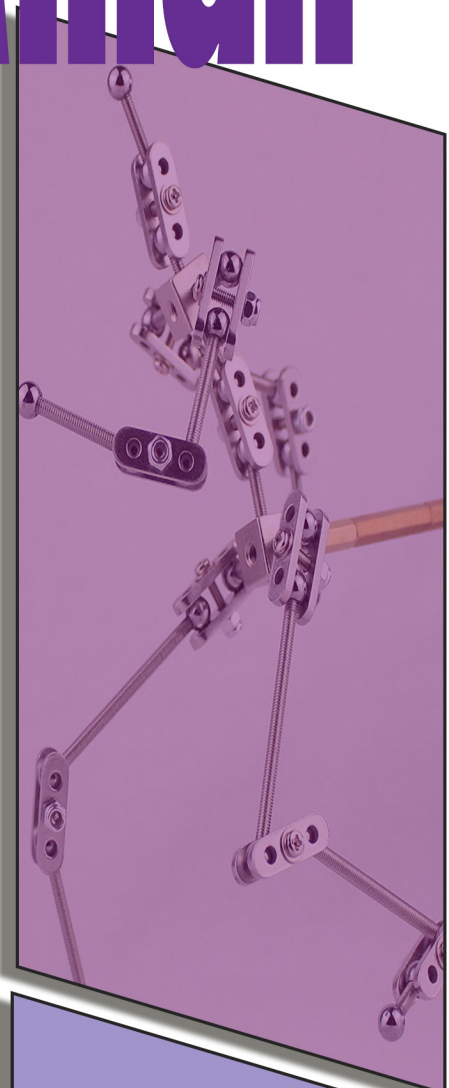
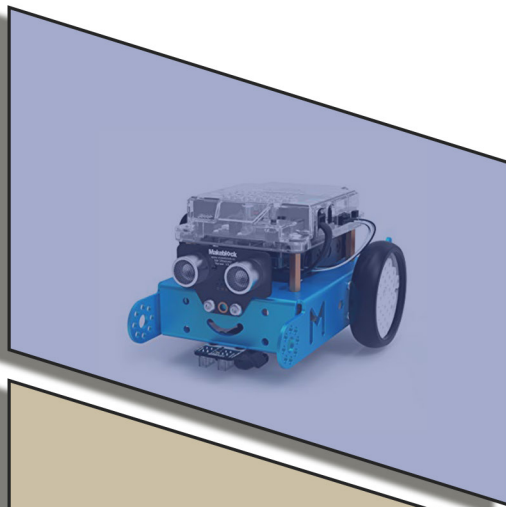
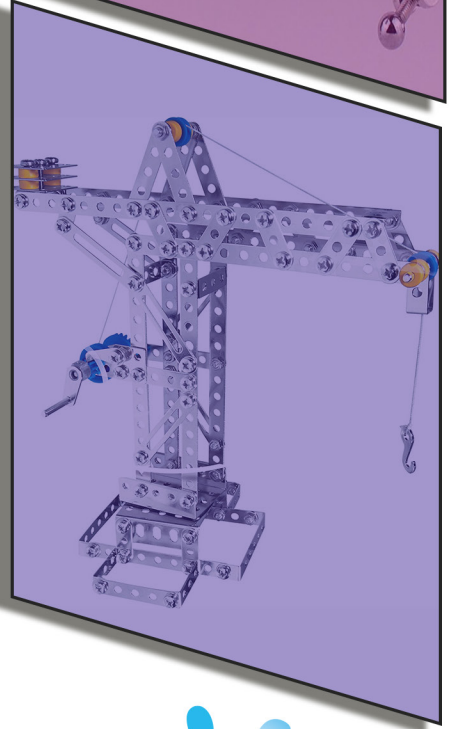


# LEARNING KITS @ McMillan



```
## forever
set pitch to (rotation)
set roll to (rotation)
if (pitch < -10)
then
  radio send number 1
  show number 1
else
  if (pitch > 10)
  then
    radio send number 3
    show number 3
  else
    if (roll < -10)
    then
      radio send number 2
      show number 2
    else
      if (roll > 10)
      then
        radio send number 4
        show number 4
      else
        radio send number 0
        show number 0
```



# Learning Kits @ McMillan

## S.T.E.A.M. Learning Kits

Thanks to the generous support of the Bell Family Charitable Foundation and WiLS the McMillan Memorial Library is now able to offer our community partners specialized learning kits. These kits are available to local organization that support life long learning in our community.

