

ARTS IMPACT—ARTS-INFUSED INSTITUTE LESSON PLAN (YR2-MAP)

EIGHTH GRADE—LESSON FOUR: Depth through Use of Light and Color

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Grade Level: 8

Examples:



Enduring Understanding

Using color variations and light direction illustrates the illusion of depth in an artwork.

Art

Target: Transfers refined city plan to vellum.

Criteria: Uses rulers and pencils to replicate/trace the pre-images and images accurate to original design.

Art

Target: Mixes colors for cityscape from primary watercolors.

Criteria: Uses color wheel to mix secondary and tertiary colors from primary colors.

Art

Target: Uses craftsmanship in applying color.

Criteria: Paints to a line using watercolor and brush; lightly and evenly adds color to building and detail planes and shapes.

Art

Target: Creates a sense of light using color values.

Criteria: Paints buildings' facade different than the sides.

<p>Materials Removable tape, mechanical pencils, vinyl erasers, rulers, large vellum sheets, blue tape, watercolors, well palettes, brushes, water pans, paper towels, color wheels, ELMO projector</p>	<p>Learning Targets</p> <ul style="list-style-type: none"> • Transfers refined city plan to vellum. • Mixes colors for cityscape from primary watercolors. • Uses craftsmanship in applying color. • Creates a sense of light using color values.
<p>Do Now Traced cityscapes painted with watercolors. Paints to a line and creates a sense of light through painting the facade differently than the sides. Creates final cityscape.</p>	
<p>Activities/Prompts</p> <ul style="list-style-type: none"> • Review: Beulah Hyde's <i>Old Mill</i> (see CD) and point out that the facade is painted differently than the sides. • Demonstrate taping vellum to the paper cityscape, adjusting how much ground and sky are visible and tracing the city onto the vellum using rulers and sharp pencils. • Suggest that students add details to their cityscapes, such as trees, roads, lights or other elements to lend scale. • Pass out color wheels and direct students' attention to the large color wheel poster. • Distribute paint, brushes and water to students. • Demonstrate mixing second colors from primary colors: <ul style="list-style-type: none"> ○ Orange: Yellow and Red ○ Green: Yellow and Blue ○ Violet: Blue and Red ○ Brown (neutral): Complementary colors (red/green, orange/blue and violet/yellow) • Apply to vellum; blue grid should face DOWN; otherwise, it will show through painting. • Model tinting colors (lightening value) by adding water (diluting concentration of watercolor paint) and allowing more white paper to show through watered down paint. 	<p>Big Art Ideas</p> <p>Color Primary Secondary Tertiary Hue Value Color wheel Shade Light Shadow Tints Scale</p>

<ul style="list-style-type: none"> • Demonstrate rinsing brush prior to dipping brush into fresh paint. • Model painting to a line. • Reinforce through demonstration that the facades of the buildings should be painted differently than the sides (example: Facade is darker than the sides). • Reinforce painting the entire cityscape, details and surrounding landscape. 	
<p>Closure</p> <ul style="list-style-type: none"> • Set student work carefully on a flat surface to dry. • Carefully wash brushes and materials. • Put all materials and notes/data sheets in a folder. • Return tools as directed. • Self assess using checklist. ADS 11-13 	<p>Assessment Criteria</p> <ul style="list-style-type: none"> <input type="checkbox"/> Uses rulers and pencils to replicate/trace the pre-images and images accurate to original design. <input type="checkbox"/> Uses color wheel to mix secondary and tertiary colors from primary colors. <input type="checkbox"/> Paints to a line using watercolor and brush; lightly and evenly adds color to building and detail planes and shapes. <input type="checkbox"/> Paints buildings' facade different than the sides.
<p>Next Steps/Follow up Needs</p> <p>Some students may require more time to complete their paintings. Once fully dry, carefully remove the under drawing (if it has not already been removed) and keep all work as evidence of student progress.</p>	

Teaching and Learning Strategies

1. Warm-up: Reviews images from Tacoma Art Museum Collection and initiates discussion about light in artwork. *Prompts:* Today we will be refining our cities on vellum paper and adding color. To help our cities look more realistic, we will be painting light and shadows into our city image. We're returning to our TAM artworks one last time to consider light in artworks. Let's look at Beulah Hyde's Old Mill (see CD). Look at the facade: Is there anything different about how the artist painted the facade in contrast to the sides? Is there a light source in the artwork? If not, does it have the illusion of light? How did the artist achieve that? How does light in an artwork create more depth? If there were no light sources anywhere in this image, what would you see? How did the artist use shadow? When we see a three-dimensional object in a space, we are seeing the light reflected off it. Where we're not seeing light, we're seeing shadow. The light comes from a source and by analyzing where the light and shadow is on an object, we can find the light source. Where is the light source in this artwork? Let's look at this box with a light shining on it directly. What is the shadow doing as I move the light around it?

