

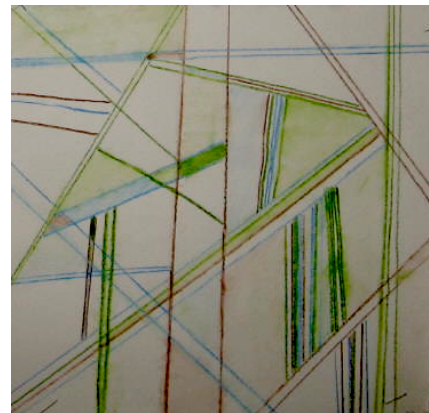
ARTS IMPACT—ARTS-INFUSED INSTITUTE LESSON PLAN (YR2-AEMDD)

LESSON TITLE: Parallel and Perpendicular Lines: Unity and Variety

Visual Art and Math Lesson

Artist-Mentor – Meredith Essex

Grade Level: Fourth Grade



Enduring Understanding

Repeating parallel and perpendicular lines can create unity in compositions; varying direction, thickness, and color of parallel and perpendicular lines can create variety in compositions.

Geometry Search Journal:

Target: Isolates and records parallel and perpendicular lines in the environment.

Criteria: Observes and draws an area with equidistant lines and lines at right angles to each other in the world around them.

Target: Identifies parallel lines and perpendicular lines.

Criteria: Observes and draws lines that are equidistant and lines at right angles to each other.

Target: Adds line for unity and variety in composition.

Criteria: Repeats parallel and perpendicular lines and changes direction, thickness and color of parallel and perpendicular lines.

Target: Creates painting effects and uses narrow color palette.

Criteria: Softens lines using a wet brush; draws in two or three colors only.

Teaching and Learning Strategies

Introduction to Arts-Infused Concepts through Classroom Activities:

Arts-Infused Concepts: Parallel and Perpendicular Lines; Vertical/Horizontal lines

- ▣ Manipulate ½ in. strips of paper to create pathways of parallel and perpendicular lines.
- ▣ Show parallel and perpendicular lines with hands (or feet!).
- ▣ Create combinations of parallel and perpendicular lines in Geometry Search Journal.
- ▣ Find these lines in the environment.

1. **Introduces *Mather* by Robert Yoder.** *Prompts: This is a lesson that is a visual art lesson and a math lesson at the same time. Parallel and perpendicular lines can be used in art; by repeating or varying these lines the artists can create unity and variety in a composition. What direction do the*

lines you see in the art move? (vertical and horizontal) Trace them with your fingers. Find parallel and perpendicular lines in this painting composition. What effect does the difference of thickness of lines have in this art (variety)? Imagine if all the lines were parallel and the same thickness?

Student: Finds lines in art.

2. Demonstrates using a viewfinder to isolate and draw three small areas in the room that have parallel and perpendicular lines. *Prompts: I am looking for an area where I see both perpendicular and parallel lines—using the viewfinder is just like looking through a camera and figuring out what you want in your picture. Draw three rectangles on one page of your search journal: then quickly sketch three different combinations of parallel and perpendicular lines that you see in the room using your viewfinder (in the rectangles). This is just a warm-up: do not worry about using rulers or erasing.*

Student: Observes and records parallel and perpendicular lines found in the environment.

Embedded Assessment: Criteria-based teacher checklist

3. Demonstrates making artistic decisions to develop composition. *Prompts: I will use my ruler/straightedge to draw my lines. I will only be using a total of 2 or 3 colors—a narrow palette (just like the painting at which we looked). We are working with parallel and perpendicular lines so I am keeping in mind that I want to repeat parallel and perpendicular lines, but also change the thickness and color of them. I am choosing two more colors of pencil for my narrow palette—I am thoughtfully adding to my composition step by step.*

Student: Observes demonstration.

4. Guides creative process. *Prompts: Be thoughtful in your artistic choices. Think about how having a variety of thickness and direction of parallel and perpendicular lines will make your composition exciting. However, you will want to repeat lines to help unify your art too. Think about it step by step. Check in with a partner who can step back and hold your work up for you. Talk about what you will repeat for unity and what you will add for variety.*

Student: Observes demonstration

5. Demonstrates technique possibilities for using water soluble colored pencils. *Prompts: I am softening colored pencil lines using a barely wet brush—this art material is a combination of drawing and painting. I can add water to make a line a bit thicker or soften a color in my narrow palette. Notice how Robert Yoder's painting has variations of one color—light and dark. I can also dab away water with a paper towel. It is very important that my lines are still clear in my composition, so I am not brushing away my lines or changing them so they are no longer parallel or perpendicular—I can also draw over the lines after adding water to re-define them.*

Student: Creates art.

Embedded Assessment: Criteria-based peer critique; criteria-based self-assessment

6. Facilitates criteria-based reflection. Displays art on the board. *Prompts: Look at a classmate's art and identify and sketch parallel and perpendicular lines you see in their art in your Geometry Search Journal. Look closely at your own art—note and share what you added and repeated in your composition for unity and what you added and changed for variety.*

Student: Participates in peer critique and self-reflection.

Embedded Assessment: Criteria-based class critique; criteria-based peer and self assessment

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ASSESSMENT WORKSHEET

Students	VISUAL ART AND MATH PARALLEL LINES AND PERPENDICULAR LINES		VISUAL ART UNITY AND VARIETY		VISUAL ART TECHNIQUES: Pencil NARROW PALETTE		Total 6
	Observes and draws an area with equidistant lines and lines at right angles to each other in the world around them		Repeats parallel and perpendicular lines	Changes direction, thickness and color of parallel and perpendicular lines	Softens lines drawn	Uses two or three colors of pencil only	
	Parallel	Perpendicular					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
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18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							
Total							
Percentage							

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

Self-Reflection: *Look closely at your own art—note what you repeated in composition for unity and what you changed for variety.*

Peer to Peer: *Check in with a partner who can step back and hold your work up for you. Talk about where you see parallel lines and perpendicular repeated for unity.*

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

VISUAL ART AND MATH LESSON – Parallel and Perpendicular Lines: Unity and Variety

Dear Family:

Today your child participated in an **visual art and math lesson**.

- We identified and sketched **parallel** and **perpendicular** lines seen in the art work, ***Mather***, by **Robert Yoder**.
- We isolated and recorded parallel and perpendicular lines that we saw in a small area of our classroom environment.
- We repeated and changed **direction**, **thickness** and **color** of parallel and perpendicular **lines** to **unify** our **compositions** and add **variety** or visual interest to them.
- We created painting effects: **softened the lines** using **water-soluble colored pencils** .and used a **narrow color palette**.
- We looked at each other’s art and talked about how we effectively used parallel and perpendicular lines in our compositions.

You could create compositions at home by making parallel and perpendicular lines with different materials: sticks, ribbons, yarn. Weaving also uses parallel and perpendicular lines.

Enduring Understanding

Repeating parallel and perpendicular lines creates unity in compositions; varying direction, thickness, and color of parallel and perpendicular lines can create variety in compositions.