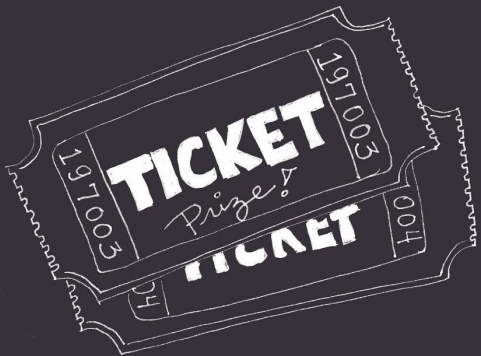
Mrs. Gould Fort Ann, NY

Albany

New York City



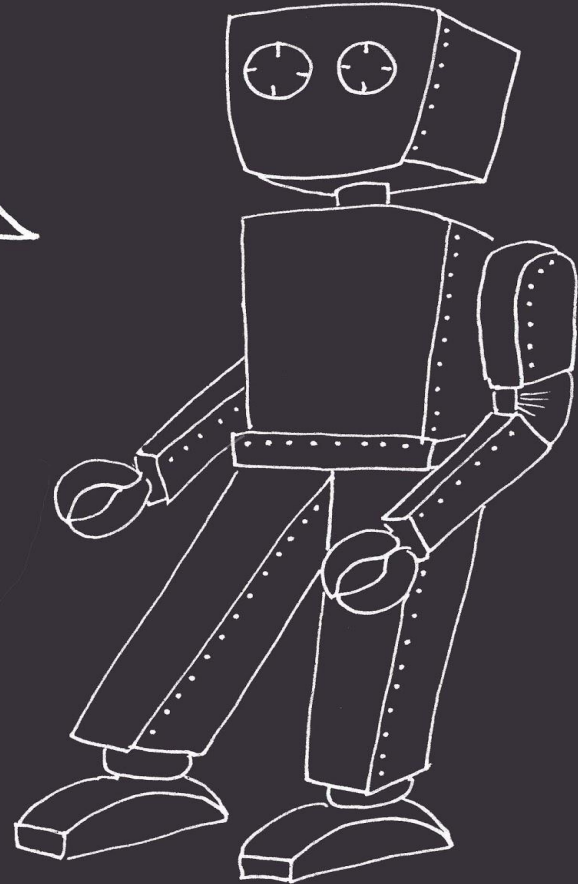
FREE FREE FREE



A Special Edition Battery Powered ROBOT

BOT BREAK

EXTRA SPECIAL SUPPLIES FOR YOUR BOT



ABSTRACT:

The task is to construct a robot that creates its own art.

As the Art Bot's electric motor propels marker "legs" across the paper it creates an abstract drawing.

Once the basics of construction are mastered the Bot's drawing path can be measured and customized, changing how it draws.



and wobbling

lots of wiggling

TIME to start BOT Making!

- * FORM A TEAM OF 5
- * ASSIGN ROLES
- * CREATE A TEAM NAME

In my classroom each team makes 1 bot, for this workshop each participant makes a bot.

- Invent together, chuck on each other, bounce ideas off each other
- Keep your own notes but present all your data as a team in the end



MATERIALS:

