

# Curriculum Makerspace Ideas

## 5<sup>th</sup> Grade STEM

(I have not viewed all of these Expeditions and 360 videos in full. So please vet them before showing them to students.)

- 3D printing/designing
  - Skills - design process; geometry standards – radius, diameter, angles, and shapes area; math to solve real-world problems; convert centimeters to millimeters; area; volume; line graph or bar chart of volume or area of design and time it took to print; mass
- Bloxels
  - Skills - area of cubes; compare centimeters of completed character on board to centimeters on screen – conversions, fractions, etc.
  - Projects - Create level to look like an ecosystem or planet; fractions - <http://www.bloxelsbuilder.com/fraction-character-challenge>
- Green screen
  - Uses - video projects, presentations
- Stop motion animation / Stikbot (Miniature green screens coming)
  - Skills - Formulas to figure out number of frames needed to complete a movie a certain length
- Makey Makey
  - Project - Shapes and angles - <https://makeymakey.com/lessons/sort-and-classify-lesson/>
- Osmo
  - Numbers– Review, brain break, RTI
  - Words – can create own with STEM vocabulary
  - Newton– miniature practice with engineering process
  - Coding
  - Tangrams – area, shapes, angles
- Virtual Reality
  - Expeditions – Fly with NASA's Juno Mission to Jupiter, International Space Station, Aurora Borealis, From the Stratosphere, etc.
  - YouTube 360 Videos – Explore the Solar System, 360 Degree Video of the Milky Way, 360 Dive through an Oil Rig Ecosystem, 360 Underwater National Park, 360 Antarctica
- Open ended projects – check out some of these or the space and let the students decide