# Unit 8: 3D printed Jewlery

Content Area: **Art**
Course(s): **Art Experience, Jewelry Design 1**
Time Period: **April**
Length: **7 blocks**
Status: **Published**

## Enduring Understandings

Determine and use the appropriate application of resources in the design, development, and creation of a technological product or system.w technoloy

The use of technology and digital tools requires knowledge and appropriate use of operations and related applications

## Essential Questions

How can Digital tools facilitate local and global communication and collaboration in designing products?

Can we control the pace at which technology is created?

How does technology extend human capabilities?

What are the positive and negative consequences of technology?

What implications does technology have on craftsmanship?

## Content

**3D printing or additive manufacturing is any of various processes for making a three-dimensional object of almost any shape from a 3D model or other electronic data.**

Rhino3D software is one of many 3D printing programs that is user friendsly

Shapeways. com is an online worldwide 3D printing service with mare resources

Scintered nylon is a white strong flexible budget friendly 3D printing material suitabloe for jewelry printing that can be dyed

* to be determined with more 3 D educational training and professional development!

Towson UNiversity currently has

## Skills

Identify what 3D printers currently can and cannot print.
Explain how 3D printer technology works.
Sketch a original jewelry design that could be made using current 3D printer technology.
create a piece of jewelry using a 3D printer
demonstratee knowlege of 3D printing software
* to be determined with more 3 D educational training and professional development!

## Resources

Student materials kit includes

round nose pliers
chain nose pliers
flat nose pliers

Bent chain nose

Side cutter

6 mini files set

Jewelers saw

Bench pin

Safety goggles

Sandpaper 8 grits package

Toothbrush

Classroom tools
forming pliers
side and flush cutters, snips
crimping pliers
findings--jump rings, crimps, lobster claw, earring wires, crimp covers, spring rings, toggles, cones, beads, found objects, bench block, nylon jaw pliers for wire
wire gauge,headpins and eyepins, resin, etching materials, patina, sheet metal, helicopter punch,

Copper and nickel wire, mandrels, multiple hammers, stamps, sponges, steel wool, pickle pot, enameling kiln, microwave glass kiln, spray booth for varnishes and sealers, various oven baked polymer clay, toaster oven, solder, butane torch, kiln brick flux, rubber cement, drill press, copper tongs, self locking tweezers
sketchbooks

Safety Goggles (When needed)

Chromebooks and smartphones for student research and esl programs
Printer for photos, templates and artwork

Teacher pinterest acct. with technique examples
Pinterest groups -- idea for examples and business branding, sales

Reference Books-- Teacher's personal classroom library

"Making Etched Jewelry- Techniques and Projects,Step by Step"--- Kris Robinson and Ruth Rae

"PATINA 300+ Coloration Effects for Jewelers & Metalsmiths"----- Matthew Runfola
"Stamped Metal Jewelry- Creative Techniques & Designs for Making Custom Jewelry"---- Lisa Niven Kelly
" New Stamped Metal Jewelry" --Lisa Niven Kelly and

"Making Metal Jewelry"---- Tim McCreight

"Metal Artists' Workbench"---- Thomas Mann

Youtube instructional videos by Jewelry Artists

Classroom samples and models
Color wheel, sketchbooks
Previous student examples
"Jewelry artist" magazines
www.JewelryMakingDaily.com
www.beaducation.com

## Standards

**NJ: 2009 CCCS: Standard 9: 21st Century Life and Careers**
**NJ: Grade 12**
**9.1 21st-Century Life & Career Skills**
**9.1 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.**

A. Critical Thinking and Problem SolvingShow details
9.1.12.A.1 Apply critical thinking and problem-solving strategies during structured learning experiences.
9.1.12.A.2 Participate in online strategy and planning sessions for course-based, school-based, or outside projects.
9.1.12.A.4 Justify problem-solving strategies used in the development of a particular innovative product or

practice in the United States and in another country.
F. Accountability, Productivity, and EthicsShow details
9.1.12.F.1 Explain the impact of current and emerging technological advances on the demand for increased and new types of accountability and productivity in the global workplace.
9.1.12.F.2 Demonstrate a positive work ethic in various settings, including the classroom and during structured learning experiences.

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| VPA.1.1.12 | All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art. |
| VPA.1.1.12.D | Visual Art |
| VPA.1.1.12.D.1 | Distinguish innovative applications of the elements of art and principles of design in visual artworks from diverse cultural perspectives and identify specific cross-cultural themes. |
| VPA.1.3.12 | All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art. |
| VPA.1.3.12.D | Visual Art |
| VPA.1.3.12.D.1 | Synthesize the elements of art and principles of design in an original portfolio of two- and three-dimensional artworks that reflects personal style and a high degree of technical proficiency and expressivity. |
| VPA.1.3.12.D.2 | Produce an original body of artwork in one or more art mediums that demonstrates mastery of visual literacy, methods, techniques, and cultural understanding. |
| VPA.1.3.12.D.4 | Analyze the syntax and compositional and stylistic principles of two- and three-dimensional artworks in multiple art media (including computer-assisted artwork), and interpret themes and symbols suggested by the artworks. |
| VPA.1.3.12.D.5 | Identify the styles and artistic processes used in the creation of culturally and historically diverse two- and three-dimensional artworks, and emulate those styles by creating an original body of work. |