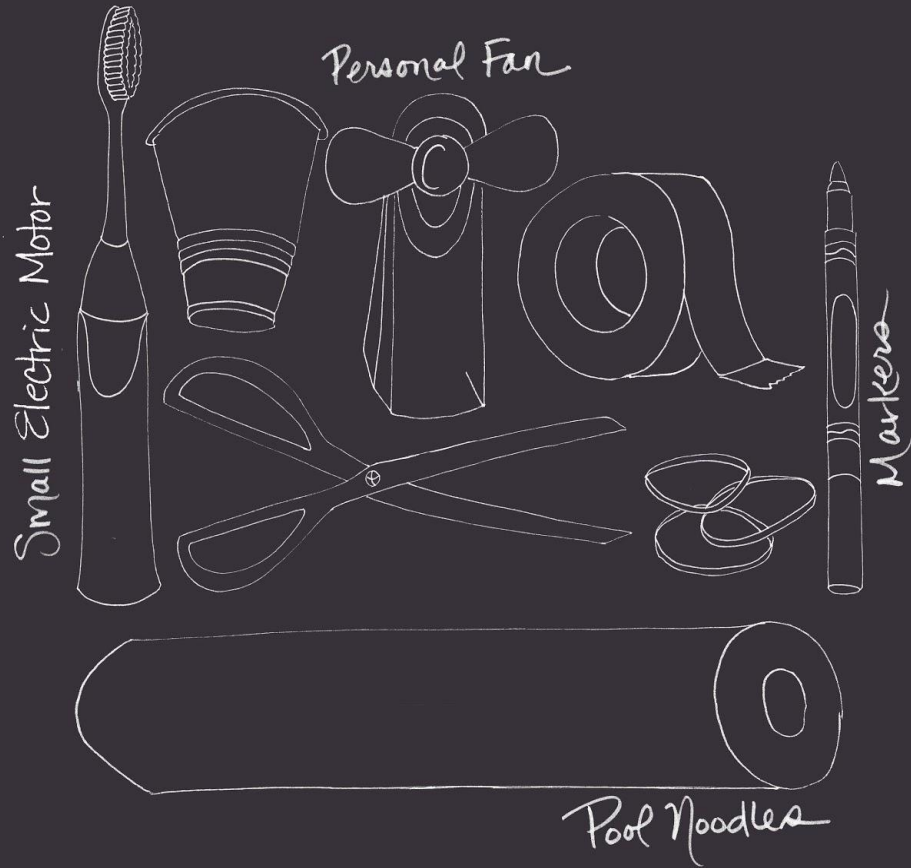
- * Small Electric Motor
- * Protective Shell
- * Tape or bands
- * Scissors
- * Paper
- * Batteries



- * Pen, Pencil, markers

Optional Materials:

- * Anything available to make a unique found object assemblage



ART BOT Lab:

Step 1: Find a power source (a small electric motor).

Step 2: Find a body or exoskeleton for the motor that will allow you to attach drawing instruments.

Step 3: Secure drawing instruments.

Step 4: Determine that it can make a drawn path.

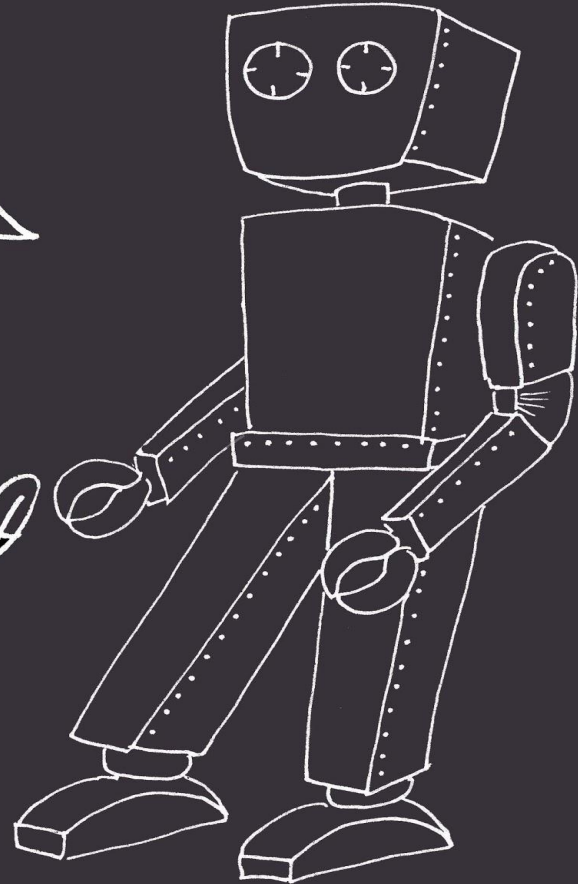
Step 5: Make the drawing path unique.

Step 6: Gather data on path, patterns and distance.

BOT BREAK

EXTRA SPECIAL SUPPLIES FOR YOUR BOT

* Whose birthday is the closest to this event?



Frequently Asked Questions (FAQ)

Having troubles? You may find the answer to your question below

Q: Why doesn't the motor run?

