

**Your Name: Rachel Vredenburg**

**Title of Lesson: “Reverse Perspective Gallery”**

**Grade Level and Number of Students: Grade 9, 10, 11, and/or 12 Art I; 20 students**

**Lesson Length: 1 week**

## **LESSON RATIONALE**

After practicing foundational and technical methodologies that focus on the elements and principles for drawing at the beginning of the semester, students will expand their technical knowledge to encompass one-point and two-point perspective. This is an important foundational skill i to understand space and depth in art. It is important to consider the big idea of perspective as students both in the technical sense, and in the sense that students are sharing their views and experiences via a curated display of their own interior gallery. This creates a conversation with viewers and the fluency of this visual illusion adds interest to their investigation of perspective. By crafting their own reverse perspective illusion sculptures, they will create a visual dialog with peer viewers as they will be on display in the hallway. Students will exercise creative thinking when creating truncated pyramids that, when viewed on the wall, appears to the interior of a gallery space despite its convex shape. The prospect of creating one’s own personal illusion pieces will enhance student interest in this project.

Next, students will explore a topic that personally resonates with them. This might include personal landscapes, a theme based on subjects, or an exploration of memories. This will be used when incorporating a minimum of six drawn pieces within their perspective pieces. Students will be motivated by this aspect of personalization as well as the option to color these pieces with colored pencils. Practicing a new technique using familiar media will boost students’ understanding, while adding new knowledge to their skillset. It is inspiring to include artists that utilize illusion such as Patrick Hughes, Rafael Araujo, and M.C. Escher. That way, students have an idea of the impressive extent to which illusion may be utilized in both two-dimensional and three-dimensional works. Further, by introducing these detail-focused artists, students will see the inspiring results of a precise use of perspective to encourage a detailed approach in each student’s project.

### **Process**

Paper Sculpture; Colored pencil (optional); Graphite

### **ARTISTS**

**Patrick Hughes:** “Patrick was born in Birmingham, England in October 1939. His first exhibition was in 1961 and his first reverspective, *Sticking-out Room*, was made in 1964” (Hughes, 2025). “In the late 1980s Hughes revisited exploiting the difference between perspective and reverspective and making space, frozen but mobile. For the last 25 years his 3-D reversepective paintings have been hugely in demand, exhibited around the world and featured in many public collections” (Hughes, 2025). His forms offer viewers a unique, immersive experience when viewed in person. “He is the creator of “reverspective”, an optical illusion on a three-dimensional surface where the parts of the picture which seem farthest away are actually physically the nearest” (Hughes, 2025).

**M. C. Escher (1898-1972):** Maurits Cornelis Escher was a Dutch graphic artist who made woodcuts, lithographs, and mezzotints, many of which were inspired by mathematics. He started with “lessons in architecture at the School of Architecture and Decorative Arts in Haarlem,” Netherlands, but quickly switched to Graphic Arts (The M.C. Escher Company B.V., 2019). He lived and worked in Italy from 1924-1935 (The M.C. Escher Company B.V., 2019). He has been “referred to as the ‘father of modern tessellations’” (The Editors of Encyclopedia Britannica, 2019).

**Rafael Araujo** is a Venezuelan architect and illustrator who “uses the mathematical proportion known as the golden ratio — a proportion that comes up in many natural objects and is responsible for the “intelligent patterns” and created designs without the help of a computer, simply pen and ink (Young, 2016). According to Araujo, “I do all by hand, on my drawing board with classical architectural drawing tools (a compass, protractor, squares and rules) and I do not use any kind of computer software whatsoever” (Araujo, 2021).

## **BIG IDEA: Perspective**

### **LEARNER OBJECTIVES:**

- Students will understand and practice one- and two-point perspective
- Students will follow directions to create the illusion of depth via sculpture.
- Students will curate their own miniature art show withing the space
- Students will analyze the symbols that they have chosen and present their findings to the class during a mini critique.

-Students will develop patience and practice precision as they create their own optical illusions.

**3 National Standards for Visual Arts (VAS) (list numbers and full description for each standard) <https://www.arteducators.org/learn-tools/articles/219-national-visual-arts-standards-at-a-glance>**

VA:Cr1.1.1a Use multiple approaches to begin creative endeavors.

