



Think Make Create

LABS

# The Makerspace Playbook

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## TMC ON THE MOVE: MANAGING INVENTORY

The TMC mobile lab model is a great way to provide rural programs with access to high quality materials and resources. Their mobility allows them to easily be transported from program to program. In South Dakota, this can mean the trailer is in Ft. Pierre Friday and Belle Fourche on Monday (3 hours or 200 miles apart).

However, moving from program to program does not come without challenges. The key to making these moves successful is to create a system of labels and inventory sheets that allow programs to easily keep things organized and inventory at a glance.

In our TMC trailers, each tote has a specific home indicated by a color coded matching label. Additionally, on the inside of each tote there is an inventory sheet that includes a list and pictures of everything that should be included. Programs complete electronic surveys to indicate any materials that are missing or running low, so that replacements can be mailed to the next program to use the trailer.

*~Christine Wood, SDSU Extension 4-H  
STEM Field Specialist*



## Spotlight on Louisiana: Tangipahoa Parish Summer Learning Camps

Northshore STEM's TMC lab, the Brain Food Truck, spent this June supporting the Tangipahoa Parish School System's (TPSS) Summer Learning Camps in southeast Louisiana. The Camps were designed to help students who struggled during the previous school year, especially in science and math. The Brain Food Truck was rotated to a different site in the parish each day for a total of 21 schools and over 1,000 students in grades 2-6 served.

Glenda Husser, with TPSS Federal Programs & STEM Grants, organized the Camps and coordinated with Northshore STEM to make the program possible. Glenda noted that, "The Brain Food Truck brought excitement to our Summer Learning Camps. The students were motivated to engage in hands-on science activities provided [and] teachers in the district observed engaged, happy students interacting with activities aligned to science standards."

A small group of teachers from schools in Tangipahoa Parish worked with the Northshore STEM team before the Summer Learning Camps began. The teachers had the opportunity to become familiar with the activities and supplies offered by the Brain Food Truck and plan how to best use the truck's resources to support the students at each site they travelled to.

The purpose of the Brain Food Truck is to support Northshore STEM's Vision and Mission targeting underserved populations of K-8th grade students via out-of-school and in-school program providers. Being part of the Tangipahoa Summer Learning Camps was an excellent opportunity to put that purpose into practice. The Northshore STEM team looks forward to continued collaboration with partners like TPSS to bring quality STEM education to students of all ages in our communities!

*~ Jessica Meyer Deville, Communications Vista, Northshore STEM Coalition*

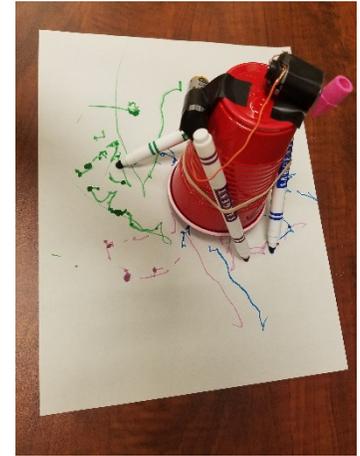
# Give It A Try: Scribbling Machine

Activities that combine science content with art and engineering are a hit in any making and tinkering environment. This activity goes by many names; Can-Can Robot, Robo Cup, and Scribbling machine to name a few. But no matter which activity guide you follow, youth have the opportunity to explore electrical circuits as they build their very own coloring machine. Youth can try different designs to change how their robot will move and what type of drawing it will create.

This activity is great at allowing youth to explore variables though the use of both low tech and high tech materials. It is also a great activity for teen leaders to facilitate.

Give it a try: <https://www.exploratorium.edu/tinkering/projects/scribbling-machines>

~Christine Wood, SDSU Extension 4-H STEM Field Specialist



## Put it Into Practice: DoS

The Idaho TMC Lab program uses Dimensions of Success, an observation tool developed by the Pear Institute, that helps define key aspects of a quality STEM learning experience. Within four categories, the twelve dimensions are a list of essential components that are great reminders when preparing TMC Lab activities, regardless of an educator's experience level:

### Features of the Learning Environment:

Organization, Materials, Space Utilization

### Activity Engagement:

Participation, Purposeful Activities, Engagement with STEM

### STEM Knowledge and Practices:

STEM Content Learning, Inquiry, Reflection

### Youth Development in STEM:

Relationships, Relevance, Youth Voice

As with any youth program, knowing your audience is key, and sometimes one dimension may be more important than another. Yet, over time as these categories are consistently included within TMC Lab programming, the high quality of instruction and programming will positively impact our youth.

~Claire Sponseller, University of Idaho Extension 4-H STEM Educator

## Tips and Tricks: Stories from TMC Lab Hosts

- Setting up early was essential!
- Knowing numbers of youth ahead of time helped so that enough supplies were provided.
- Always plan for more youth than what you were told!
- Extra "creative" supplies were helpful as the youth were able to be really creative with their project.
- Do not do too many activities at one event – find a balance for your staff, participants, and your sanity.
- Try and test the projects before the kids arrive!
- Jump in and try new things; kids enjoy exploring and creating.

~Claire Sponseller,  
University of Idaho Extension  
4-H STEM Educator

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