A: If your motor does not run at all when you turn the switch on, several things could be wrong. Check each of the following:

- Make sure you put the batteries in correctly. The "+" signs on the batteries should line up with the "+" signs inside. If you get one battery backwards, the motor will not spin.
- The batteries might be shaking out of place. You may want to remove the protective door over the battery holder and tape the batteries securely in place.
- If you took the motor out of the toothbrush or fan you might not have completely twisted the wires together. Check to make sure the wires from the motor and battery holder are tightly twisted together.
- Excess weight can burn out the motor. You may have added too many attachments.

Q: Why does the Art Bot fall over?

A: There are a few things that could make your Art Bot fall over. Check for each of the following:

- Your marker "legs" are loose, and not firmly attached.
- The markers are not evenly spaced around the cup, causing the Bot to tilt to one side.
- The items used to balance the Art Bot are *too* far off center, causing the robot to wobble excessively and fall over.
- Not all of the legs need to be markers. A popsicle stick can provide stability and drag. Drag can change the path of your Bot.

Q: Why does the Art Bot slow down after a while?

A: Just like anything battery-operated, eventually your Art Bot will need new batteries. It will slow down as the batteries drain. Use two new AA batteries.

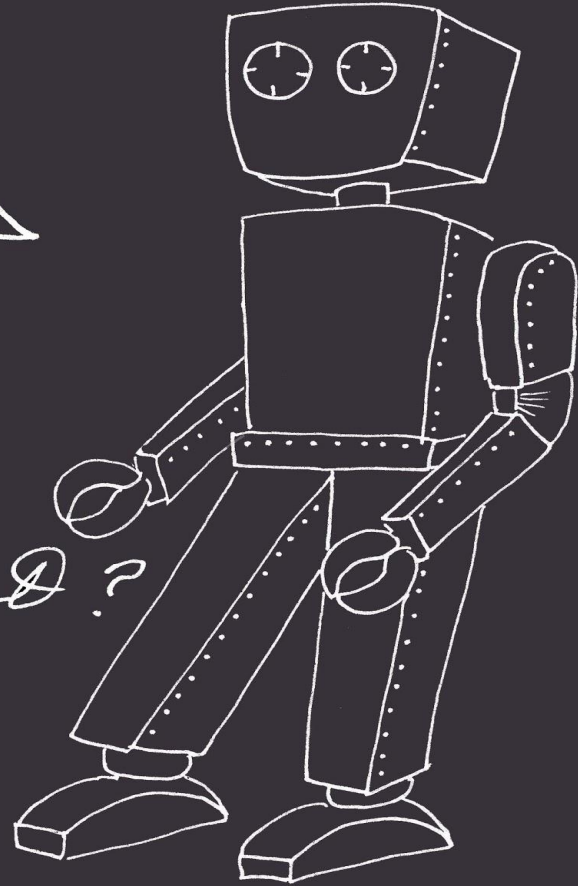
Q: The personal fan I chose for a motor isn't moving the bot?

A: Try adding something to one of the fan blades (like a paper clip). Secure it so that it won't fly off.

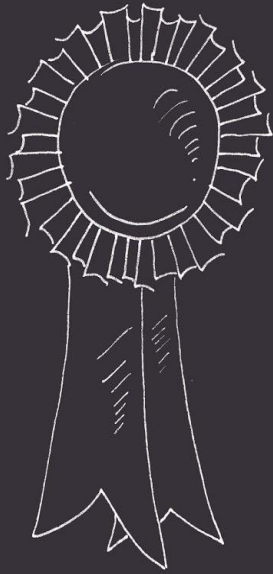
BOT BREAK

EXTRA SPECIAL SUPPLIES FOR YOUR BOT

* Who has been married the longest?



Prizes awarded for :