VA:Pr4.1.1a Analyze, select, and curate artifacts and/or artworks for presentation and preservation.

VA:Pr5.1.1a Analyze and evaluate the reasons and ways an exhibition is presented.

**3 VA State Standards of Learning (SOL) in the arts:**

[http://www.doe.virginia.gov/testing/sol/standards\\_docs/fine\\_arts/2013/visual\\_arts/std\\_finearts\\_visualarts.pdf](http://www.doe.virginia.gov/testing/sol/standards_docs/fine_arts/2013/visual_arts/std_finearts_visualarts.pdf)

AI.1 The student will apply creative thinking to original artistic works. a) Communicate personal ideas in works of art by selecting media and incorporating appropriate elements of art and principles of design. b) Employ a variety of subject matter, including symbols and metaphors, to represent ideas about personal, cultural, or social concepts.

AI.13 The student will combine a variety of approaches to create the illusion of space within works of art such as overlapping, size, placement, and one-point perspective.

AI.16 The student will use a variety of two dimensional, three-dimensional, and contemporary media to create works of art.

## **ESSENTIAL QUESTIONS**

1. How does your perspective of art change from 2D to 3D?
2. Does a visual illusion have more of an impact on viewers than a perspective drawing? Why or why not?
3. What is your title of your mini art show? Why?

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## **MATERIALS NEEDED FOR LESSON**

**A. Art supplies:**

20-11x11” pieces of Drawing paper, 20 pencils, 20 rulers, 20 ebony pencils, 8 packs of colored pencils (optional), 20 Glue sticks, 20-6x6” squares of cardboard for mounting, 20 6x6” mats with 3.5x3.5” windows to finalize the projects 3 lightboxes so that a group of 20 may trace their templates.

**B. Additional Materials**

[Quizziz Perspective Pre-Assessment](#)

PowerPoint Presentation linked [here](#).

Tutorial video on Canvas: [Reverse Perspective Room Art Tutorial](#)

Artist footage from the museum:

[Patrick Hughes - Reverse Perspective Paintings - YouTube3D Art - "Superduperperspective" - Patrick Hughes - Birmingham Art Gallery](#)

**VOCABULARY/DEFINITIONS**

One-Point Perspective: Using one vanishing point and horizon line to create the illusion of depth in space.

Two Point Perspective: Using two vanishing points and a horizon line to create the illusion of depth in a two dimensional space.

Optical Illusion: A visual phenomenon that tricks our perception of space.

Reverseperspectives: Term used by Patrick Hughes to describe his convex, *external* optical illusions that appear as an *interior* space.

Truncated Pyramid: A 4 sided shape similar to a pyramid, but has a flat surface on the top, rather than all sides converging in a pointed tip.

Orthogonal Lines: Lines that converge at the vanishing point(s)

**MOTIVATING STUDENTS; PERSONAL and SOCIAL RELEVANCE**

Students will utilize a choice-based approach that will allow each to select a topic that is personally relevant. Further, students will use a template to create intriguing optical illusions based on the designs of Patrick Hughes. Students will also have freedom

to choose the subject and unifying factor of their art show that interests them. This open choice of subject or theme leaves the students with a multitude of possibilities for customization. Since these choices make the final piece personally relevant, students will be more motivated to complete these pieces as they define their personal beliefs.

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## LESSON PROCEDURES

### A. Teacher/Classroom Prep:

Teacher will prepare a PowerPoint and demo to deliver pertinent info. Teacher will create templates, cut mats, cut cardboard, and assemble sheets of paper and place them on the counter for easy accessibility. Teacher will make sure that there is enough supplies for each class. They will cut more pieces of paper if necessary.

### B. LESSON SEQUENCE **IN PROGRESS**

## Teacher Actions

12:45-2:18

### Day 1; Monday:

12:45-12:47: greets students as they enter the classroom and take their seats. Teacher will take attendance via Synergy.

12:47- 12:50 Teacher will introduce the pre-Quizziz with a brief explanation of why I need the data for my class.

12:50-1:20 Teacher will announce “twenty minutes to finish the pre-Quizziz.” And set a timer on the Boxlight board to stay on track.

## Expected Learner Actions

12:45-2:18

### Day 1; Monday:

12:45-12:47: Students will respond to teachers greeting and take their seats.