Each kit offers tools and curriculum in the areas of Science, Technology, Engineering, Art, and Music so you don't have to expend your resources purchasing items you may use occasionally.

## Activities:

Each learning kit contains at least 5 literacy based activities. The activities have been developed by a broad spectrum of local and national educators. Kit activities will continue to develop as we get input from the field.

Since you know the people you are working with best you can always choose to use what you want and leave the rest.

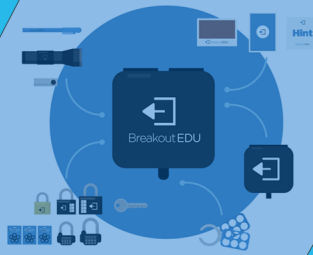
## Literacy Based:

Each kit contains items and activities built around 21st century workforce job skills. Each exercise lists literacy focuses on the program. Topics covered include the following literacy topics from the Partnership for 21st Century Learning

- Collaboration and Teamwork
- Creativity
- Critical Thinking
- Problem Solving
- Flexibility and Adaptability
- Leadership
- Oral / Written Communication
- Technology Literacy
- Initiative
- Curiosity and Inquisitiveness
- Productivity
- Entrepreneurship
- Interpersonal Skills



## Science Kit: BreakOut



The scientific process begins when a question or a problem is posed. Scientists learn and gain knowledge with observations and experiments; trial and error. For our science kit we will be using the BreakOut Edu, escape room in a box, kits; these kits facilitate learning across and broad spectrum and focus on observation and deduction at their core. In the process they embody the 4Cs of 21st Century Literacy: Collaboration, Communication, Critical Thinking and Creativity.

Audience: up to 30

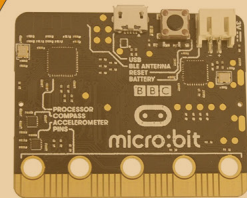
Check Out Period: 6 weeks

Sample Lessons:

A Case of the Mondays - Math Focused

Apollo: To the Moon - Earth Science, Space Science

## Technology Kit: microbit



Designed specifically for kids and beginners, the micro:bit is a pocket-sized computer that you can code, customize and control to bring your digital ideas, games and apps to life. It's a small, code-able device that is a non-intimidating introduction to programming and making – switch on, program it to do something fun – wear it, customize it, develop new ideas.

The micro:bit platform combines the 'bit, a pocket-sized coding device featuring several sensors and LEDs, with an awesome website full of coding examples and projects. From making your own games to taking selfies, the possibilities are endless!

Audience: up to 20 (working in pairs)

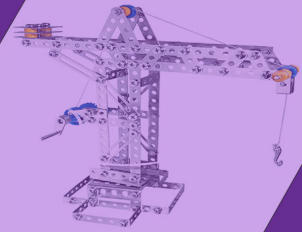
Check Out Period: 4 weeks

Sample Lessons:

Block Coding - Digital Name Tag

Digital Compass

## Engineering Kit: Erector Sets



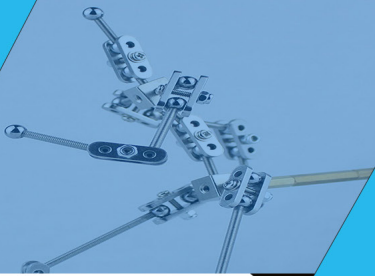
The Erector Set has been a favorite toy since the early part of the 20th century. Designed for ages ten and older, the ingenious system of small parts combine in numerous ways to create an infinite number of models. As kids enjoy building with the Erector Metal Construction Set, they're learning important skills like patience, organization, coordination, and how to read directions.