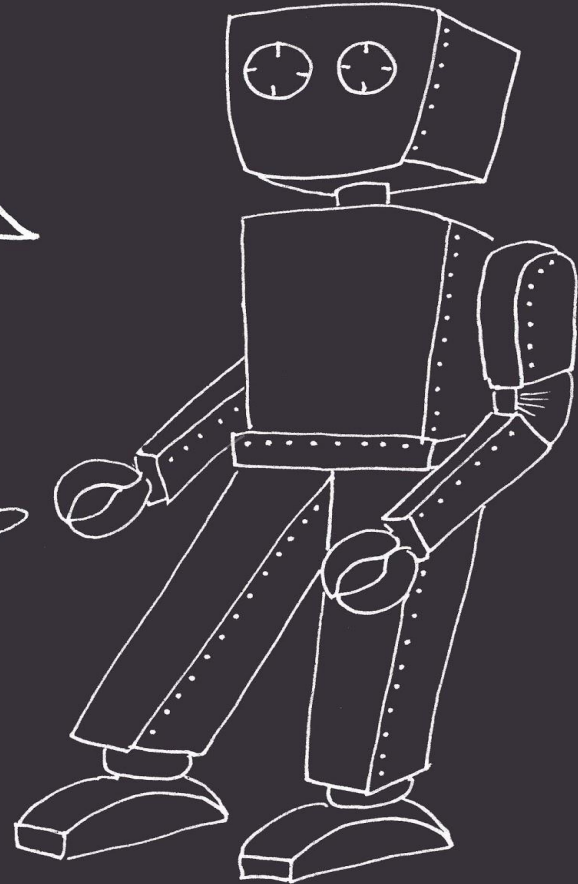
- * PRESENTATION OF THOUGHTS
- * MECHANICAL EFFICIENCY
- * PROGRAMMING QUALITY
- * DESIGN PROCESS
- * INNOVATION



BOT BREAK

EXTRA SPECIAL SUPPLIES FOR YOUR BOT

* Who woke up the earliest this morning?



**The remaining slides are
Student Classroom
Presentation**

ART BOTS STEM/STEAM

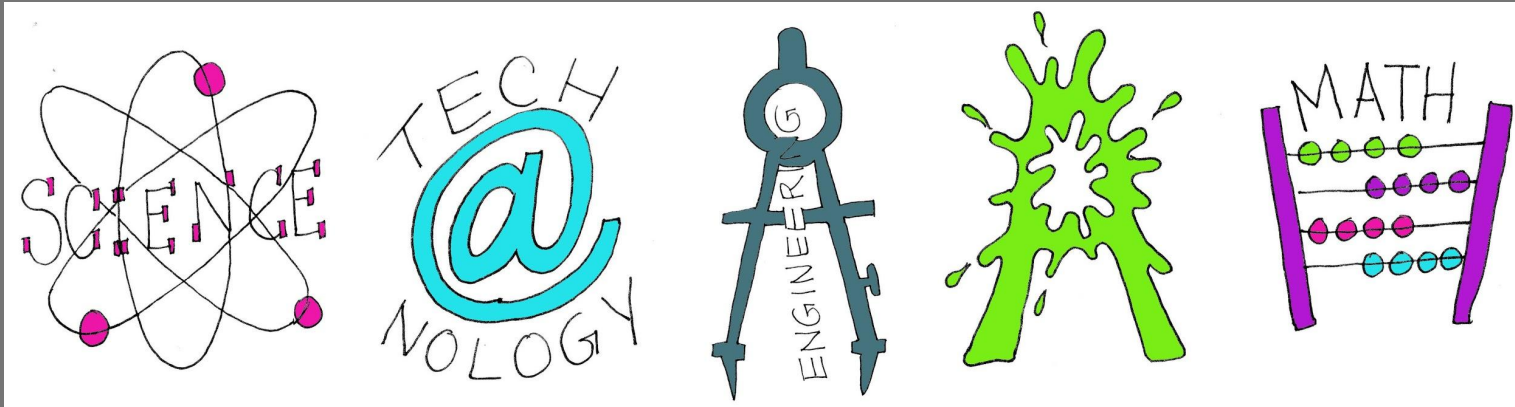


A FOUND OBJECT ASSEMBLAGE THAT CREATES ABSTRACT ART

– Why make an Art Bot?

STEM & STEAM

The STEM Movement started when employers reported that their workers needed skills that many of today's graduates don't have. Students need more in-depth knowledge of math and science, plus the ability to integrate and apply that knowledge to solve the challenges facing our nation.



– So what does art have to do with it?

ART naturally fits into the STEAM movement

How does it naturally fit?

- **Design:** Applying design in any way including computer graphics, logos or stylized designs can improve the appearance and usability of a product.
- **Creative Planning:** Adopting a playful, inventive, artistic approach while brainstorming solutions for an engineering problem can help generate creative and innovative thinking.

The purpose of STEAM is to apply ART in real situations. Applied knowledge leads to deeper learning.

– Where is the Art in making an Art Bot?

What is a Found Object Assemblage?

