**The Sewing Machine**

A machine with a mechanically driven needle used to stitch fabric and other materials with thread.

Level 5: Expert

You have reached this level if you know how to:

* Clean and oil the machines
* Draft your own sewing patterns
* Advise and assist others in the novice through advanced levels

Level 4: Advanced

You have reached this level if you know how to:

* Use decorative top stitches
* Change the needle on the machine
* Change the stitch length and width (usually for basting or temporary stitches or gathering)
* Sew a buttonhole using the buttonholer foot and selecting the correct stitch on the machine
* Sew a zipper using the zipper foot
* Troubleshoot birdnesting issues
* Design and create a project that improves the makerspace using the sewing machine

Level 3: Proficient

You have reached this level if you know how to:

* Thread the upper thread without help from a teacher
* Fill and re-thread the bobbin
* Troubleshoot thread issues and error notifications
* Change the type of stitch on the machine
* Use a zig-zag stitch to reduce fraying and to seal your seams
* Sew at the highest speed
* Sew around curves
* Use elastic in your projects
* Use a seam ripper to take apart sewn fabric as needed
* Supervise and advise others at the novice and competent levels

Level 2: Competent

You have reached this level if you know how to:

* Know the names of the different parts of the sewing machine and their functions
* Differentiate between types of fabric and scissors (fabric vs other)
* Check the upper thread and bobbin to be sure they are full and properly threaded before sewing, and notify a teacher for help if they are not
* Sew in a straight line with a straight stitch in the lowest or medium speed
* Use reinforcement stitches (back stitch at the beginning and end of a sewing line)
* Sew around corners and monitor your seam allowance
* Follow a pattern or tutorial to sew a simple project (such as a bag or a scrunchie)
* Properly clean up your workspace

Level 1: Novice

If you want to learn how to use the sewing machines, you are already a novice! Congrats!

**Certification Levels**