Audience: up to 20 (working in quads)  
Check Out Period: 4 weeks

Sample Lessons:

Zip Line Races  
All Terrain Bot

## Art Set: Stop Motion Animation



Containing everything you need for small scale stop motion movie production this kit focuses on Collaboration, Creativity, Problem Solving and Initiative. The kit contains stage with reversible, chroma key background, models armatures, modeling clay, rigging tools and ipad with software.

Audience: 4-5 working at once  
Check Out Period: 4 weeks

Sample Lessons:

Character Creation  
Lego Animation



## Music / Recording Kit: Mobile Studio



This kit has everything you need to make high quality recordings for music or voice. The portable studio checks out with 2 microphones, Focusrite audio interface, midi keyboard and iPad with software for both music and podcast recording.

Audience: 2 working at once

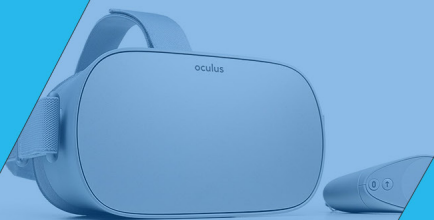
Check Out Period: 4 weeks

Sample Lessons:

An Interview with Family

Beats and Loops w/ Garage Band

## Global Literacy: Virtual Reality Lab



This kit focuses on global issues and other cultures to allow youth to think about the how intertwined the world has become. It does this utilizing the new Oculus Go Virtual Reality glasses. The kit includes 4 sets of VR goggles. Oculus recommends users be 13 or older due to ocular development in children.

Audience: 4 working at once

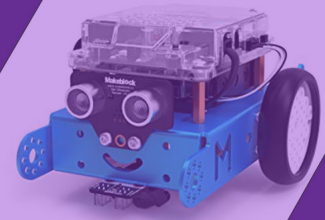
Check Out Period: 2 weeks

Sample Lessons:

Don't Take My Word for It - Compare and Contrast the Media

VR Brainstorm

## Robotics Kit: mBot



mBot is a STEAM education robot for beginners, that makes teaching and learning robot programming simple and fun. With just a screwdriver, the step by step instructions, and a study schedule, children can build a robot from scratch and experience the joys of hands-on creation. As they go, they will learn about a variety of robotic machinery and electronic parts, get to grips with the fundamentals of block-based programming, and develop their logical thinking and design skills. The kit contains 5 mBot models.

Audience: up to 10 (working in pairs)

Check Out Period: 4 weeks

Sample Lessons:

mBot Path Follower

mBot Obstacle Course

## Mobile Computer Lab



Do you need computers for coding programs or to teach a short program? Our mobile lab is available with 10 Dell Windows 10 laptops. If you need special software loaded ahead of time we can look at pre-installing some software.

Audience: up to 20 (working in pairs)

Check Out Period: 2 weeks

# Learning Kit Checkout

## Requirements:

- To check out a kit you must part of a local organization, school or government agency.
- McMillan Memorial Library must have a signed agreement of responsibility for lost or broken equipment.
- Organizations may only check out one kit at a time, schools may check out one kit per classroom
  - Exceptions may be made with prior authorization on a limited basis
  - The mobile computer lab is an exception to this rule

## Booking and Checkout:

- Go to the McMillan Memorial Library KitKeeper website
- Select the kit you are interested in
- Select the date you would like to reserve your kit for (kits are reserved on a first come first served basis)
- Complete reservation information
- Pick-up kit on designates date
- Some kits may have the option of requesting a MCM staff member for set-up and initial instruction
- For tracking and notification purposes kits will be checked out on the library card of the person picking up the kit or the organization's institutional card

## Return Process:

- Check your kit against the included inventory sheet to ensure all pieces are accounted for
- Return kit to library checkout desk during normal business hours

This project was made possible by the generous support of the Bell Family Charitable Foundation, WiLS and the McMillan Memorial Library Endowment.