The definition is abbreviated from the Visual Arts Encyclopedia (www.visual-arts-cork.com/assemblage-art.htm):

Popularized in the United States during the 1950s and 1960s by artists like Robert Rauschenberg (b.1925) and Jim Dine (b.1935), **Assemblage** is a form of 3-D visual art whose compositions are formed from everyday items, usually called "**found objects**"

What is Abstract Art - in relation to this project?

The definition is abbreviated from About Education (http://arthistory.about.com/od/glossary_a/a/a_abstract_art.htm):

Abstract art does not depict a person, place or thing in the natural world. With abstract art, the subject of the work is based on what you see: color, shapes, brushstrokes. (Assemblage can also be abstract art)

What is Found Object Assemblage?

**This is an internet sales ad:
Flying Through Rainbows, by Jay Garrison.**

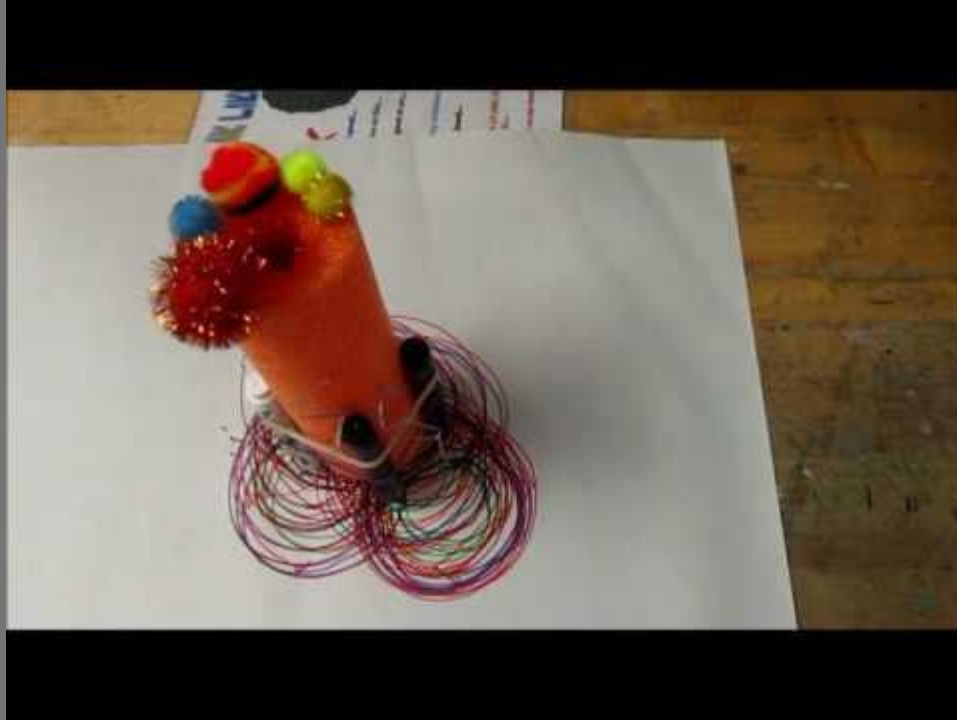
Found object assemblage.
15 in high x 24 in wide x 22 in deep.

Price \$495.

Could you think of anything
better to hang in a kid's room?
Like to see more of Jay Garrison's
whimsical flying machines?