Student: Reviews artwork; discusses light and shadow.

2. Instructs the tracing of cities on vellum. *Prompts:* We are creating finished city plans on vellum paper. Architects use vellum because drawings underneath become visible. It is great for layering images, but it looks opaque when nothing is underneath it. We will be laying our vellum pieces over our cities that we have assembled together and tracing the final city on one clean layer of vellum with pencil. The vellum is expensive paper and you will only get one piece, so make sure that you are very careful with it. Place your vellum over your city and figure out the most interesting placement for it. Make sure you fit in all the drawing that you have done, but you may want to adjust the horizon line so the sky is really big or do the opposite. You could also adjust your city to the left or right so the vanishing point isn't in the center of your composition. Once your horizon line is parallel and you have a composition you like, use the blue tape to gently tape it in place. Next, use the pencil and ruler to carefully trace your buildings and city details. Use a light touch and take your time. Once all the objects are down, draw the exposed horizon line/X-axis to give your city a ground.

Student: Tapes composition to vellum and traces with pencil.

Embedded Assessment: Criteria-based teacher checklist

3. Demonstrates mixing colors with watercolor paints on vellum. *Prompts:* The value of a hue is the relative lightness and darkness of it. What color do you add to make a tint of a color? If we are using watercolor paints there is no white, so we add a bigger proportion of water to create a tint, and the white paper showing through will serve as our white areas. To create a darker value, we add a very small, usually less than you think, amount of the complementary color to the color. Try and make a tint and darker value of a color in your palette. While using watercolor, it's important to keep your brush damp, but you may need to dab it on the paper towel to control the amount of liquid on your brush. The vellum is not very absorbent; a little paint should go a long way. If you get a puddle, make sure to dab it up with the paper towel.

Student: Samples tints and shades of one color on a small piece of vellum; shares color samples with a classmate to double check work.

Embedded Assessment: Criteria-based peer assessment

4. Discusses using color to create a sense of light. *Prompts:* We will be using our color today to create a sense of light in our cities which means we will need different values: tints and tones/shades of each hue we use. The first thing we should determine is where the light source is, mainly the sun. This does not mean that we need to draw the sun, but we need to consider from which direction it is shining on our city. Is the light coming from the top, front, the right or the left? We will use lighter values/tints on the side/s where the light is hitting the object directly; darker values: tones/shades for the sides that are furthest away from the light, and slight variations of the original hue for everything else. If we are trying to make a space look more realistic, the light should be affecting the color values of all the objects in our picture the same way, because they are all sharing the same light. All of the buildings in the cities we designed are angled the same direction, so all the front faces should have the same degree of color value, but don't have to be the same hue. The visible faces from the right should all be the same color value, and so on. The ground and sky will also be affected by

the light source. The areas closest to the light source will have lighter hues and areas furthest away will be darker color values. The last thing we will have to consider is the shadows that are cast by the absence/reduction of light on one side of the buildings. These shadows will need to be on the opposite side of the light sides and work with the height of the object as well as the angle of the light. It may help to visualize a right triangle on the shadow side of each building, where the top angle is the same angle as the sun and the side of the triangle on the ground is the length of the shadow you will need. Remember when you paint cast shadows, they are darker values of the parts of the picture plane that they are falling on, and they have soft edges. They are not solid black boxes. Paint smoothly and evenly with a light amount of paint on your brush so you stay in control.

Student: Paints city so that it has a sense of light.

