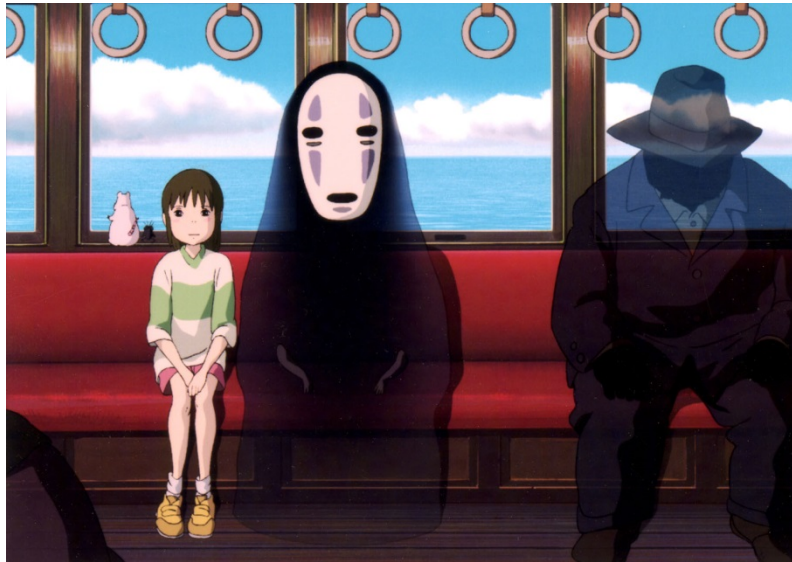


Title: 3-D Cube creatures inspired by the artwork and characters of Hayao Miyazaki
(Sculpture/Technology/High School)



film still from *Spirited Away* by Hayao Miyazaki

Introduction/Summary: Students will use the artwork of Miyazaki as an inspiration for creating 3-dimensional creatures. The 3-dimensional creatures will be made into paper sculptures and printed on the 3D printer.

Duration of Lessons: Nine class periods, 50 minutes each

Connection to standards/common core: Visual Arts, Grade 9-12 (Ohio)

HS intermediate: **Responding/Reflecting** - 4RE: Explain the role of innovative technologies in the creation and composition of new media imagery.

HS intermediate: **Producing/Performing** - 5PR: Understand and demonstrate how to access available digital tools and innovative technologies to create and manipulate artwork.

HS intermediate: **Perceiving/Knowing** - 5PE: Explore the application of technology to the production of visual artworks.

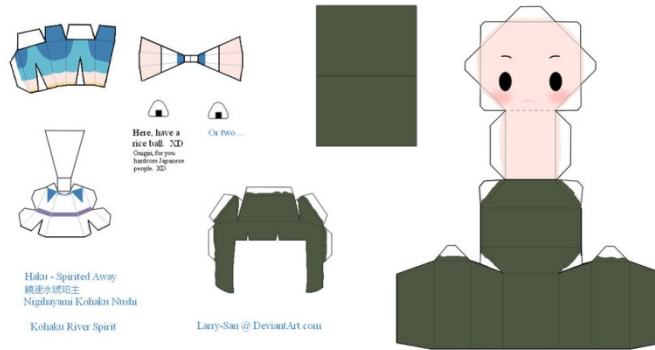
Guiding Questions/ Essential Questions: How can an artist be inspired by another artist without just copying another's artwork? How can technology help us create artwork?

Learning Objectives: Students will understand how advancements in technology have helped artists expand their access to tools for creating artwork. Students will learn basic tools in Maya to create a 3-D modeled figure, and learn how to make it into an 'unwrapped' pattern to add texture in Photoshop. Students will mix creating artwork digitally and through traditional methods.

Materials:

- a) Graph paper and pencils for sketches
- b) Cover stock paper, X-acto knives and glue for printing the creatures
- c) Paint, markers, colored pencils

- d) Filament for the 3D printer
- e) Trailer for *Spirited Away*: <https://www.youtube.com/watch?v=ByXuk9QqQkk>
- f) Trailer for *My Neighbor Totoro*: https://www.youtube.com/watch?v=TuLX50_5UAI
- g) Worksheet for Maya figure creation
- h) Worksheet for Maya unwrap
- i) Worksheet for Photoshop and paper folding



Spirited Away paper craft by Larry San

Pre-Assessment: Students have begun working on Maya, and will receive feedback on their progress. Students discuss their knowledge of Miyazaki's movies and animated characters. Students discuss their knowledge of anime and the history and origin of anime.

Lesson Activity Day 1

Students look at segments of Miyazaki movies and film still images, and begin sketching characters inspired by Miyazaki's movies. They will use graph paper to make their designs into simple cube designs, intending to start creating simple creatures in Maya using polygon cubes and the extruder tool.

Lesson Activity Day 2

Tutorial on using the extruder tool in Maya. Students practice using the extruder tool, and begin creating their creature in Maya, following their designs on the graph paper.

Lesson Activity Day 3

Students finish their 3D modeled creature design and save the file as an STL file ready to print on the Ultimaker 3D printer. Students send their file to the teacher for assessment and to get the file ready to print using the Cura software program.

Lesson Activity Day 4

While the 3D printer is starting to print, students will begin working on the 'unwrap' of their 3D creature. Teacher demonstration of UVs and textures in Maya, and students begin working on creating UVs and textures.

Lesson Activity Day 5 and 6

Teacher demonstration of Photoshop as a means to create textures on UVs. Students practice using Photoshop to create textures, and save the files as jpegs. Students send jpeg files to the teacher for assessment and to print files on cover stock paper.

Lesson Activity Day 7 and 8

Studio days. Teacher demonstration of paper folding and cutting. Students work on cutting out their paper creatures and folding and gluing creatures. Students will have paints, pencils and markers available to decorate their paper cubes.

Lesson Activity Day 9

Class critique and review of paper creatures and 3D printed models. Students work on self-assessments and reflections.

Post Assessment: Students will self-assess the success of their creatures and their ease with technology to create art. They will also review the influence the images of Miyazaki had on their own imagery. Teacher assessment will be based on creativity, craftsmanship, effort, and design. Teacher will reflect on lesson and make adjustments for next lessons.

Extension Activities/Extending the lesson: Students can create additional figures using multiple polygons and snap to tools to create their figures. Students can create additional figures for extra credit. Students can also design, cut and fold cube figures out of paper, without using any software. Students can research additional manga artists and use their designs as a source of inspiration.



Film still from *Castle in the Sky* by Hayao Miyazaki

Teacher notes:

1. Manga and Miyazaki-inspired paper crafts and 3-D modeling
https://www.google.com/search?q=spirited+away+characters&newwindow=1&rlz=1C1CHFX_enUS499US499&espv=2&biw=1242&bih=545&source=inms&tbm=isch&sa=X&ved=0CAYQ_AUoAWoVChMI-sou6ivT8xgIVSVs-Ch2CAQBy#newwindow=1&tbm=isch&q=spirited+away+characters+papercrafts
2. link to paper pattern:
http://img05.deviantart.net/acca/i/2013/198/7/5/blood_papercraft_saya_by_larry_san-d4vlt1j.jpg
3. blog page 3D modeling for paper craft spirited away character:
<http://kattyew.blogspot.com/2013/06/spirited-away-papercraft-work-in.html>
4. papercraft.net -lots of templates <http://paperkraft.blogspot.com/2011/05/nyanpire-papercraft.html>

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