— Fort Ann Central School Art Bot Mash-Up



TEAM UP

Teams of 2 to 4, Maximum # of teams 6

Proposed Teams A Day

One: Luke, Kayla, Jenna, Sarah P

Two: Gabs, Bethany, Mia, Sarah S

Three: Liz, Trent, Ben, Abs

Four: Declan, Ryan

Five: Audri, Gavin, Rowan

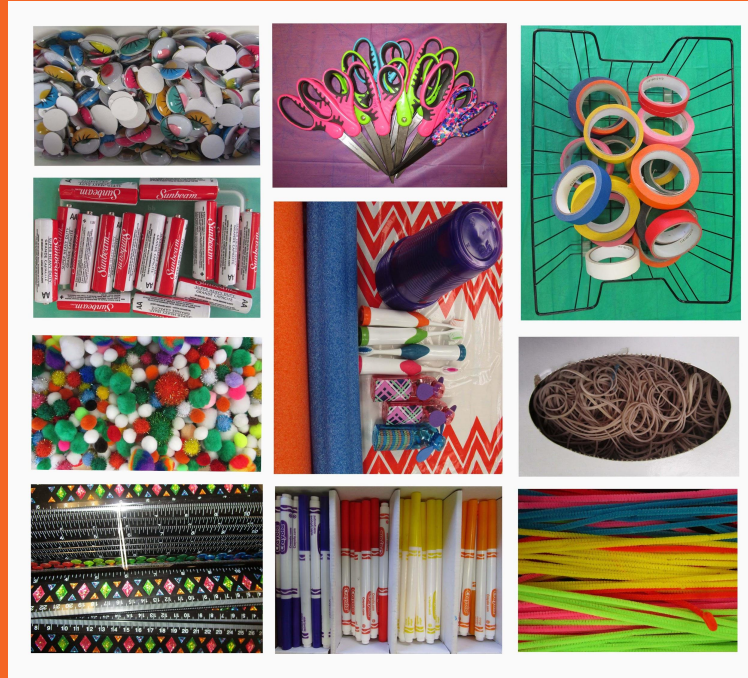
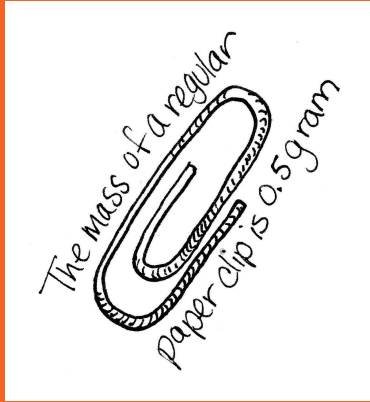
B Day

Chase
Cole



BEFORE YOU BUILD

Let's talk about Planning, Notes, Materials



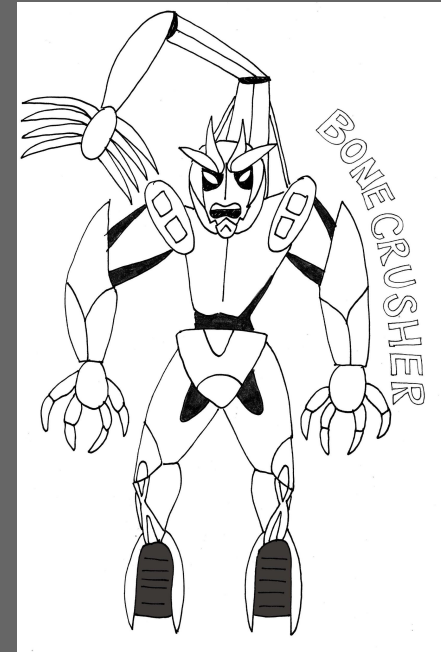
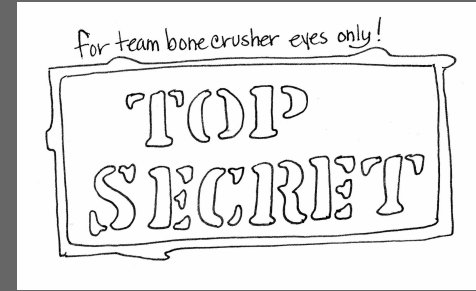
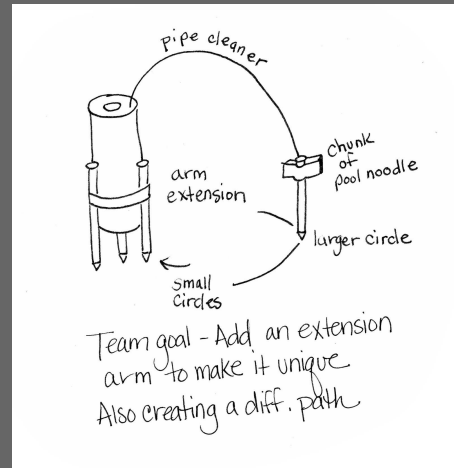
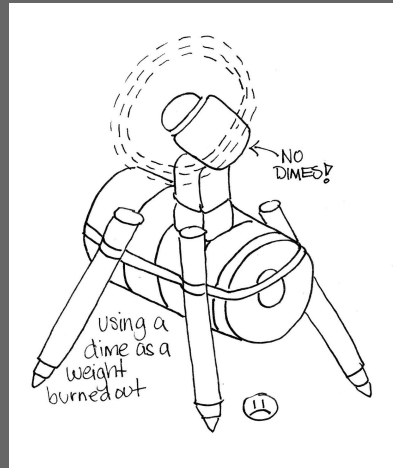
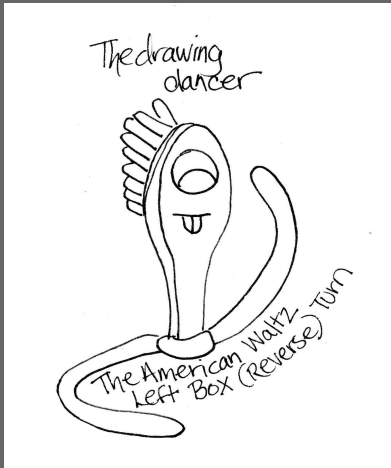
BEFORE YOU BUILD