12:47- 12:50 Students will pay attention to the introduction, then log onto Quizziz.

12:50-1:20 Students will work independently and do their best on this non-graded pre-assessment for data collection.

1:20-1:30: After all the Quizzizs are submitted, the teacher will present the lesson plan via the attached PowerPoint presentation. Teacher will make sure to pause and ask students questions about the presentation and ask if students have questions.

1:30-1:35 Go beyond the PowerPoint and conduct an in-class demo to demonstrate the steps of tracing, cutting, and drawing perspective lines that correspond to the traced vanishing points. Student questions might include “How do I make sure my lines look even?” “Personally, I’m a fan of the “measure twice, cut once’ mentality. Meaning double check that the ruler is on both points and draw lightly so that if you do have to erase, it’s not too dark.”

1:35-2:05 teacher will walk around and check in on student’s independent practice.

2:13: Teacher will announce cleanup and ask that students put all supplies back in their table’s tubs and place all projects in their portfolios. And MAKE SURE their names are on the back

2:18 The bell rings and the teacher will wish the students a good day as they leave.

**Day 2; Tuesday**

1:20-1:30: Students will tune into the teacher’s presentation and ask questions such as “Can I make my gallery show about animals?” “Of course! There is an annual show hosted by the Suffolk Center for Cultural Arts called Walk on the Wild Side in real life, so you’re already on track!”

1:30-1:35 Students will watch the brief demo on the Box light and ask questions such as “Which dots do I use, there are 3 on the template...” “Great question! The middle vanishing point is for all the paintings on the walls, the vanishing points on the ceiling and floor will guide the directionality of the floor and ceiling texture.”

1:35-2:05 Students will work independently and raise their hands if they need help.

2:13: Students will gather supplies and return them to each table’s supply tub and place the tubs back in the correct block’s cabinet.

2:14-2:17: Students will refrain from looking at their phones and turn all video volume down on Chromebooks.

2:18 Students will say goodbye to Ms. V and Mr. Corday as they leave.

12:45-12:47: Teacher will greet students as they come into the room and remind them that they are working on completing their perspective projects. Teacher will take attendance via Synergy.

12:47-2:12: Teacher will walk around as students work independently to clarify or reexplain to any students that were absent on Monday. "How are we feeling about it at this table?" "Pretty good, the lines don't quite look right on the sides of the canvas." "Make sure you're using the vanishing points on the floor and ceiling for those. If you use the center one, the lines won't work out. You are doing great thus far, and we are still in progress!" Teacher will continue to different tables for encouragement and consultation.

2:13 Teacher will announce cleanup.

2:18 The bell rings and students leave the classroom. Teacher wishes them a good day as they leave.

### **Day 3; Wednesday**

12:45-12:47: Teacher will greet students as they come into the room and remind them that they are working on shading their perspective projects. Teacher will take attendance via Synergy

12:47-2:12: Teacher will walk around as students work independently to clarify or reexplain to any students that were absent on Monday. "How are we feeling about it

### **Day 2; Tuesday**

12:45-12:47 Students will say hello as they enter the classroom, gather their supplies/drawings from their portfolios, and continue the shading process to build contrast and dimension.

12:47-12:50 Students will pay attention during the teacher's reminders/announcements and ask any pertinent questions before they get started. For instance, "We are writing our initial ideas tomorrow, right?" "Yes! They do not have to be completely done, just introduce us to your ideas. Good question." Students will work on their initial drawings paying close attention to the vanishing points and drawing their orthogonal lines.

12:50-2:14: Students will work steadily on these projects, and they will have plenty of time to ask the teacher questions or obtain advice for certain areas they wish to improve. "I accidentally drew a line at the wrong angle, How do I fix it?" "Oh! That's ok, just erase it as best you can with the chonky eraser, and redraw it correctly it'll be fine. But make sure you're drawing the lines lightly, just in case you need to erase anything else."

2:13 Students will begin cleaning their tables, place work either on the drying rack or in their portfolios Further, they will wipe any graphite off the tables.

at this table?” “Not great, I don’t know what to draw.” “What subjects do you usually create?” “Usually skulls or cryptids...” “so maybe an oddities exhibit could be your unifying theme and some of the exhibited works are inspired by one’s you’ve already done.” Teacher will continue to monitor different tables for encouragement and consultation. Teacher will remain available to help students if they get stuck but will allow the rest of the class time to finish these projects. Questions might include “How should I fill in the rest of my empty space?” “One option is to have a neutral or lightly textured ceiling and floors, you don’t have to shade the walls due to the shadows cast on the 3D sculpture. So emphasis is placed on the objects.”