Embedded Assessment: Criteria-based teacher checklist

Vocabulary	Materials and Community Resource	WA Essential Learnings & Frameworks
<p><u>Arts Infused:</u> Light Shadow</p> <p><u>Math:</u> Angle</p> <p><u>Arts:</u> Hue Shade Tints Tone Value</p>	<p>Museum Artworks Armin Landek, <i>City Lane</i>, 1945, Drypoint, 1970.184.2 Chester Arnold, <i>Addition</i>, 2002, Lithograph, 2002.40.1 Beulah Hyde, <i>Old Mill</i>, 1995, Oil on canvas, 1991.11 Photograph of Tacoma Art Museum <i>Building Tradition</i> catalog <ul style="list-style-type: none"> • Photo of Tacoma • Photo of TAM <p>Art Materials: Removable tape Mechanical pencils Vinyl erasers Rulers Large vellum sheets Blue tape Watercolors Well palettes Brushes Water pans Paper towels Color wheels ELMO projector Clip light and box Paint samples that illustrate gradations of value</p> </p>	<p>Arts State Grade Level Expectations AEL 1.1 concepts <i>Identifies and demonstrates how line and value define form and space</i> <i>Identifies color attributes: hue, value and intensity</i> AEL 1.1.2 composition <i>Uses proportion to analyze size relationships in an artwork</i> AEL 1.2 skills and techniques <i>Uses spatial devices (e.g., one-point perspective)</i> <i>Presents work for display (e.g., centers, mounts/mats)</i> AEL 4.2 connections between the arts and other content areas <i>Explains relationships between the arts and other content areas</i> AEL 4.3 understands how the arts impact lifelong choices <i>Analyzes how the arts impact choices in natural and constructed environments</i></p> <p>Math State Grade Level Expectations <i>Recognizes parallel faces in polyhedra</i></p>

ARTS-INFUSED INSTITUTE LESSON PLAN (YR2-MAP)

EIGHTH GRADE—LESSON FOUR: Depth through Use of Light and Color

ASSESSMENT WORKSHEET

Disciplines	ART	ART	ART	ART	Total 4 Points
Concept	Drawing	Painting	Painting	Light and Shadow	
Students	Uses rulers and pencils to replicate/trace the pre-images and images accurate to original design	Uses color wheel to mix secondary and tertiary colors from primary colors	Paints to a line using watercolor and brush, lightly and evenly adding color to building and detail planes and shapes	Paints facade different (lighter or darker) than sides to establish depth	
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27.					
28.					
Total					
Percentage					

Criteria-based Reflection Questions: (Note examples of student reflections on back.)

Thoughts about Learning:

Which prompts best communicated concepts? Which lesson dynamics helped or hindered learning?

Lesson Logistics:

Which classroom management techniques supported learning?

Teacher: _____

Date: _____

ARTS IMPACT—ARTS-INFUSED LEARNING FAMILY LETTER

EIGHTH GRADE: Using Math and Art as an Architect and City Planner

Dear Family:

Recently, your child participated in **Art and Math** lessons aligned with 8th grade math standards. Starting with a drawing of a single building, we created **one-point perspective cities** (five buildings) using the coordinates of our own designs as well as our classmates' designs.

- We studied **one-point perspective** and how it is used to create the **illusion of depth** in an artwork.
- We created a **building design** in one-point perspective on a coordinate plane complete with **architectural details** to unify the design.
- We studied **parallel lines, transversals, complementary angles,** and **supplementary angles;** and discussed where they occur in **one-point perspective.**
- We formed **architectural firms** with classmates to share designs and double-check work.
- We recorded the grid **coordinates** of our designs so they can be shared with the members of our architectural firm.
- We performed **transformations** on the building designs of our firm to insert the buildings into a city plan; **reflections, translations,** and **dilations.**
- We graphed our building designs and **combined** them into a **city drawing** in one-point perspective.
- We **refined** our city drawings by **tracing** them onto **vellum with pencil.**
- We painted our drawings with **watercolor paint,** and used a variety of **values** to create a sense of **light** in our artworks.

These are the Enduring Understandings we will use now and as adults:

Enduring Understandings

The illusion of depth in a two-dimensional drawing can be created from orthogonal lines radiating out of a vanishing point.

Assigning numerical values can communicate shared visual information and document changes.

Overlapping, one-point perspective, and atmospheric perspective create the illusion of depth in an artwork.

Using color variations and light direction illustrates the illusion of depth in an artwork.