Let's talk about SAFETY!!!



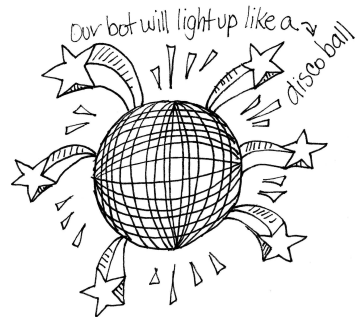
BONUS POINTS FOR:

- Awesome TEAM Name
- Sketches with your notes
- Completing the optional tasks (all in your planning sheet)

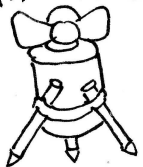




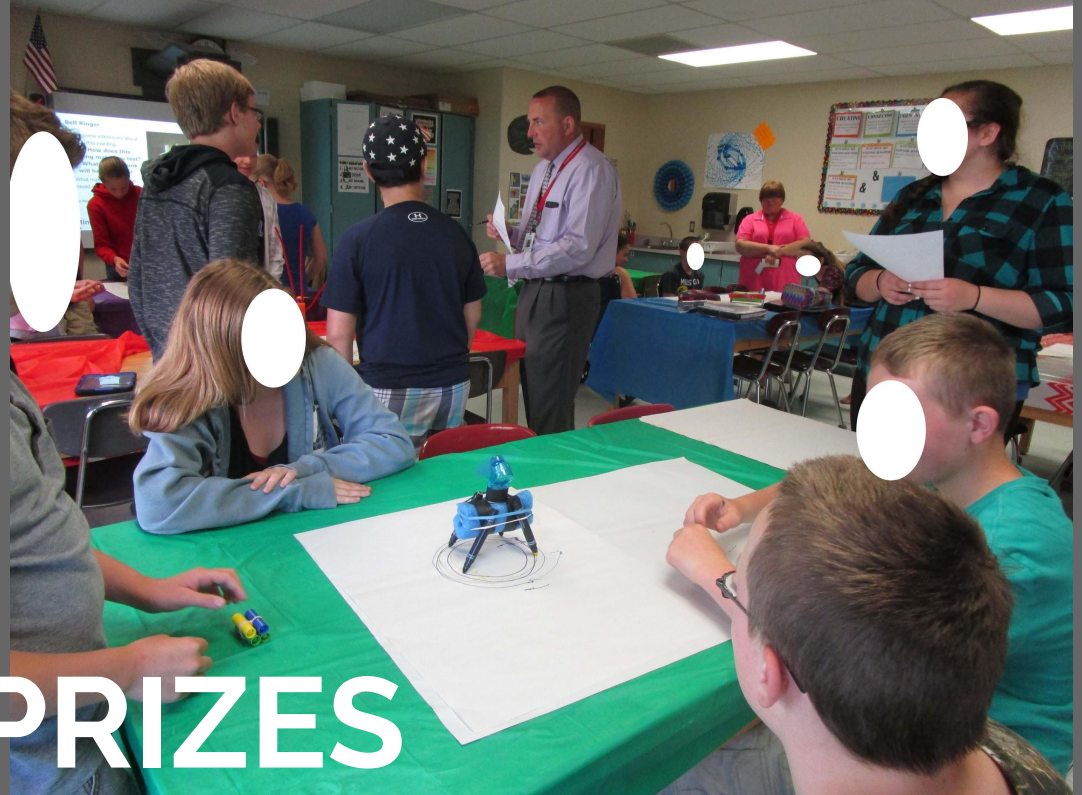
Eat my drawing dust



The Stippler



PRINCIPAL JUDGES



BOTS FOR PRIZES

JR'S & SENIORS JUDGE




✦ ✦ ✦