2:13 Teacher will announce cleanup and remind students that they will be presenting their in-progress pieces and receiving feedback tomorrow.

2:18 The bell rings and teacher will say goodbye as students leave. “Have a great day!”

#### **Day 4; Thursday**

12:47-2:12: Teacher will walk around as students work independently to clarify or reexplain to any students that were absent on Monday. “How are we feeling about it at this table?” “Not great, I don’t know what to draw.” “What subjects do you usually create?” “Usually skulls or cryptids...” “so maybe an oddities exhibit could be your unifying theme and some of

12:18 Students will say goodbye as they leave.

#### **Day 3**

12:45-12:47: Students will greet the teacher and peers as they enter the classroom, gather their supplies and continue the shading process.

12:47-2:12 Students will pay attention during the teacher’s reminders/announcements and jot down their theme ideas in their sketchbooks and discuss amongst their tables. Some examples might include “I chose a cryptid theme as most of my works follow this theme already.” or “I chose to do local landscapes as I am from the area and feel connected to these areas.” Students will work steadily on their projects, and they will have plenty of time to ask more questions. “It’s almost done but I just don’t know how to make it look ‘finished. What would you suggest?” “It looks like your subject is super detailed, but you haven’t added extra layers of ebony pencil or graphite to really get that high contrast effect, that will really push the illusion.”

2:13 Students will begin cleanup and place finished work in their portfolio.

12:18 Students will acknowledge the homework assignment and say goodbye as they leave.

the exhibited works are inspired by one's you've already done." Teacher will continue to monitor different tables for encouragement and consultation. Teacher will remain available to help students if they get stuck but will allow the rest of the class time to finish these projects. Questions might include "How should I fill in the rest of my empty space?" "One option is to have a neutral or lightly textured ceiling and floors; you don't have to shade the walls due to the shadows cast on the 3D sculpture. So, emphasis is placed on the objects."

2:13: Teacher will remind students to begin cleanup and place their projects in the cabinet. "High quality photos and the artist statement are due tomorrow night via email to me and Mr. Corday."

2:18 the bell rings and teacher will say goodbye as students leave. "Happy Friday Eve and great work!"

### **Day 5; Friday**

12:45-12:47: Teacher will greet students as they come into the room and remind them that they are working on mounting/gluing their perspective projects. Teacher will take attendance via Synergy.

12:47-12:55: Teacher will conduct a brief demo on how to most effectively fold and glue their projects, as well as mount them

### **Day 4; Thursday**

12:45-12:47: Students will wish the class a good morning as they enter the classroom, gather their supplies and continue the shading process as this is the second to last workday before the Gallery Walk.

12:47-2:12 Students will tune in during the teacher's reminders/announcements and keep working on their shading for a realistic illusion. Students will work steadily on their projects as drawing takes time, and they will have plenty of time to ask more questions. "How many works do we need again? I have four already" "Great question, the minimum is 3 works of art on both walls for a total of six mini-works."

2:13: Students will pack up their supplies and gently put their pieces in their portfolios. Students will acknowledge the artist statement assignment.

2:18 The bell rings and students leave for the day.

### **Day 5; Friday**

12:45-12:47: Students will wish the class a good morning as they enter the classroom, gather their supplies and begin gathering supplies for the mounting and gluing process.

onto the cardboard surface with a mat underneath.

12:55-2:12: Teacher will walk around and answer questions such as how to refold if the first fold didn't exactly match the line. "Unfold it as best as you can to crease it exactly on the lines you drew."

2:13: Teacher will announce cleanup and that this is the last workday. "On Monday we will do an Art Walk and admire all of your awesome pieces!"

12:18 the bell rings and teacher will say goodbye as students leave. "Happy Friday, have a great weekend!"

### **Day 6: Monday**

12:45-12:47: Teacher will greet students as they come into the room and remind them that they are doing an art walk to assess their perspective projects. Teacher will take attendance via Synergy.

2 minute reminder of "what is critique"

15 minutes of them working on what to say

35 minutes left for the gallery walk and feedback.

2 minute closing/ cleanup

12:47-12:55: Students will pay attention to the demo and ask questions such as "can I use hot glue?" "No, unfortunately, for this project glue sticks are going to be the best option."

12:55-2:12: Students will apply the info from the demo to their own projects and check in with the teacher before gluing anything. Students will continue working independently. "So, just to clarify, I fold the tabs under all the sides?" "Yes, wouldn't want to cover up all that hard work."

2:13: "Got it, art walk on Monday. Can I bring my work home to add extra shading?" "I wouldn't just because it's super breakable, if you do, make SURE you take final photos and set a reminder to bring it back in."

12:18: "Happy Friday, have a great weekend!"

### **Day 6: Monday**

2:18: The bell rings and teacher wishes students a good day as they leave.

## **ADAPTATIONS AND RECOMMENDATIONS**

All students will have access to a subtitled demo video of the in-class demo as well as a copy of the introductory presentation. Both will be uploaded to canvas. This will benefit absent students, students with a hearing impairment, as well as students with a learning disability as they will be able to pause the directions/ presentations multiple times and read along with the directions. Students who need wheelchair access will be able to reach the provided supplies as the teacher will prep the classroom and put the supplies on the counter. There will also be plenty of room provided at their table so the chair will fit comfortably.

## **ASSESSMENT**

### **A. Assessment:**

Preassessment will include a brief quiz in which they will evaluate vocabulary before being presented with the information.

Post-Assessment will be the same quiz after the project has concluded for a grade.

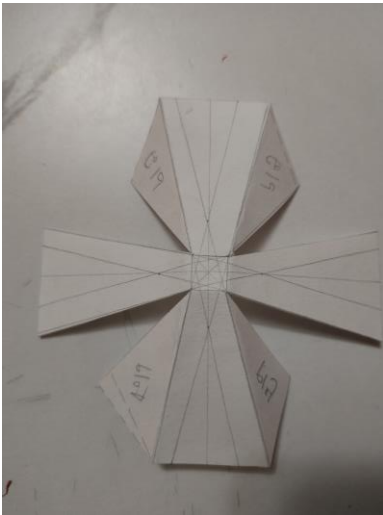
Students will present their projects in a mini art walk in which they will evaluate the success and discuss the intentions of their individual art show spaces. Students will share what their curated art show is called and some background information about the show.

Students will write a short description of their art show to be presented to their audience. This will be submitted to canvas for grading and added to the hallway display.

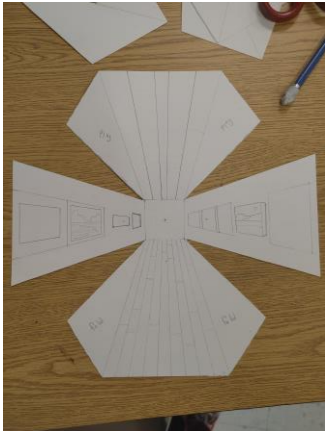
**PROCESS IMAGES**



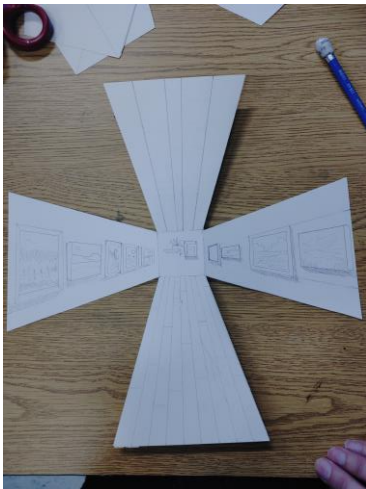
Step 1: Gather Supplies including colored pencils (optional), square paper, pencils, erasers, a ruler, cardboard, and matboard.



Step 2: Trace all guidelines with a ruler using the provided template and a lightbox



Step 3: Begin setting up the interior space with paintings/artwork on the walls.



Step 4: Continue adding more details/shadows/texture.



Step 5: Add color to the artwork, the interior may remain black and white using graphite and an ebony pencil.



Step 6: fold tabs and glue together to form the truncated pyramid.



Step 7: Mount on cardboard with a mat for the final piece!

### References

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