If want just draw. If
will draw with
= STYLE =

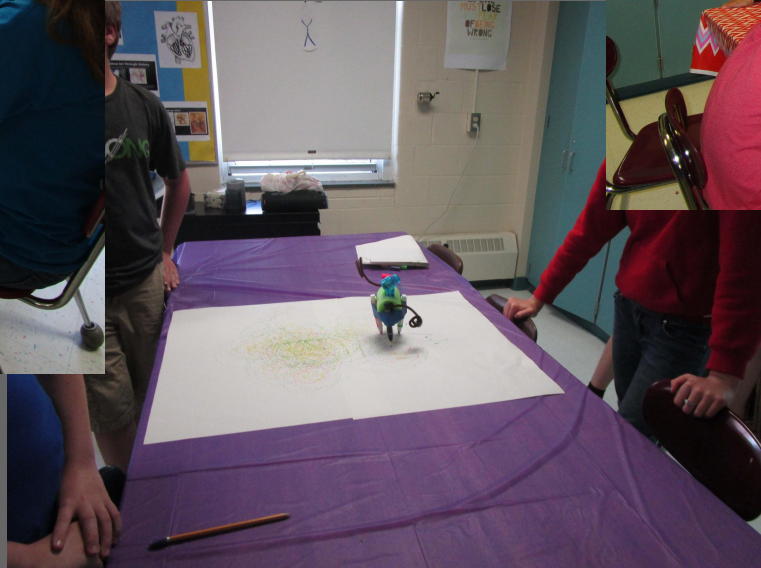
Becky said our Bot can only draw Blue

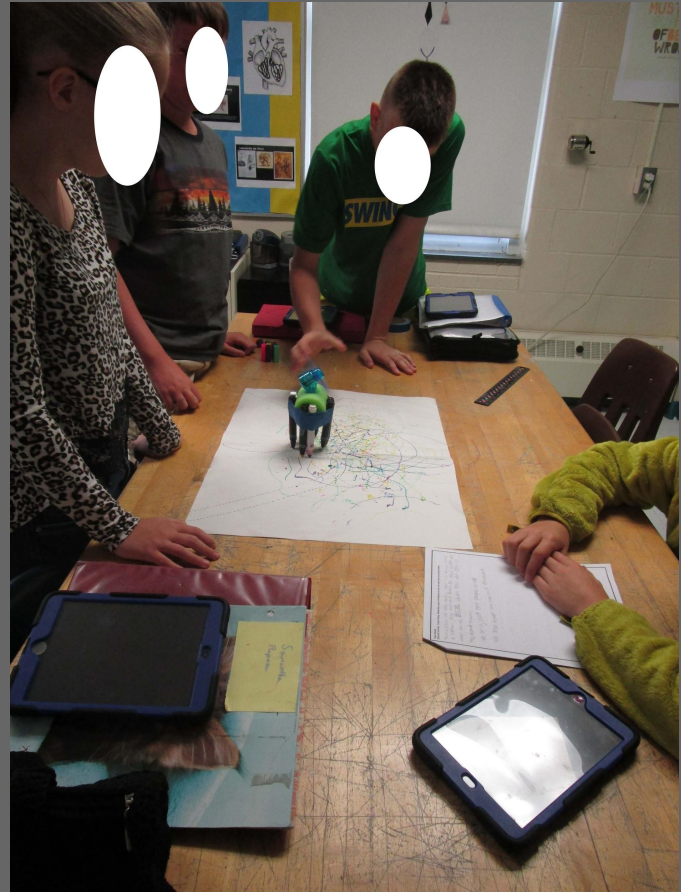


how many poms
can fit
on this cup?



A hand-drawn diagram of a cup with several horizontal lines representing pom-poms inside. The text "how many poms can fit on this cup?" is written around the drawing.





SIBS



BIGS WITH LITTLES

